

Appendix A

NOAA Fisheries Greater Atlantic Regional Fisheries Office
Essential Fish Habitat (EFH) Assessment & Fish and Wildlife
Coordination Act (FWCA) Worksheet.

NOAA Fisheries Greater Atlantic Regional Fisheries Office Essential Fish Habitat (EFH) Assessment & Fish and Wildlife Coordination Act (FWCA) Worksheet

This worksheet is your essential fish habitat (EFH) assessment. It provides us with the information necessary to assess the effects of your action on EFH under the Magnuson Stevens Fishery Conservation and Management Act and on NOAA trust resources under the Fish and Wildlife Coordination Act (FWCA). Consultation is not required if:

1. there is no adverse effect on EFH or NOAA trust resources (see page 10 for more info).
2. no EFH is designated and no trust resources may be present at the project site.

Instructions

Federal agencies or their non-federal designated lead agency should email the completed worksheet and necessary attachments to nmfs.gar.efh.consultation@noaa.gov. Include the public notice (if applicable) or project application and project plans showing:

- location map of the project site with area of impact.
- existing and proposed conditions.
- all waters of the U.S. on the project site with mean low water (MLW), mean high water (MHW), high tide line (HTL), and water depths clearly marked.
- sensitive habitats mapped, including special aquatic sites (submerged aquatic vegetation, saltmarsh, mudflats, riffles and pools, coral reefs, and sanctuaries and refuges), hard bottom or natural rocky habitat areas, and shellfish beds.
- site photographs, if available.

We will provide our EFH conservation recommendations and recommendations under the FWCA, as appropriate, within 30 days of receipt of a complete EFH assessment (60 days if an expanded consultation is necessary). Please submit complete information to minimize delays in completing the consultation.

This worksheet provides us with the information required¹ in an EFH assessment:

1. A description of the proposed action.
2. An analysis of the potential adverse effects on EFH and the federally managed species.
3. The federal agency's conclusions regarding the effects of the action on EFH.
4. Proposed mitigation, if applicable.

Your analysis **should focus on impacts that reduce the quality and/or quantity of the habitat or result in conversion to a different habitat type** for all life stages of species with designated EFH within the action area.

Use the information on the [HCD website](#) and [NOAA's EFH Mapper](#) to complete this worksheet. If you have questions, please contact the appropriate [HCD staff member](#) to assist you.

¹ The EFH consultation process is guided by the requirements of our EFH regulation at 50 CFR 600.905.

EFH ASSESSMENT WORKSHEET

General Project Information

Date Submitted:

Project/Application Number:

Project Name:

Project Sponsor/Applicant:

Federal Action Agency (if state agency acting as delegated):

Fast-41 or One Federal Decision Project: Yes No

Action Agency Contact Name:

Contact Phone: Contact Email:

Latitude: Longitude:

Address, City/Town, State:

Body of Water:

Project Purpose:

Project Description:

Anticipated Duration of In-Water Work or Start/End Dates:

	Habitat Type	Total impact (sq ft/acres)	Impacts are temporary	Restored to pre-existing conditions	Permanent conversion of all or part of habitat
	Rocky/hard bottom ⁴ :				
	Sand				
	Shellfish beds or oyster reefs				
	Mudflats				
	Submerged aquatic vegetation (SAV) ⁵ , macroalgae, epifauna				
	Diadromous fish (migratory or spawning habitat)				

Indicate type(s) of rocky/hard bottom habitat (pebble, cobble, boulder, bedrock outcrop/ledge) and species of SAV:

Project Effects

Select all that apply	Project Type/Category
	Hatchery or Aquaculture
	Agriculture
	Forestry
	Military (e.g., acoustic testing, training exercises)
	Mining (e.g., sand, gravel)
	Restoration or fish/wildlife enhancement (e.g., fish passage, wetlands, beach renourishment, mitigation bank/ILF creation)

⁴ Indicate type(s). The type(s) of rocky habitat will help you determine if the area is cod HAPC.

⁵ Indicate species. Provide a copy of the SAV report and survey conducted at the site, if applicable.

Select all that apply	Project Type/Category
	Infrastructure/transportation (e.g., culvert construction, bridge repair, highway, port)
	Energy development/use
	Water quality (e.g., TMDL, wastewater, sediment remediation)
	Dredging/excavation and disposal
	Piers, ramps, floats, and other structures
	Bank/shoreline stabilization (e.g., living shoreline, groin, breakwater, bulkhead)
	Survey (e.g., geotechnical, geophysical, habitat, fisheries)
	Other

Select all that apply	Potential Stressors Caused by the Activity	Select all that apply and if temporary or permanent		Habitat alterations caused by the activity
		Temp	Perm	
	Underwater noise			
	Water quality/turbidity/contaminant release			Water depth change
	Vessel traffic/barge grounding			Tidal flow change
	Impingement/entrainment ⁶			Fill
	Prevent fish passage/spawning			Habitat type conversion
	Benthic community disturbance			Other:
	Impacts to prey species			Other:

⁶ Entrainment is the voluntary or involuntary movement of aquatic organisms from a water body into a surface diversion or through, under, or around screens and results in the loss of the organisms from the population. Impingement is the involuntary contact and entrapment of aquatic organisms on the surface of intake screens caused when the approach velocity exceeds the swimming capability of the organism.

Details: project impacts and mitigation

The level of detail that you provide should be commensurate with the magnitude of impacts associated with the proposed project. Attach supplemental information if necessary.

Describe how the project would impact each of the habitat types selected above. Include temporary and permanent impact descriptions and direct and indirect impacts.

What specific measures will be used to avoid impacts, including project design, turbidity controls, acoustic controls, and time of year restrictions? If impacts cannot be avoided, why not?

What specific measures will be used to minimize impacts?

Is compensatory mitigation proposed?

Yes

No

If no, why not? If yes, describe plans for mitigation and how this will offset impacts to EFH. Include a conceptual compensatory mitigation and monitoring plan, if applicable.

Federal Action Agency's EFH determination (select one)	
	There is no adverse effect ⁷ on EFH or EFH is not designated at the project site. EFH Consultation is not required. This is a FWCA-only request.
	The adverse effect ⁷ on EFH is not substantial. This means that the adverse effects are no more than minimal, temporary, or can be alleviated with minor project modifications or conservation recommendations. This is a request for an abbreviated EFH consultation.
	The adverse effect ⁷ on EFH is substantial. This is a request for an expanded EFH consultation. We will provide more detailed information, including an alternatives analysis and NEPA document, if applicable.

EFH and HAPC designations⁸

Use the [EFH mapper](#) to determine if EFH may be present in the project area and enter all species and lifestages that have designated EFH. Optionally, you may review the EFH text descriptions linked to each species in the EFH mapper and use them to determine if the described habitat is present. We recommend this for larger projects to help you determine what your impacts are.

Species	EFH is designated/mapped for:				Habitat present based on text description (optional)
	EFH: eggs	EFH: larvae	EFH: juvenile	EFH: adults/spawning adults	

⁷ An **adverse effect** is any impact that reduces the quality and/or quantity of EFH. Adverse effects 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 ecosystem components. Adverse effects to EFH may result from actions occurring within EFH or outside of EFH and may include site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

⁸ Within the Greater Atlantic Region, EFH has been designated by the New England, Mid-Atlantic, and South Atlantic Fisheries Management Councils and NOAA Fisheries.

HAPCs

Select all that are in your action area.

	Summer flounder: SAV ⁹		Alvin & Atlantis Canyons
	Sandbar shark		Baltimore Canyon
	Sand Tiger Shark (Delaware Bay)		Bear Seamount
	Sand Tiger Shark (Plymouth-Duxbury-Kingston Bay)		Heezen Canyon
	Inshore 20m Juvenile Cod		Hudson Canyon
	Great South Channel Juvenile Cod		Hydrographer Canyon
	Northern Edge Juvenile Cod		Jeffreys & Stellwagen
	Lydonia Canyon		Lydonia, Gilbert & Oceanographer Canyons
	Norfolk Canyon (Mid-Atlantic)		Norfolk Canyon (New England)
	Oceanographer Canyon		Retriever Seamount
	Veatch Canyon (Mid-Atlantic)		Toms, Middle Toms & Hendrickson Canyons
	Veatch Canyon (New England)		Washington Canyon
	Cashes Ledge		Wilmington Canyon

⁹ Summer flounder HAPC is defined as all native species of macroalgae, seagrasses, and freshwater and tidal macrophytes in any size bed, as well as loose aggregations, within adult and juvenile summer flounder EFH. In locations where native species have been eliminated from an area, then exotic species are included. Use local information to determine the locations of HAPC.

More information

The [Magnuson-Stevens Fishery Conservation and Management Act \(MSA\)](#) mandates that federal agencies conduct an [essential fish habitat \(EFH\) consultation](#) with NOAA Fisheries on any actions they authorize, fund, or undertake that may adversely affect EFH. An **adverse effect** is any impact that reduces the quality and/or quantity of EFH. Adverse effects 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 ecosystem components. Adverse effects to EFH may result from actions occurring within EFH or outside of EFH and may include site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

We designed this worksheet to help you to prepare EFH assessments. It is important to remember that an adverse effect determination is a trigger to consult with us. It does not mean that a project cannot proceed as proposed, or that project modifications are necessary. It means that the effects of the proposed action on EFH must be evaluated to determine if there are ways to avoid, minimize, or offset adverse effects.

This worksheet should be used as your EFH assessment or as a guide to develop your EFH assessment. At a minimum, you should include all the information required to complete this worksheet in your EFH assessment. The level of detail that you provide should be commensurate with the magnitude of impacts associated with the proposed project. If your answers in the worksheet and supplemental information you attach do not fully evaluate the adverse effects to EFH, we may request additional information to complete the consultation.

You may need to prepare an expanded EFH assessment for more complex projects to fully characterize the effects of the project and the avoidance and minimization of impacts to EFH. While the EFH assessment worksheet may be used for larger projects, the format may not be sufficient to incorporate the extent of detail required, and a separate EFH assessment may be developed. However, regardless of format, you should include an analysis as outlined in this worksheet for an expanded EFH assessment, along with any additional necessary information. This additional information includes:

- the results of on-site inspections to evaluate the habitat and site-specific effects.
- the views of recognized experts on the habitat or the species that may be affected.
- a review of pertinent literature and related information.
- an analysis of alternatives that could avoid or minimize the adverse effects on EFH.

Please contact our Greater Atlantic Regional Fisheries Office, [Protected Resources Division](#) regarding potential impacts to marine mammals or threatened and endangered species.

Useful Links

[National Wetland Inventory Maps](https://www.fws.gov/wetlands/)

<https://www.fws.gov/wetlands/>

[EPA's National Estuary Program \(NEP\)](https://www.epa.gov/nep/local-estuary-programs)

<https://www.epa.gov/nep/local-estuary-programs>

[Northeast Regional Ocean Council \(NROC\) Data Portal](https://www.northeastocean.org/)

<https://www.northeastocean.org/>

Mid-Atlantic Regional Council on the Ocean (MARCO) Data Portal

<http://portal.midatlanticocean.org/>

Resources by State

Maine

[Maine Office of GIS Data Catalog](https://geolibrary-maine.opendata.arcgis.com/datasets#data)

<https://geolibrary-maine.opendata.arcgis.com/datasets#data>

[Town shellfish information including shellfish conservation area maps](https://www.maine.gov/dmr/shellfish-sanitation-management/programs/municipal/ordinances/towninfo.html)

<https://www.maine.gov/dmr/shellfish-sanitation-management/programs/municipal/ordinances/towninfo.html>

[State of Maine Shellfish Sanitation and Management](https://www.maine.gov/dmr/shellfish-sanitation-management/index.html)

<https://www.maine.gov/dmr/shellfish-sanitation-management/index.html>

[Eelgrass maps](https://www.maine.gov/dmr/science-research/species/eelgrass/index.html)

<https://www.maine.gov/dmr/science-research/species/eelgrass/index.html>

[Casco Bay Estuary Partnership](https://www.cascobayestuary.org/)

<https://www.cascobayestuary.org/>

[Maine GIS Stream Habitat Viewer](https://www.arcgis.com/home/item.html?id=5869c2d20f0b4c3a9742bdd8abef42cb)

<https://www.arcgis.com/home/item.html?id=5869c2d20f0b4c3a9742bdd8abef42cb>

New Hampshire

[NH's Statewide GIS Clearinghouse, NH GRANIT](http://www.granit.unh.edu/)

<http://www.granit.unh.edu/>

[NH Coastal Viewer](http://www.granit.unh.edu/nhcoastalviewer/)

<http://www.granit.unh.edu/nhcoastalviewer/>

[State of NH Shellfish Program](https://www.des.nh.gov/organization/divisions/water/wmb/shellfish/)

<https://www.des.nh.gov/organization/divisions/water/wmb/shellfish/>

Massachusetts

[MA Shellfish Sanitation and Management Program](https://www.mass.gov/shellfish-sanitation-and-management)

<https://www.mass.gov/shellfish-sanitation-and-management>

[MassGIS Data, Including Eelgrass Maps](http://maps.massgis.state.ma.us/map_ol/oliver.php)

http://maps.massgis.state.ma.us/map_ol/oliver.php

[MA DMF Recommended TOY Restrictions Document](https://www.mass.gov/files/documents/2016/08/ry/tr-47.pdf)

<https://www.mass.gov/files/documents/2016/08/ry/tr-47.pdf>

[Massachusetts Bays National Estuary Program](https://www.mass.gov/orgs/massachusetts-bays-national-estuary-program)

<https://www.mass.gov/orgs/massachusetts-bays-national-estuary-program>

[Buzzards Bay National Estuary Program](http://buzzardsbay.org/)

<http://buzzardsbay.org/>

[Massachusetts Division of Marine Fisheries](https://www.mass.gov/orgs/massachusetts-division-of-marine-fisheries)

<https://www.mass.gov/orgs/division-of-marine-fisheries>

[Massachusetts Office of Coastal Zone Management](#)

<https://www.mass.gov/orgs/massachusetts-office-of-coastal-zone-management>

Rhode Island

[RI Shellfish and Aquaculture](#)

<http://www.dem.ri.gov/programs/fish-wildlife/marine-fisheries/shellfish-aquaculture.php>

[RI Shellfish Management Plan](#)

<http://www.shellfishri.com/>

Eelgrass Maps

<http://edc.maps.arcgis.com/apps/View/index.html?appid=db52bb689c1e44259c06e11fd24895f8>

[RI GIS Data](#)

<http://ridemgis.maps.arcgis.com/apps/webappviewer/index.html?id=87e104c8adb449eb9f905e5f18020de5>

[Narragansett Bay Estuary Program](#)

<http://nbep.org/>

[Rhode Island Division of Marine Fisheries](#)

<http://www.dem.ri.gov/programs/fish-wildlife/marine-fisheries/index.php>

[Rhode Island Coastal Resources Management Council](#)

<http://www.crmc.ri.gov/>

Connecticut

[CT Bureau of Aquaculture](#)

<https://www.ct.gov/doag/cwp/view.asp?a=3768&q=451508&doagNav=>

[CT GIS Resources](#)

https://www.ct.gov/deep/cwp/view.asp?a=2698&q=323342&deepNav_GID=1707

[Natural Shellfish Beds in CT](#)

<https://cteco.uconn.edu/viewer/index.html?viewer=aquaculture>

[Eelgrass Maps](#)

https://www.fws.gov/northeast/ecologicalservices/pdf/wetlands/2012_CT_Eelgrass_Final_Report_11_26_2013.pdf

[Long Island Sound Study](#)

<http://longislandsoundstudy.net/>

[CT GIS Resources](#)

<http://cteco.maps.arcgis.com/home/index.html>

[CT DEEP Office of Long Island Sound Programs and Fisheries](#)

<https://www.ct.gov/deep/site/default.asp>

[CT River Watershed Council](#)

<https://www.ctriver.org/>

New York

[Eelgrass Report](#)

http://www.dec.ny.gov/docs/fish_marine_pdf/finaleseagrassreport.pdf

[Peconic Estuary Program](#)

<https://www.peconicestuary.org/>

[NY/NJ Harbor Estuary](#)

<https://www.hudsonriver.org/estuary-program>

New York GIS Clearinghouse

<https://gis.ny.gov/>

New Jersey

[Submerged Aquatic Vegetation Mapping](http://www.crssa.rutgers.edu/projects/sav/)

<http://www.crssa.rutgers.edu/projects/sav/>

[Barnegat Bay Partnership](https://www.barnegatbaypartnership.org/)

<https://www.barnegatbaypartnership.org/>

[NJ GeoWeb](https://www.nj.gov/dep/gis/geoweb splash.htm)

<https://www.nj.gov/dep/gis/geoweb splash.htm>

[NJ DEP Shellfish Maps](https://www.nj.gov/dep/landuse/shellfish.html)

<https://www.nj.gov/dep/landuse/shellfish.html>

Pennsylvania

[Delaware River Management Plan](https://www.fishandboat.com/Fish/Fisheries/DelawareRiver/Documents/delaware_river_plan_exec_draft.pdf)

https://www.fishandboat.com/Fish/Fisheries/DelawareRiver/Documents/delaware_river_plan_exec_draft.pdf

[PA DEP Coastal Resources Management Program](https://www.dep.pa.gov/Business/Water/Compacts%20and%20Commissions/Coastal%20Resources%20Management%20Program/Pages/default.aspx)

<https://www.dep.pa.gov/Business/Water/Compacts%20and%20Commissions/Coastal%20Resources%20Management%20Program/Pages/default.aspx>

[PA DEP GIS Mapping Tools](https://www.dep.pa.gov/DataandTools/Pages/GIS.aspx)

<https://www.dep.pa.gov/DataandTools/Pages/GIS.aspx>

Delaware

[Partnership for the Delaware Estuary](http://www.delawareestuary.org/)

<http://www.delawareestuary.org/>

[Center for Delaware Inland Bays](http://www.inlandbays.org/)

<http://www.inlandbays.org/>

[Delaware FirstMap](http://delaware.maps.arcgis.com/home/index.html)

<http://delaware.maps.arcgis.com/home/index.html>

Maryland

[Submerged Aquatic Vegetation Mapping](http://web.vims.edu/bio/sav/)

<http://web.vims.edu/bio/sav/>

[MERLIN](http://dnrweb.dnr.state.md.us/MERLIN/)

<http://dnrweb.dnr.state.md.us/MERLIN/>

[Maryland Coastal Bays Program](https://mdcoastalbays.org/)

<https://mdcoastalbays.org/>

Virginia

[Submerged Aquatic Vegetation mapping](http://www.mrc.virginia.gov/regulations/Guidance_for_SAV_beds_and_restoration_final_approved_by_Commission_7-22-17.pdf)

http://www.mrc.virginia.gov/regulations/Guidance_for_SAV_beds_and_restoration_final_approved_by_Commission_7-22-17.pdf

[VDGIF Time of Year Restrictions \(TOYR\) and Other Guidance](https://www.dgif.virginia.gov/wp-content/uploads/VDGIF-Time-of-Year-Restrictions-Table.pdf)

<https://www.dgif.virginia.gov/wp-content/uploads/VDGIF-Time-of-Year-Restrictions-Table.pdf>

IMPACTS EVALUATION (page 6 of EFH Worksheet) Barnegat Inlet Beneficial Use Dredging

The Guide to Essential Fish Habitat Designations in the Northeastern United States Volume IV (NOAA 1999) and the EFH Mapper (NMFS 2019) were used to identify federally managed fish species and life stages within the vicinity of the Oyster Creek dredging and beneficial use areas. EFH is defined by descriptions contained in the fishery management plans developed by the regional Fishery Management Councils (FMCs), in this case primarily the New England and Mid-Atlantic FMCs. It is believed that SAV is absent in the project area due to depths, however a survey is under way to determine whether SAV is located in the project area.

Oyster Creek is a component of the upstream limit of the authorized Barnegat Inlet navigation channel that has been maintained by the Philadelphia District U.S. Army Corps of Engineers (USACE) since 1940. The channel at Oyster Creek is 200 feet wide by 8 feet deep (MLLW). The western portion of the channel shoals frequently and is typically dredged every 3 years based on when funding is appropriated. USACE proposes to initially dredge approximately 25,000 cubic yards (cy) to bring the channel back to authorized depth. Dredging will be conducted utilizing a hydraulic pipeline (cutterhead) dredge and the material will be placed using a diffuser in the center and at the bottom of Site 6 in order create a first lift of a submerged island, similar to the method used for creation of Sites 26A and 26B. The initial operation is expected to take four weeks and will occur during the mid-November through December time frame.

More about the Selected Placement Sites:

Site 6 is located in deeper water west of the historic USACE dredged material disposal site called "Site 26B". There is strong support for island creation at this site as the depths (about 8 feet NAVD88) are believed to be in excess of the depth that SAV will proliferate. Both Sites 26A and 26B islands were created in the near vicinity and provide significant natural resource value. The creation of island at Site 26B has afforded shallow water habitat where fringing SAV has developed naturally and is an ideal location under the Section 1122 pilot program to monitor island development. The creation of an island at Site 26A has resulted in the establishment of a heron rookery. Based on experiences in the methodology for development of Sites 26A and 26B, the creation of an island in this vicinity at Site 6 is expected to provide comparable habitat benefits.

Site 10 is the Edwin B. Forsythe National Wildlife Refuge site, located on the western side of Barnegat Bay. The evaluation team felt that this aquatic site was a good location as a nearshore placement area. The objective is to keep the high quality sand in the system and this site has the potential to provide a supplemental sand source for shoreline protection and promote marsh migration in an area where shoreline erosion is a concern to the Refuge managers. Use of this location for placement would require SAV and shellfish delineations to be completed to fine-tune strategic placement to avoid adversely impacting these resources. The site will be carried forward for further, more in-depth review as a potential future placement site outside of the scope of the Section 1122 pilot program.

Burial of some species will occur within the placement site, however, species in highly dynamic areas are typically R-selected species capable of recolonizing their populations rapidly through recruitment from neighboring areas. The sediment placement will occur gradually over a period of four weeks, therefore some benthic organisms may be able to migrate through the newly placed sand. While turbidity will temporarily increase at the placement site, turbidity levels are typically naturally elevated in this area due to currents and wave action. Mobile species, such as fish and crabs in marine environments have been shown through video monitoring to leave an area of disturbance and elevated turbidity temporarily, returning shortly after placement operations cease. Turbidity that results from placement will dissipate quickly due to currents and the large grain size of the clean sandy material. Water depths in the center of the placement area are expected to decrease by about 1-1.5 feet after the initial placement. It is hoped that successive placements over a prolonged period of years would raise the area to resemble site 26B, which is an island of approximately 11 acres of upland and wetland surrounded by shallow subtidal habitat with dense SAVs, making for a total area of approximately 60 acres.

Placement (Sites 10 and 11) Benthic organisms that occur within the depth of closure zone of the nearshore area have evolved to live in the dynamic environment of elevated turbidity due to wave action and bottom sediment movement. The proposed placements will be approximately 1000 feet long and 500 feet wide, and will be located within the 6-7 (MLLW) foot contours (NAVD88) (see enclosed figure). The hopper dredge will approach bow-first, as close into the breaking waves as the draft allows, and open the hopper to release the sand. The hopper will contain approximately 250 cubic yards each load and the loads can be placed over a grid pattern within the 1000 ft zone, allowing for small amounts of sediment to be placed with minimal impact.

Burial of some species will occur within the placement site, however, species in highly dynamic areas are typically R-selected species capable of recolonizing their populations rapidly through recruitment from neighboring areas. The quantities placed per hopper release are small (250-300 cubic yards/load) are small, allowing for some benthic organisms to migrate through the newly placed sand (Bolam, 2010; OSPAR Commission, 2008; Hinchey et al., 2006; Maurer et al., 1981). Populations of benthic prey species are not expected to be high in the proposed placement nearshore zone. Turbidity levels are typically naturally elevated in the nearshore zone due to wave action. Mobile species, such as fish and crabs in marine environments have been shown through video monitoring to leave an area of disturbance and elevated turbidity temporarily, returning shortly after placement operations cease. Turbidity that results from placement will dissipate quickly due to waves and currents and the large grain size of the clean sandy material. Water depths are not expected to change significantly due to the natural movement of sand by currents and waves within the nearshore zone, however, after a series of placement cycles, the placement may create a nearshore subtidal area of elevated topography that is attractive to fish.

References Cited

Bolam, Stefan George, 2010. Environmental Monitoring and Assessment: *Burial survival of benthic macrofauna following deposition of simulated dredged material*. Vol. 181 Issue 1-4, pp. 13-27.

Hinchey, E.K., L.C. Schaffner, C.C. Hoar, B.W. Vogt, L.P. Batte, 2006. *Responses of estuarine benthic invertebrates to sediment burial: the importance of mobility and adaptation*. Hydrobiologia, Vol. 556, issue 1, pp. 85-98.

Maurer, D., R.T. Keck, J.C. Tinsman, W.A. Leathem, 1981. *Vertical migration and mortality of benthos in dredged material*. Part 1: Mollusca. Marine Environmental Research 4 (1980-81) 299-319.

OSPAR Commission, 2008. Literature Review on the Impacts of Dredged Sediment Disposal at Sea. Biodiversity Series, ISBN 978-1-906840-01-3.

If impacts cannot be avoided, why not?

Adverse impacts of the proposed dredging are unavoidable and have been minimized to the maximum extent practicable. The impacts of the dredging will be minimal and temporary due to the relatively small acreage of dredging, the width of the waterway relative to the shoaled areas to be dredged, strong currents running through the inlet, and the history of dredging disturbance in the area.

Adverse impacts of the proposed placements have been avoided and minimized to the maximum extent practicable. The impacts of the placements will be minimal and primarily temporary due to the dynamic nature of the aquatic environment within the placement zones, strong currents running through the area, and the uncontaminated large grained nature of the material. Furthermore, the impacts of the placements are mitigated by the benefit to the aquatic environment that will be provided by keeping sediment in the local system. Additional added benefits are anticipated to be realized over time as the placement sites are expected to provide shallower habitat that may diffuse energy of currents in their immediate area. This expectation is based on the nearby gradual placement sites (26 A and 26 B) which, over time and multiple placements, created shallow habitat with slower wave energy conducive to the establishment of healthy SAV beds.

What specific measures will be used to minimize impacts?

Dredging: The draghead is equipped with a grid screen to prevent entrainment/impingement of marine species. Standard operating procedure requires that the draghead is not switched on until it is resting on the bottom so eliminate suction in the water column.

Placement: The proposed action is designed to allow some operational flexibility to determine where placement is most needed and protect existing valuable aquatic habitat. Disturbance to the bay bottom would occur at both the channel and the placement area, however, the quantities proposed for dredging and placement are small and adverse impacts to benthic habitat are minimized through placement of material similar in grain size to existing substrate. SAV surveys will occur at the selected placement sites prior to the dredging cycle in order to

Site 11 is Lighthouse Camp. Like Site 10, it is also located on the western side of the bay just south of Site 10. The land is NJDEP-owned and currently leased to a non-governmental organization (NGO). The evaluation team felt that the site has potential for shoreline protection by providing a supplemental sand source to promote improved shoreline resiliency and promote marsh migration. The site also houses an SAV “grow-out” facility used to support SAV mitigation/restoration. As noted for Site 10, use of this site would require SAV and shellfish delineations. The marsh and shoreline have suffered extensive degradation, predominantly from historic mosquito-management, farming, chronic boat wake erosion, severe storms and sea level rise. The Lighthouse Center for Natural Resource Education is located nearby. The marsh and shoreline degradation have made the Lighthouse Center’s facilities more vulnerable to coastal flooding. TNC has proposed a hybrid living shoreline project in this area. A sand supplement using dredge material from the Oyster Creek channel and placed in the nearshore zone may complement future shoreline restoration efforts. The site will be carried forward for further, more in-depth review as a potential future placement site outside of the scope of the Section 1122 pilot program.

Impacts Discussion

Dredging. The impacts of the proposed dredging will not be permanent. Oceans are dynamic environments with waves and currents continually moving bottom sediments. The Oyster Creek channel has been repeatedly dredged for decades due to shoaling. The open water area around Oyster Creek is large (generally about 600 to 1000 feet wide), allowing for fish passage during dredging operations at significant distance away from the action area. The navigation channel is about 200 feet wide and roughly one half of the channel bottom has shoaled and will be dredged. The cutterhead dredge (Fullerton, to be used for site 6) and the hopper dredge (Currituck or Murden, which may potentially be used in the future for sites 10 and 11) emit low vibration engine noise not unlike any commercial vessel transiting the inlet. Impingement/entrainment is unlikely as most marine species will avoid the dredge and the draghead is not activated until it is resting directly on the bottom. The Fullerton, Currituck and Murden have grid screens on the draghead water intake to prevent impingement/entrainment of marine species into the dredge. Turbidity created by the dredging operation will dissipate quickly due to the strong currents that pass through the inlet.

Placement (Site 6) The proposed placement at site 6 is being designed to mimic the success at placement site 26 B. Placement site 26B has created an island of approximately 11 acres with fringing SAVs in the surrounding submerged area of approximately 60 acres. Thick beds of SAV have since established as a fringe around the island as placement of the dredged material created shallow depths suitable for the plants to thrive. At site 6, the first placement of 25,000 cubic yards in November/Dec 2020 will be located in the very middle of an approximately 60-acre area. Though it is hard to predict the exact dimensions of this initial placement, we anticipate that it will create a lift of about 1 to 1.5 ft spread out over roughly 11 acres of the submerged habitat. The first placement will be monitored pre-, during and post placement to determine the dimensions initially after construction and to inform future successive lifts of the island/area.

determine whether SAV's have the potential to be impacted. Exact placement locations will be adjusted in order to avoid impacts to SAVs as much as possible. An SAV survey for site 6 is scheduled to be conducted on September 2, 2020.

Is compensatory mitigation proposed. If no, why not?

Compensatory mitigation is not proposed due to the primarily temporary impacts to the aquatic environment, as well as the mitigating effect of beneficially using the dredged sediment rather than removing it to an upland CDF or depositing it on nearby 26B. The proposed action is maintenance dredging of an authorized navigation channel and entails the beneficial use of the dredged sand to supplement nourishment of the local aquatic environment in order to reduce risk of storm damages to an eroding shorelines (Sites 10 and 11) and create shallow habitat with low wave energy to encourage SAV recruitment.

Additional Federally-managed species for the project area that could not fit into the EFH Worksheet:

Species	EFH is designated/mapped for:				Habitat present based on text description (optional)
	EFH: eggs	EFH: larvae	EFH: juvenile	EFH: adults/spawning adults	
Spiny Dogfish	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Atlantic surfclam	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Scup	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Summer flounder	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Black sea bass	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Appendix B

NOAA Fisheries Greater Atlantic Regional Fisheries Office Not
Likely To Adversely Affect Section 7 (ESA) Consultation
Verification Form.



GARFO ESA Section 7: NLAA Program Verification Form

(Please submit a signed version of this form, together with any project plans, maps, supporting analyses, etc., to nmfs.gar.esa.section7@noaa.gov with "USACE NLAA Program: [Application Number]" in the subject line)

Section 1: General Project Details

Application Number:		Oyster Creek Dredging and Beneficial Use Project	
Reinitiation:		No	
Applicant(s):		U.S. Army Corps of Engineers	
Permit Type:		Civil Works/Federal Navigation	
Anticipated project start date (e.g., 10/1/2020)		11/015/2020	
Anticipated project end date (e.g., 12/31/2022 – if there is no permit expiration date, write “N/A”)		12/31/2031	
Project Type/Category (check all that apply to entire action):			
<input type="checkbox"/>	Aquaculture (shellfish) and artificial reef creation	<input type="checkbox"/>	Mitigation (fish/wildlife enhancement or restoration)
<input checked="" type="checkbox"/>	Dredging and disposal/beach nourishment	<input type="checkbox"/>	Bank stabilization
<input type="checkbox"/>	Piers, ramps, floats, and other structures	<input checked="" type="checkbox"/>	If other, describe project type category: dredging and sediment placement for beneficial use
Town/City:	Ocean County	Zip:	
State:	New Jersey	Water body:	Oyster Creek/Barnegat Bay

Project/Action Description and Purpose (include relevant permit conditions that are not captured elsewhere on form):		
The Philadelphia District, USACE, has received funding to complete dredging in the Oyster Creek channel and to beneficially place the dredged material in Barnegat Bay, New Jersey. The project's purpose is to bring the channel back to authorized depth and maintain the channel for safe use by vessels, to eventually develop an island (Site 6) that will provide habitat for fauna and depths suitable for the establishment of SAV beds. Two additional sites (Sites 10 and 11) are proposed as future potential placement locations for annual maintenance material to provide a supplemental sand source to potentially reduce the risk of storm damages to eroding shorelines. The project is to last until 2031.		
The objective will be to conduct successive placements over many years, with maintenance dredging material from the Oyster Creek channel to eventually develop an island (Site 6 – see enclosed map) that will provide conditions suitable for the establishment of extensive SAV beds. Initially we will place 25,000 cubic yards of material from the Oyster Creek Channel in		
Type of Bottom Habitat Modified:	Permanent/Temporary:	Area (acres):
Sand (saline)	Temporary	10.00
Sand (saline)	Temporary	82.00
Sand (saline)	Temporary	
Project Latitude (e.g., 42.625884)	39.786521	
Project Longitude (e.g., -70.646114)	-74.158563	
Mean Low Water (MLW)(m)	2.66	
Mean High Water (MHW)(m)	3.20	
Width (m) of water body in action area:	Stressor Category (stressor that extends furthest distance into water body – e.g., turbidity plume; sound pressure wave):	Max extent (m) of stressor into the water body:
5,000.00	turbidity	1,200.00

Section 2: ESA-listed species and/or critical habitat in the action area:

<input checked="" type="checkbox"/>	Atlantic sturgeon (all DPSs)	<input checked="" type="checkbox"/>	Kemp's ridley sea turtle
<input type="checkbox"/>	Atlantic sturgeon critical habitat Indicate which DPS : <input type="text" value="Select DPS"/>	<input checked="" type="checkbox"/>	Loggerhead sea turtle (NW Atlantic DPS)
<input type="checkbox"/>	Shortnose sturgeon	<input checked="" type="checkbox"/>	Leatherback sea turtle
<input type="checkbox"/>	Atlantic salmon (GOM DPS)	<input type="checkbox"/>	North Atlantic right whale
<input type="checkbox"/>	Atlantic salmon critical habitat (GOM DPS)	<input type="checkbox"/>	North Atlantic right whale critical habitat
<input checked="" type="checkbox"/>	Green sea turtle (N. Atlantic DPS)	<input type="checkbox"/>	Fin whale

* Please consult GARFO PRD's ESA Section 7 Mapper for ESA-listed species and critical habitat information for your action area at: <https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-species-critical-habitat-information-maps-greater>.

Section 3: NLAA Determination (check all applicable fields):

If the Project Design Criteria (PDC) is met, select Yes. If the PDC is not applicable (N/A) for your project (e.g., the stressor category is not included for your project activity, or for PDC 2, your project does not occur within the range of the GOM DPS of Atlantic salmon), select N/A. If the PDC is applicable, but is not met, leave both boxes blank and provide a justification for that PDC in Section 4.

a) GENERAL PDC			
Yes	N/A	PDC #	PDC Description
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1.	No portion of the proposed action will individually or cumulatively have an adverse effect on ESA-listed species or designated critical habitat.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2.	No portion of the proposed action will occur in the tidally influenced portion of rivers/streams where Atlantic salmon presence is possible from April 10–November 7. Note: If the project will occur within the geographic range of the GOM DPS Atlantic salmon but their presence is not expected following the best available commercial scientific data, the work window does not need to be applied (include reference in project description).
<input type="checkbox"/>	<input checked="" type="checkbox"/>	3.	No portion of the proposed action that may affect shortnose or Atlantic sturgeon will occur in areas identified as spawning grounds as follows: i. Gulf of Maine: April 1–Aug. 31 ii. Southern New England/New York Bight: Mar. 15–Aug. 31 iii. Chesapeake Bay: March 15–July 1 and Sept. 15–Nov. 1 Note: If river specific information exists that provides better or more refined time of year information, those dates may be substituted with NMFS approval (include reference in project description).
<input type="checkbox"/>	<input checked="" type="checkbox"/>	4.	No portion of the proposed action that may affect shortnose or Atlantic sturgeon will occur in areas identified as overwintering grounds, where dense aggregations are known to occur, as follows: i. Gulf of Maine: Oct. 15–April 30 ii. Southern New England/ New York Bight: Nov. 1–Mar. 15 iii. Chesapeake Bay: Nov. 1–Mar. 15 Note: If river specific information exists that provides better or more refined time of year information, those dates may be substituted with NMFS approval (include reference in project description).
<input type="checkbox"/>	<input checked="" type="checkbox"/>	5.	Within designated Atlantic salmon critical habitat, no portion of the proposed action will affect spawning and rearing areas (PBFs 1-7).
<input type="checkbox"/>	<input checked="" type="checkbox"/>	6.	Within designated Atlantic sturgeon critical habitat, no work will affect hard bottom substrate (e.g., rock, cobble, gravel, limestone, boulder, etc.) in low salinity waters (i.e., 0.0-0.5 parts per thousand) (PBF 1).

Yes	N/A	PDC #	PDC Description
<input checked="" type="checkbox"/>	<input type="checkbox"/>	7.	Work will result in no or only temporary/short-term changes in water temperature, water flow, salinity, or dissolved oxygen levels.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	8.	If ESA-listed species are (a) likely to pass through the action area at the time of year when project activities occur; and/or (b) the project will create an obstruction to passage when in-water work is completed, then a zone of passage (~50% of water body) with appropriate habitat for ESA-listed species (e.g., depth, water velocity, etc.) must be maintained (i.e., physical or biological stressors such as turbidity and sound pressure must not create barrier to passage).
<input type="checkbox"/>	<input checked="" type="checkbox"/>	9.	Any work in designated North Atlantic right whale critical habitat must have no effect on the physical and biological features (PBFs).
<input checked="" type="checkbox"/>	<input type="checkbox"/>	10.	The project will not adversely impact any submerged aquatic vegetation (SAV).
<input checked="" type="checkbox"/>	<input type="checkbox"/>	11.	No blasting or use of explosives will occur.

b) The following stressors are applicable to the action
(check all that apply – use Stressor Category Table for guidance):

<input type="checkbox"/>	Sound Pressure
<input checked="" type="checkbox"/>	Impingement/Entrapment/Capture
<input checked="" type="checkbox"/>	Turbidity/Water Quality
<input type="checkbox"/>	Entanglement (Aquaculture)
<input checked="" type="checkbox"/>	Habitat Modification
<input checked="" type="checkbox"/>	Vessel Traffic

Activity Category	Stressor Category					
	Sound Pressure	Impingement/Entrapment/Capture	Turbidity/Water Quality	Entanglement	Habitat Mod.	Vessel Traffic
Aquaculture (shellfish) and artificial reef creation	N	N	Y	Y	Y	Y
Dredging and disposal/beach nourishment	N	Y	Y	N	Y	Y

Activity Category	Stressor Category					
	Sound Pressure	Impingement/ Entrapment/ Capture	Turbidity/ Water Quality	Entanglement	Habitat Mod.	Vessel Traffic
Piers, ramps, floats, and other structures	Y	N	Y	N	Y	Y
Transportation and development (e.g., culvert construction, bridge repair)	Y	N	Y	N	Y	Y
Mitigation (fish/wildlife enhancement or restoration)	N	N	Y	N	Y	Y
Bank stabilization and dam maintenance	Y	N	Y	N	Y	Y

c) SOUND PRESSURE PDC

Information for Pile Driving:

If your project includes non-timber piles*, please attach your calculation to this verification form showing that the noise is below the injury thresholds of ESA-listed species in the action area. The GARFO Acoustic Tool is available as one source, should you not have other information:

<https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-consultation-technical-guidance-greater-atlantic>

*Sound pressure effects from timber and steel sheet piles were analyzed in the NLAA programmatic consultation, so no additional acoustic information is necessary.

	Pile material	Pile diameter/width (inches)	Number of piles	Installation method
a)	Select pile material			Select installation method
b)	Select pile material			Select installation method
c)	Select pile material			Select installation method
d)	Select pile material			Select installation method

Yes	N/A	PDC #	PDC Description
<input type="checkbox"/>	<input checked="" type="checkbox"/>	12.	<p>If pile driving is occurring during a time of year when ESA-listed species may be present, and the anticipated noise is above the behavioral noise threshold, a “soft start” is required to allow animals an opportunity to leave the project vicinity before sound pressure levels increase. <i>In addition to using a soft start at the beginning of the work day for pile driving, one must also be used at any time following cessation of pile driving for a period of 30 minutes or longer.</i></p> <p><u>For impact pile driving:</u> pile driving will commence with an initial set of three strikes by the hammer at 40% energy, followed by a one minute wait period, then two subsequent 3-strike sets at 40% energy, with one-minute waiting periods, before initiating continuous impact driving.</p> <p><u>For vibratory pile installation:</u> pile driving will be initiated for 15 seconds at reduced energy followed by a one-minute waiting period. This sequence of 15 seconds of reduced energy driving, one-minute waiting period will be repeated two additional times, followed immediately by pile-driving at full rate and energy.</p>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	13.	Any new pile supported structure must involve the installation of ≤ 50 piles (below MHW).
<input type="checkbox"/>	<input checked="" type="checkbox"/>	14.	All underwater noise (pressure) is below (<) the physiological/injury noise threshold for ESA-species in the action area.

d) IMPINGEMENT/ENTRAINMENT/CAPTURE PDC

Information for Dredging/Disposal:

Type of dredge:	Low-volume hopper (~300 cubic yard maximum bin capacity)		
Maintenance dredging?:	Yes	If “Yes”, how many acres?	10.00
If maintenance, when was the last dredge cycle?	2017		
New dredging:	Select Yes or No	If “Yes”, how many acres?	
Estimated number of dredging events covered by permit:	10		
ESA-species exclusion measures required (e.g., cofferdam, turbidity curtain):	No		
If no exclusion measures required, explain why:	Not operationally feasible		
Information for Intake Structures:			
Mesh screen size (mm) for temporary intake:			

Yes	N/A	PDC #	PDC Description
<input checked="" type="checkbox"/>	<input type="checkbox"/>	15.	Only mechanical, cutterhead, and low volume hopper (e.g., CURRITUCK, ~300 cubic yard maximum bin capacity) dredges may be used.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	16.	No new dredging in Atlantic sturgeon or Atlantic salmon critical habitat (maintenance dredging still must meet all other PDCs). New dredging outside Atlantic sturgeon or salmon critical habitat is limited to one time dredge events (e.g., burying a utility line) and minor (≤ 2 acres) expansions of areas already subject to maintenance dredging (e.g., marina/harbor expansion).
<input checked="" type="checkbox"/>	<input type="checkbox"/>	17.	Work behind cofferdams, turbidity curtains, or other methods to block access of animals to dredge footprint is required when operationally feasible or beneficial and ESA-listed species are likely to be present (if presence is limited to rare, transient individuals, exclusion methods are not necessary).
<input type="checkbox"/>	<input checked="" type="checkbox"/>	18.	Temporary intakes related to construction must be equipped with appropriate sized mesh screening (as determined by GARFO section 7 biologist and/or according to Chapter 11 of the NOAA Fisheries Anadromous Salmonid Passage Facility Design) and must not have greater than 0.5 fps intake velocities, to prevent impingement or entrainment of any ESA-listed species life stage.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	19.	No new permanent intake structures related to cooling water, or any other inflow at facilities (e.g. water treatment plants, power plants, etc.).

e) TURBIDITY/WATER QUALITY PDC

Information for Turbidity Producing Activity (excluding disposal):

ESA-species turbidity control measures required (e.g., turbidity curtain):	No
If no turbidity control measures required, explain why:	Not operationally feasible

Information for Dredged Material Disposal:

Disposal site:	Nearshore placement/nourishment
Estimated number of trips to disposal site:	10
Relevant disposal site permit/special conditions required (NAE: for offshore disposal, include Group A, B, C, or relevant Long Island Sound consultation):	Clarification on disposal location and method: Material will be pumped from the channel and onto site 6 for this initial placement. In subsequent years a much smaller amount of material (about 3,000 CY) will be dredged and deposited at either site 6, 10, or 11.

Yes	N/A	PDC #	PDC Description
<input checked="" type="checkbox"/>	<input type="checkbox"/>	20.	Work behind cofferdams, turbidity curtains, or other methods to control turbidity is required when operationally feasible or beneficial and ESA-listed species are likely to be present (if presence is limited to rare, transient individuals, turbidity control methods are not necessary).
<input type="checkbox"/>	<input checked="" type="checkbox"/>	21.	In-water offshore disposal may only occur at designated disposal sites that have been the subject of ESA section 7 consultation with NMFS, where a valid consultation is in place and appropriate permit/special conditions are included.

Yes	N/A	PDC #	PDC Description
<input checked="" type="checkbox"/>	<input type="checkbox"/>	22.	Any temporary discharges must meet state water quality standards (e.g., no discharges of substances in concentrations that may cause acute or chronic adverse reactions, as defined by EPA water quality standards criteria).
<input type="checkbox"/>	<input checked="" type="checkbox"/>	23.	Only repair, upgrades, relocations and improvements of existing discharge pipes or replacement in-kind are allowed; no new construction of untreated discharges.
f) ENTANGLEMENT PDC			
Information for Aquaculture Projects:			
Approximate distance from shore (MHW)(m):			
Grow season begins (approximate):			
Grow season ends (approximate):			
Total number of vertical lines:			
Total number of horizontal lines:			
Is any gear seasonally removed from the water? If yes, which parts and when?			
	Aquaculture Gear	Acreage (total permit footprint)	Type of Shellfish Cultivated
a)	Select aquaculture gear		Select type of shellfish cultivated
b)	Select aquaculture gear		Select type of shellfish cultivated
c)	Select aquaculture gear		Select type of shellfish cultivated
Yes	N/A	PDC #	PDC Description
<input type="checkbox"/>	<input checked="" type="checkbox"/>	24.	Shell on bottom <50 acres with maximum of 4 corner marker buoys;
<input type="checkbox"/>	<input checked="" type="checkbox"/>	25.	Cage on bottom with no loose floating lines <5 acres and minimal vertical lines (1 per string of cages, 4 corner marker buoys);
<input type="checkbox"/>	<input checked="" type="checkbox"/>	26.	Floating cages in <3 acres in waters and shallower than -10 feet MLLW with no loose lines and minimal vertical lines (1 per string of cages, 4 corner marker buoys);
<input type="checkbox"/>	<input checked="" type="checkbox"/>	27.	Floating upweller docks in >10 feet MLLW.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	28.	Any in-water lines, ropes, or chains must be made of materials and installed in a manner to minimize or avoid the risk of entanglement by using thick, heavy, and taut lines that do not loop or entangle. Lines can be enclosed in a rigid sleeve.
g) HABITAT MODIFICATION PDC			
Yes	N/A	PDC #	PDC Description
<input checked="" type="checkbox"/>	<input type="checkbox"/>	29.	No conversion of habitat type (soft bottom to hard, or vice versa) for aquaculture or reef creation.

h) VESSEL TRAFFIC PDC			
Information for Vessel Traffic:			
	Temporary Project Vessel Type		Number of Vessels
a)	Dredge vessel		1
b)	Crew support vessel		1
c)	Select temporary vessel type		
	Type of Non-Commercial or Aquaculture Vessels Added <i>– only include if there is a net increase directly/indirectly resulting from project)</i>		Number of Vessels <i>(if sum > 2, PDC 33 is not met and justification required in Section 4)</i>
a)	Select type of non-commercial or aquaculture vessels		
b)	Select type of non-commercial or aquaculture vessels		
	Type of Commercial Vessels Added <i>(only include if there is a net increase directly/indirectly resulting from project)</i>		Number of Vessels <i>(if > 0, PDC 33 is not met and justification required in Section 4)</i>
a)			
b)			
If no temporary/permanent vessel traffic, briefly explain (e.g., all land-based work, no net increase in vessel traffic)			
Yes	N/A	PDC #	PDC Description
<input checked="" type="checkbox"/>	<input type="checkbox"/>	30.	Maintain project vessels operating within the action area to speed limits below 10 knots and dredge vessel speeds of 4 knots maximum, while dredging.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	31.	Maintain a 1,500-foot buffer between project vessels and ESA-listed whales and a 150-foot buffer between project vessels and sea turtles unless the vessel is navigating to an in-water disposal site/activity. If the vessel is navigating to an in-water disposal site/activity, refer to and include the conditions contained in the appropriate GARFO-USACE/EPA consultation for the disposal site.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	32.	The number of project vessels must be limited to the greatest extent possible, as appropriate to size and scale of project.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	33.	The permanent net increase in vessels resulting from a project (e.g., dock/float/pier/boating facility) must not exceed two non-commercial vessels. A project must not result in the permanent net increase of any commercial vessels (e.g., a ferry terminal).

Section 4: Justification for Review under the NLAA Program

If the action is not in compliance with all of the General PDC and appropriate stressor PDC, but you can provide justification and/or special conditions to demonstrate why the project still meets the NLAA determination and is consistent with the aggregate effects considered in the programmatic consultation, you may still certify your project through the NLAA program using

this verification form. Please identify which PDC your project does not meet (e.g., PDC 9, PDC 15, PDC 22, etc.) and provide your rationale and justification for why the project is still eligible for the verification form.

To demonstrate that the project is still NLAA, you must explain why the effects on ESA-listed species or critical habitat are **insignificant** (i.e., too small to be meaningfully measured or detected) or **discountable** (i.e., extremely unlikely to occur). **Please use this language in your justification.**

PDC#	Justification
PDC #	
PDC #	
PDC #	

PDC #	
-------	--

Section 5: USACE Verification of Determination

<input checked="" type="checkbox"/>	In accordance with the NLAA Program, USACE has determined that the action complies with all applicable PDC and is not likely to adversely affect listed species.
<input type="checkbox"/>	In accordance with the NLAA Program, the USACE has determined that the action is not likely to adversely affect listed species per the justification and/or special conditions provided in Section 4.
USACE Signature:	
WARD.RACHEL.J.1513505503 Digitally signed by WARD.RACHEL.J.1513505503 Date: 2020.09.22 11:16:15 -04'00'	Date: 09/22/2020

Section 6: GARFO Concurrence

<input checked="" type="checkbox"/>	In accordance with the NLAA Program, GARFO PRD concurs with USACE’s determination that the action complies with all applicable PDC and is not likely to adversely affect listed species or critical habitat.
<input type="checkbox"/>	In accordance with the NLAA Program, GARFO PRD concurs with USACE’s determination that the action is not likely to adversely affect listed species or critical habitat per the justification and/or special conditions provided in Section 4.
<input type="checkbox"/>	GARFO PRD does not concur with USACE’s determination that the action complies with the applicable PDC (with or without justification), and recommends an individual Section 7 consultation to be completed independent from the NLAA Program.
GARFO Signature:	
JOHNSEN.PETER.BERULF.1376615851 Digitally signed by JOHNSEN.PETER.BERULF.1376615851 Date: 2020.09.22 11:57:48 -04'00'	Date: 09/22/2020

Appendix C

Correspondence

THIS IS NOT A PAID ADVERTISEMENT



**US Army Corps
of Engineers**

Public Notice

Public Notice No.
CENAP-PL-E-20-02

Date
1 September 2020

Philadelphia District

Internet Homepage <http://www.nap.usace.army.mil>

In Reply Refer to: Environmental Resources Branch

**ENVIRONMENTAL ASSESSMENT
NATIONAL REGIONAL SEDIMENT MANAGEMENT (RSM)
PROGRAM
WRDA 2016 SECTION 1122
BENEFICIAL USE PILOT PROJECT
Oyster Creek Channel
Barnegat Inlet Federal Navigation Project
Ocean County, New Jersey**

Pursuant to Section 102 of the National Environmental Policy Act (NEPA), Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act (CWA), NOTICE IS HEREBY GIVEN THAT the Philadelphia District, U.S. Army Corps of Engineers, has completed a draft Environmental Assessment (EA) for the National Regional Sediment Management (RSM) Program under the Water Resources Development Act (WRDA) 2016 Section 1122 Beneficial Use Pilot Project at Oyster Creek Channel, NJ. Section 1122 of WRDA requires the USACE to establish a pilot program to carry out ten projects for the beneficial use of dredged material. The Barnegat Inlet Beneficial Use Pilot Project was one of ten projects selected from a field of 95 proposals, based on criteria contained in Section 1122 of WRDA, as having a high likelihood of delivering environmental, economic, and social benefits.

The purpose of the pilot project is to maintain the authorized depths within Oyster Creek Channel Federal navigation channel and placing the high quality dredged material in an aquatic area within Barnegat Bay to keep the material in the system and reduce water depths and eventually over time establish an emergent island. There is strong support for island creation at this site as the depths are believed to be in excess of SAV to proliferate. The New Jersey Department of Environmental Protection's (NJDEP) Bureau of Coastal Engineering is the non-Federal sponsor. There is considerable opportunity within the sediment-rich Barnegat Inlet complex to use dredged material from state and Federal channels for beneficial use.

The EA evaluates existing environmental, cultural, and socio-economic conditions and the effects of the pilot project (Beneficial Use of Sediments – Proposed Action) on existing resources at the proposed project site. The EA also evaluates the effects on

existing resources of not dredging Oyster Creek Channel, which connects Barnegat Inlet to the New Jersey Intracoastal Waterway (No Action Alternative) and the current maintenance dredging and placement practices (Current Practice).

The Barnegat Inlet Federal Navigation Project, a complex and dynamic coastal system along the New Jersey Atlantic Coast, was adopted in House Document (HD) 73 19 in 1935, modified in HD 74 85 in 1937 and HD 79 358 in 1946 and again as a result of the Supplemental Appropriation Act of 1985. Originally constructed in 1940, the navigation project consists of a dual jetty system with an inlet channel that is 300 feet wide to an authorized depth of 8 feet Mean Low Water (MLW). The inlet channel extends from the outer bar in the Atlantic Ocean to the north end of the sand dike in Barnegat Bay. The Federal project channel then extends in a northwesterly direction from the gorge in the inlet to Oyster Creek channel to provide access to deep water in the bay and a connection to the New Jersey Intercoastal Water Way Federal channel. Maintenance dredging for this 1122 pilot project will occur in the Oyster Creek channel portion of the project (Figure 1).

The channel at Oyster Creek is 200 feet wide by 8 feet deep (MLLW). The western portion of the channel shoals frequently and is typically dredged every 3 years based on when funding is appropriated. USACE proposes to initially dredge approximately 25,000 cubic yards (cy) to bring the channel back to authorized depth. Dredging will be conducted utilizing a hydraulic pipeline (cutterhead) dredge and the material will be placed at an aquatic placement area known as Site 6 in Barnegat Bay west of previously created islands known as Sites 26A and 26B. In subsequent maintenance dredging operations, USACE proposes to place approximately 3,000 cy annually at either Site 6 or at nearshore locations identified as Sites 10 and 11 to provide a supplemental sand source for shoreline protection and to promote marsh migration in an areas of shoreline erosion (Figure 2).

In accordance with NEPA, the draft EA is being circulated to the appropriate State and Federal agencies and other public interests.

Impacts to Water Quality have been evaluated in accordance with Section 404(b)(1) guidelines of the Clean Water Act (CWA) and are not adverse. In accordance with Section 401 of the CWA, Water Quality Certification is being requested from the New Jersey Department of Environmental Protection.

In accordance with Section 307 (c) of the Coastal Zone Management Act, an activity affecting land or water uses in a State's coastal zone must comply with the State's Coastal Zone Management Program. Concurrence with our determination of compliance is being requested from the New Jersey Department of Environmental Protection.

It has been determined that the proposed work is not likely to adversely affect listed species or their critical habitat pursuant to Section 7 of the Endangered Species Act (ESA), as amended. Consultation with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service is on-going and will be completed in compliance with Section 7 of the ESA.

The Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), requires all Federal agencies to

consult with the National Marine Fisheries Service on all actions, or proposed actions, permitted, funded, or undertaken by the agency, that may adversely affect Essential Fish Habitat (EFH). A preliminary assessment of the effects of the proposed action on Federally-managed species and their life stages within this area indicates the project would not adversely affect EFH.

Review of the National Register of Historic Places indicates that no registered properties, or properties listed as eligible for inclusion, would be impacted.

All practicable means to avoid or minimize adverse environmental effects have been incorporated into the plan.

The public and all agencies are invited to comment on this proposal. The EA can be downloaded from our District website:

<http://www.nap.usace.army.mil/Missions/CivilWorks/PublicNoticesReports.aspx>.

Please provide any comments within 45 days of the date of this Notice. If you have any further questions regarding this project or the EA, please contact Ms. Monica Chasten at Monica.A.Chasten@USACE.army.mil.

All comments on the work described in this public notice and/or in the report titled: "Environmental Assessment, *National Regional Sediment Management Program, WRDA 2016 Section 1122 Beneficial Use Pilot Project Barnegat Inlet, NJ*" should be directed to Mr. Peter R. Blum, ATTN: Environmental Resources Branch, U.S. Army Corps of Engineers, Wanamaker Building, 100 Penn Square East, Philadelphia, Pennsylvania 19107-3390.

Peter R. Blum, P.E.
Chief, Planning Division
Philadelphia District
U.S. Army Corps of Engineers

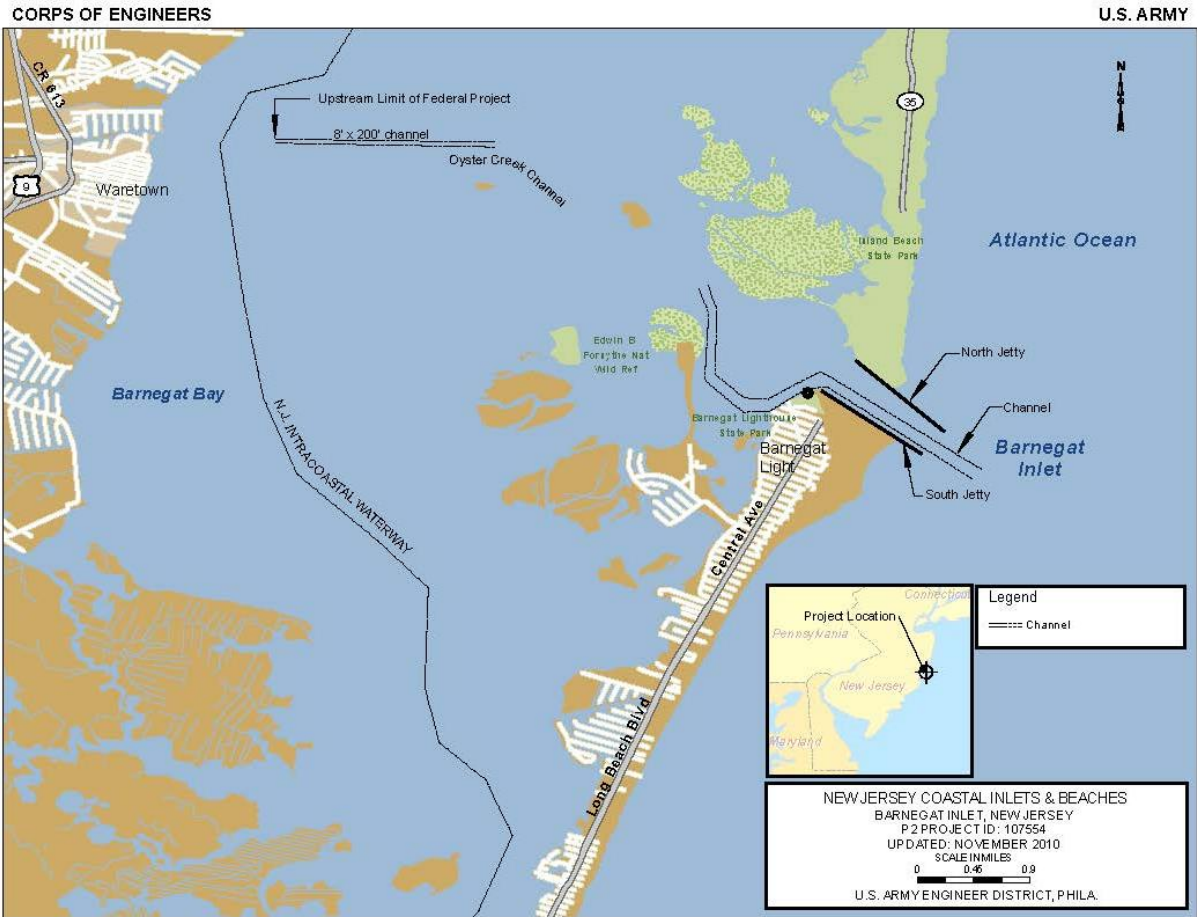


Figure 1. Barnegat Inlet Federal Navigation Project.

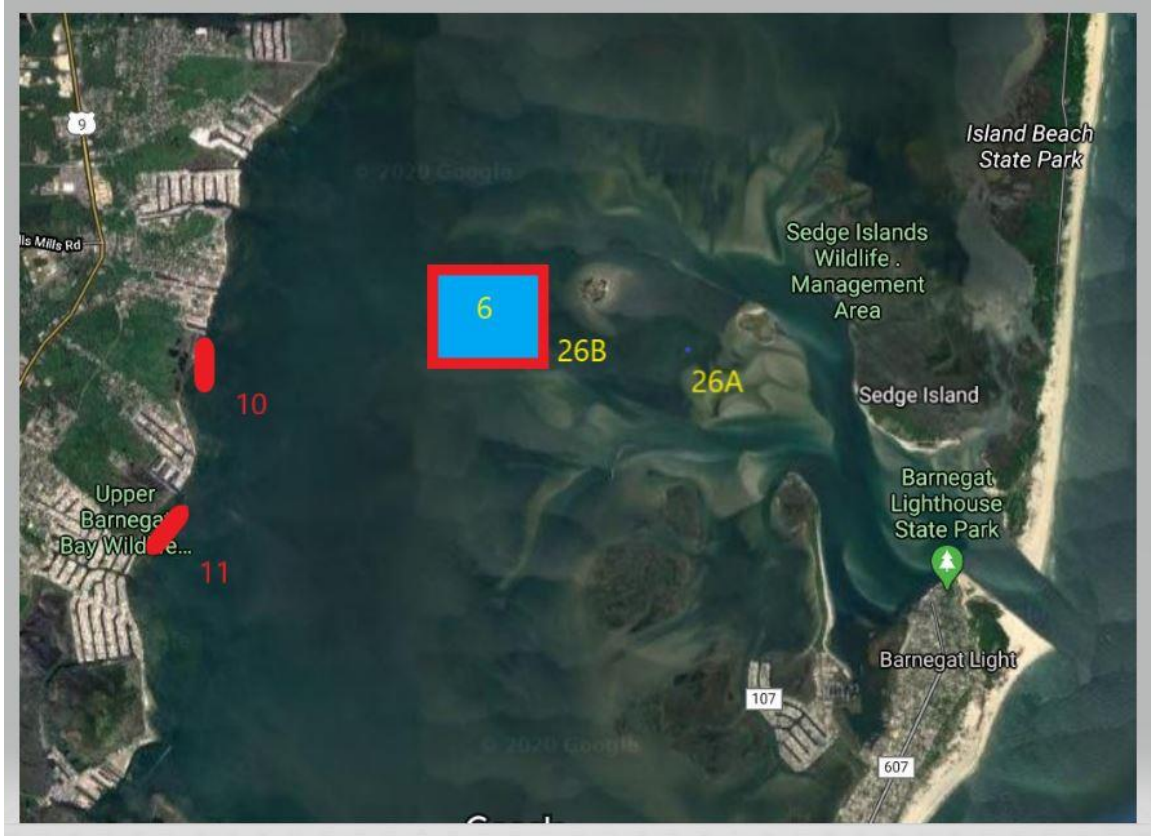


Figure 2: Blue box indicates the Section 1122 initial placement location (Site 6) west of created islands Sites 26A and 26B. Areas shown in red (Sites 10 and 11) are proposed nearshore placement locations for maintenance dredging in future years to provide a supplemental sand source to combat shoreline erosion.



DEPARTMENT OF THE ARMY
PHILADELPHIA DISTRICT, CORPS OF ENGINEERS
100 PENN SQUARE EAST, 7th FLOOR WANAMAKER BUILDING
PHILADELPHIA, PENNSYLVANIA 19107-3390

1 September 2020

Environmental Resources Branch

Ms. Mary A. Colligan
Assistant Regional Administrator
for Protected Resources
National Marine Fisheries Service
Northeast Region
One Blackburn Drive
Gloucester, MA 01930-2298
mary.colligan@noaa.gov

Dear Ms. Colligan:

This letter is to notify you that the Philadelphia District, U.S. Army Corps of Engineers (USACE) has prepared a draft Environmental Assessment (EA) titled: *National Regional Sediment Management (RSM) Program, Water Resources Development Act (WRDA 2016) Section 1122 Beneficial Use Pilot Project, Oyster Creek Channel, Barnegat Inlet Federal Navigation Project, Ocean County, New Jersey.*

Section 1122 of WRDA requires USACE to establish a pilot program to implement ten projects nationwide for the beneficial use of dredged material. The Barnegat Inlet Beneficial Use Pilot Project was selected as one of ten nationwide projects from a field of 95 proposals, based on the criteria of having a high likelihood of delivering environmental, economic, and social benefits. The initial phase of this pilot project entails dredging the authorized Barnegat Inlet navigation entrance channel to authorized depth utilizing a split-hull hopper dredge and placing the high quality sand in the nearshore zone of the ocean beach fronting the community of Harvey Cedars, a known erosional hotspot. Another component of the Section 1122 pilot program is the subject of the current EA.

The channel at Oyster Creek is 200 feet wide by 8 feet deep (MLLW). The western portion of the channel shoals frequently and is typically dredged every 3 years based on when funding is appropriated. USACE proposes to initially dredge approximately 25,000 cubic yards (cy) to bring the channel back to authorized depth. Dredging will be conducted utilizing a hydraulic pipeline (cutterhead) dredge and the material will be placed at an aquatic placement area known as Site 6 in Barnegat Bay west of previously created islands known as Sites 26A and 26B. In subsequent maintenance dredging operations, USACE proposes to place approximately 3,000 cy annually at either Site 6 or at nearshore locations identified as Sites 10 and 11 to provide a

supplemental sand source for shoreline protection and to promote marsh migration in an areas of shoreline erosion. The New Jersey Department of Environmental Protection's (NJDEP) Bureau of Coastal Engineering will serve as the non-Federal sponsor.

The draft EA was prepared in accordance with National Environmental Policy Act (NEPA) regulations, the Council on Environmental Quality's regulations for implementing NEPA and *U.S. Army Corps of Engineers Procedures for Implementing NEPA, Engineering Regulation (ER) 200-2-2*. The EA evaluates existing environmental, cultural, and socio-economic conditions in the study area, and the effects of the project on existing resources in the immediate and surrounding areas.

The EA can be downloaded from our District website:
<http://www.nap.usace.army.mil/Missions/CivilWorks/PublicNoticesReports.aspx>
The public has been invited to comment on the draft EA.

USACE is requesting informal Section 7 ESA consultation with your agency. USACE prepared the enclosed GARFO NLTAA Verification Form for this Section 1122 Pilot Program with respect to potential impacts to Federally-threatened and endangered species in the study area. We have determined that the proposed project is not likely to adversely affect Federally-endangered species that may occur in the study area. The proposed action complies with all applicable Project Design Criteria (PDC) and is not likely to adversely affect listed species or critical habitat.

The draft EA addresses potential impacts to the Atlantic sturgeon, sea turtles, and whales that may occur in the vicinity. We request your review and comments on the draft report within 30 days of the date of this letter.

If you have any questions please contact Ms. Rachel Ward of our Environmental Resources Branch at 215-656-6733 or via email Rachel.J.Ward@usace.army.mil, or Ms. Monica Chasten of our Operations Division at 215-656-6683, or via email Monica.A.Chasten@usace.army.mil. Thank you for your attention to this matter.

Sincerely,

LEARY.ADRIAN.

1384973384

FOR
Peter R. Blum, P.E.
Chief, Planning Division

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Date: 2020.09.01 12:24:46 -04'00'

Enclosure



DEPARTMENT OF THE ARMY
PHILADELPHIA DISTRICT, CORPS OF ENGINEERS
100 PENN SQUARE EAST, 7th FLOOR WANAMAKER BUILDING
PHILADELPHIA, PENNSYLVANIA 19107-3390

1 September 2020

Environmental Resources Branch

Ms. Grace Musumeci, Chief
Environmental Review Section
Strategic Planning and Multi-Media Programs Branch
USEPA Region II
290 Broadway
New York, NY 10007-1866
Musumeci.grace@epa.gov

Dear Ms. Musumeci:

This letter is to notify you that the Philadelphia District, U.S. Army Corps of Engineers (USACE) has prepared a draft Environmental Assessment (EA) titled: *National Regional Sediment Management (RSM) Program, Water Resources Development Act (WRDA 2016) Section 1122 Beneficial Use Pilot Project, Oyster Creek Channel, Barnegat Inlet Federal Navigation Project, Ocean County, New Jersey.*

Section 1122 of WRDA requires USACE to establish a pilot program to implement ten projects nationwide for the beneficial use of dredged material. The Barnegat Inlet Beneficial Use Pilot Project was selected as one of ten nationwide projects from a field of 95 proposals, based on the criteria of having a high likelihood of delivering environmental, economic, and social benefits. The initial phase of this pilot project entails dredging the authorized Barnegat Inlet navigation entrance channel to authorized depth utilizing a split-hull hopper dredge and placing the high quality sand in the nearshore zone of the ocean beach fronting the community of Harvey Cedars, a known erosional hotspot. Another component of the Section 1122 pilot program is the subject of the current EA.

The channel at Oyster Creek is 200 feet wide by 8 feet deep (MLLW). The western portion of the channel shoals frequently and is typically dredged every 3 years based on when funding is appropriated. USACE proposes to initially dredge approximately 25,000 cubic yards (cy) to bring the channel back to authorized depth. Dredging will be conducted utilizing a hydraulic pipeline (cutterhead) dredge and the material will be placed at an aquatic placement area known as Site 6 in Barnegat Bay west of previously created islands known as Sites 26A and 26B. In subsequent maintenance dredging operations, USACE proposes to place approximately 3,000 cy annually at either Site 6 or at nearshore locations identified as Sites 10 and 11 to provide a

supplemental sand source for shoreline protection and to promote marsh migration in an areas of shoreline erosion. The New Jersey Department of Environmental Protection's (NJDEP) Bureau of Coastal Engineering will serve as the non-Federal sponsor.

The draft EA was prepared in accordance with National Environmental Policy Act (NEPA) regulations, the Council on Environmental Quality's regulations for implementing NEPA and *U.S. Army Corps of Engineers Procedures for Implementing NEPA, Engineering Regulation (ER) 200-2-2*. The EA evaluates existing environmental, cultural, and socio-economic conditions in the study area, and the effects of the project on existing resources in the immediate and surrounding areas.

The EA can be downloaded from our District website:
<http://www.nap.usace.army.mil/Missions/CivilWorks/PublicNoticesReports.aspx>

Pursuant to NEPA, USACE requests your review and comment on the draft EA. Steps proposed to be taken in order to reduce potential adverse impacts to natural resources are presented in the report. All necessary permits and approvals issued by the regulatory agencies will be obtained prior to construction. Placement operations will be monitored to inform future Beneficial Use design plans using maintenance material. USACE is committed to continuing to work closely with Federal and State resource agencies, prior to and during project construction for projects such as this one.

We request your review and comments on the draft report within 45 days of the date of this letter.

If you have any questions please contact Ms. Barbara Conlin of our Environmental Resources Branch at 215-656-6557 or via email Barbara.E.Conlin@usace.army.mil or, Ms. Monica Chasten of our Operations Division at 215-656-6683 or via email Monica.A.Chasten@usace.army.mil.

Sincerely,

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Date: 2020.09.01 12:26:42
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FOR
Peter R. Blum, P.E.
Chief, Planning Division



DEPARTMENT OF THE ARMY
PHILADELPHIA DISTRICT, CORPS OF ENGINEERS
100 PENN SQUARE EAST, 7th FLOOR WANAMAKER BUILDING
PHILADELPHIA, PENNSYLVANIA 19107-3390

1 September 2020

Environmental Resources Branch

Ms. Colleen Keller, Director
Coastal Land Use Planning
Division of Land Use Management
New Jersey Department of Environmental Protection
P.O. Box 420
501 E. State Street, Second Floor
Trenton, NJ 08609
colleen.keller@dep.nj.gov

Dear Ms. Keller:

This letter is to notify you that the Philadelphia District, U.S. Army Corps of Engineers (USACE) has prepared a draft Environmental Assessment (EA) titled: *National Regional Sediment Management (RSM) Program, Water Resources Development Act (WRDA 2016) Section 1122 Beneficial Use Pilot Project, Oyster Creek Channel, Barnegat Inlet Federal Navigation Project, Ocean County, New Jersey.*

Section 1122 of WRDA requires USACE to establish a pilot program to implement ten projects nationwide for the beneficial use of dredged material. The Barnegat Inlet Beneficial Use Pilot Project was selected as one of ten nationwide projects from a field of 95 proposals, based on the criteria of having a high likelihood of delivering environmental, economic, and social benefits. The initial phase of this pilot project entails dredging the authorized Barnegat Inlet navigation entrance channel to authorized depth utilizing a split-hull hopper dredge and placing the high quality sand in the nearshore zone of the ocean beach fronting the community of Harvey Cedars, a known erosional hotspot. Another component of the Section 1122 pilot program is the subject of the current EA.

The channel at Oyster Creek is 200 feet wide by 8 feet deep (MLLW). The western portion of the channel shoals frequently and is typically dredged every 3 years based on when funding is appropriated. USACE proposes to initially dredge approximately 25,000 cubic yards (cy) to bring the channel back to authorized depth. Dredging will be conducted utilizing a hydraulic pipeline (cutterhead) dredge and the material will be placed at an aquatic placement area known as Site 6 in Barnegat Bay west of previously created islands known as Sites 26A and 26B. In subsequent maintenance dredging operations, USACE proposes to place approximately 3,000 cy annually at either Site 6 or at nearshore locations identified as Sites 10 and 11 to provide a supplemental sand source for shoreline protection and to promote marsh migration in

an areas of shoreline erosion. The New Jersey Department of Environmental Protection's (NJDEP) Bureau of Coastal Engineering will serve as the non-Federal sponsor.

The draft EA was prepared in accordance with National Environmental Policy Act (NEPA) regulations, the Council on Environmental Quality's regulations for implementing NEPA and *U.S. Army Corps of Engineers Procedures for Implementing NEPA, Engineering Regulation (ER) 200-2-2*. The EA evaluates existing environmental, cultural, and socio-economic conditions in the study area, and the effects of the project on existing resources in the immediate and surrounding areas.

The EA can be downloaded from our District website:
<http://www.nap.usace.army.mil/Missions/CivilWorks/PublicNoticesReports.aspx>
The public has been invited to comment on the draft EA.

In accordance with Section 102 of the National Environmental Policy Act, the Corps is requesting your review and comment on the draft report within 45 days of the date of this letter. Based on a review of all applicable regulations and policies in N.J.A.C. 7:7E Coastal Zone Management Rules, it is USACE's finding that the proposed action, as described in the report, complies with New Jersey's approved coastal management program and will be conducted in a manner consistent with the program, and is not expected to violate N.J. water quality standards. Our review of these Rules is provided as an attachment to this letter. We request your concurrence with our consistency determination pursuant to New Jersey's Coastal Zone Management Program and Section 401 Water Quality Certification (WQC), pursuant to the Clean Water Act. A copy of the current active WQC (#83-2-7 Intracoastal Waterway issued 23 March 1988) is also enclosed.

If you have any comments on the draft report please provide them within 45 days of the date of this letter.

If you have any questions please contact Ms. Barbara Conlin of our Environmental Resources Branch at 215-656-6557 or via email Barbara.E.Conlin@usace.army.mil or, Ms. Monica Chasten of our Operations Division at 215-656-6683 or via email Monica.A.Chasten@usace.army.mil

Sincerely,

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Date: 2020.09.01 11:16:48 -04'00'

FOR
Peter R. Blum, P.E.
Chief, Planning Division

Enclosures

**CONSISTENCY REVIEW OF
 APPLICABLE NEW JERSEY COASTAL ZONE MANAGEMENT POLICIES
 (N.J.A.C. 7:7E as amended 20 February 2020) FOR
 NATIONAL REGIONAL SEDIMENT MANAGEMENT (RSM) PROGRAM
 WATER RESOURCES DEVELOPMENT ACT 2016 SECTION 1122
 BENEFICIAL USE PILOT PROJECT**

RULE	APPLICABLE SECTIONS
SUBCHAPTER 9 - SPECIAL AREAS	
7:7-9.2 SHELLFISH HABITAT	Policies a, f
7:7-9.3 SURF CLAM AREAS	Policies a, b
7:7-9.4 PRIME FISHING AREAS	Policies a,
7:7-9.5 FINFISH MIGRATORY PATHWAYS	Policies a, b, c
7:7-9.6 SUBMERGED VEGETATION HABITAT	Policies a, b
7:7-9.7 NAVIGATION CHANNELS	Policies a, b
7:7-9.8 CANALS	N/A
7:7-9.9 INLETS	Policies a, b
7:7-9.10 MARINA MOORINGS	N/A
7:7-9.11 PORTS	N/A
7:7-9.12 SUBMERGED INFRASTRUCTURE ROUTES	N/A
7:7-9.13 SHIPWRECK AND ARTIFICIAL REEF HABITATS	N/A
7:7-9.14 WET BORROW PITS	N/A
7:7-9.15 INTERTIDAL AND SUBTIDAL SHALLOWS	Policies a
7:7-9.16 DUNES	N/A
7:7-9.17 OVERWASH AREAS	N/A
7:7-9.18 COASTAL HIGH HAZARD AREAS	N/A
7:7-9.19 EROSION HAZARD AREAS	N/A
7:7-9.20 BARRIER ISLAND CORRIDOR	N/A
7:7-9.21 BAY ISLANDS	N/A
7:7-9.22 BEACHES	N/A
7:7-9.23 FILLED WATER'S EDGE	N/A
7:7-9.24 EXISTING LAGOON EDGES	N/A
7:7-9.25 FLOOD HAZARD AREAS	N/A
7:7-9.26 RIPARIAN ZONES	N/A
7:7-9.27 WETLANDS	N/A
7:7-9.28 WETLAND BUFFERS	N/A
7:7-9.29 COASTAL BLUFFS	N/A
7:7-9.30 INTERMITTENT STREAM CORRIDORS	N/A
7:7-3.31 FARMLAND CONSERVATION AREAS	N/A
7:7-9.32 STEEP SLOPES	N/A
7:7-9.33 DRY BORROW PITS	N/A

**CONSISTENCY REVIEW OF
 APPLICABLE NEW JERSEY COASTAL ZONE MANAGEMENT POLICIES
 (N.J.A.C. 7:7E as amended 20 February 2020) FOR
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 WATER RESOURCES DEVELOPMENT ACT 2016 SECTION 1122
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RULE	APPLICABLE SECTIONS
7:7-9.34 HISTORIC AND ARCHAEOLOGICAL RESOURCES	Policies a, b
7:7-9.35 SPECIMEN TREES	N/A
7:7-9.36 ENDANGERED OR THREATENED WILDLIFE OR PLANT SPECIES HABITATS	Policies a, b
7:7-9.37 CRITICAL WILDLIFE HABITATS	Policies a, b
7:7-9.38 PUBLIC OPEN SPACE	N/A
7:7-9.39 SPECIAL HAZARD AREAS	N/A
7:7-9.40 EXCLUDED FEDERAL LANDS	N/A
7:7-9.41 SPECIAL URBAN AREAS	N/A
7:7-9.42 PINELANDS NATIONAL RESERVE AND PINELANDS PROTECTED AREA	N/A
7:7-9.43 MEADOWLANDS DISTRICT	N/A
7:7-9.44 WILD AND SCENIC RIVER CORRIDORS	N/A
7:7-9.45 GEODETIC CONTROL REFERENCE MARKS	N/A
7:7-9.46 HUDSON RIVER WATERFRONT AREA	N/A
7:7-9.47 ATLANTIC CITY	N/A
7:7-9.48 LANDS AND WATERS SUBJECT TO PUBLIC TRUST RIGHTS	Policies a, b
SUBCHAPTER 10 - STANDARDS FOR BEACH AND DUNE ACTIVITIES	
7:7-10.1 PURPOSE AND SCOPE	N/A
7:7-10.2 STANDARDS APPLICABLE TO ROUTINE BEACH MAINTENANCE	N/A
7:7-10.3 STANDARDS APPLICABLE TO EMERGENCY POST-STORM BEACH RESTORATION	N/A
7:7-10.4 STANDARDS APPLICABLE TO DUNE CREATION AND MAINTENANCE	N/A
7:7-10.5 STANDARDS APPLICABLE TO THE CONSTRUCTION OF BOARDWALKS	N/A
SUBCHAPTER 11 – STANDARDS FOR CONDUCTING AND REPORTING THE RESULTS OF AN ENDANGERED OR THREATENED WILDLIFE OR PLANT SPECIES HABITAT IMPACT ASSESSMENT AND/OR ENDANGERED OR THREATENED WILDLIFE SPECIES HABITAT EVALUATION	
7:7-11.1 PURPOSE AND SCOPE	Policies a, b, d
7:7-11.2 STANDARDS FOR CONDUCTING ENDANGERED OR THREATENED WILDLIFE OR PLANT SPECIES HABITAT IMPACT ASSESSMENTS	Policies a, b, c
7:7-11.3 STANDARDS FOR CONDUCTING ENDANGERED OR THREATENED WILDLIFE SPECIES HABITAT EVALUATIONS	N/A
7:7-11.4 STANDARDS FOR REPORTING THE RESULTS OF IMPACT ASSESSMENTS AND HABITAT EVALUATIONS	Policies a, c

**CONSISTENCY REVIEW OF
 APPLICABLE NEW JERSEY COASTAL ZONE MANAGEMENT POLICIES
 (N.J.A.C. 7:7E as amended 20 February 2020) FOR
 NATIONAL REGIONAL SEDIMENT MANAGEMENT (RSM) PROGRAM
 WATER RESOURCES DEVELOPMENT ACT 2016 SECTION 1122
 BENEFICIAL USE PILOT PROJECT**

RULE	APPLICABLE SECTIONS
SUBCHAPTER 12 - GENERAL WATER AREAS	
7:7-12.1 PURPOSE AND SCOPE	Policies a, b
7:7-12.2 SHELLFISH AQUACULTURE	N/A
7:7-12.3 BOAT RAMPS	N/A
7:7-12.4 DOCKS AND PIERS FOR CARGO AND COMMERCIAL FISHERIES	N/A
7:7-12.5 RECREATIONAL DOCKS AND PIERS	N/A
7:7-12.6 MAINTENANCE DREDGING	Policies a, b
7:7-12.7 NEW DREDGING	N/A
7:7-12.8 ENVIRONMENTAL DREDGING	N/A
7:7-12.9 DREDGED MATERIAL DISPOSAL	Policies a
7:7-12.10 SOLID WASTE OR SLUDGE DUMPING	N/A
7:7-12.11 FILLING	Policies a, d, g, h
7:7-12.12 MOORING	N/A
7:7-12.13 SAND AND GRAVEL MINING	N/A
7:7-12.14 BRIDGES	N/A
7:7-12.15 SUBMERGED PIPELINES	N/A
7:7-12.16 OVERHEAD TRANSMISSION LINES	N/A
7:7-12.17 DAMS AND IMPOUNDMENTS	N/A
7:7-12.18 OUTFALLS AND INTAKES	N/A
7:7-12.19 REALIGNMENT OF WATER AREAS	N/A
7:7-12.20 VERTICAL WAKE OR WAVE ATTENUATION STRUCTURES	N/A
7:7-12.21 SUBMERGED CABLES	N/A
7:7-12.22 ARTIFICIAL REEFS	N/A
7:7-12.23 LIVING SHORELINES	Policies a, b
7:7-12.24 MISCELLANEOUS USES	N/A
SUBCHAPTER 13 – REQUIREMENTS FOR IMPERVIOUS COVER AND VEGETATIVE COVER FOR GENERAL LAND AREAS AND CERTAIN SPECIAL AREAS	
7:7-13.1 PURPOSE AND SCOPE	N/A
7:7-13.2 DEFINITIONS	N/A
7:7-13.3 IMPERVIOUS COVER REQUIREMENTS THAT APPLY TO SITES IN THE UPLAND WATERFRONT DEVELOPMENT AND CAFRA AREAS	N/A
7:7-13.4 VEGETATIVE COVER REQUIREMENTS THAT APPLY TO SITES IN THE UPLAND WATERFRONT DEVELOPMENT AND CAFRA AREAS	N/A
7:7-13.5 DETERMINING IF A SITE IS FORESTED OR UNFORESTED	N/A
7:7-13.6 UPLAND WATERFRONT DEVELOPMENT AREA REGIONS AND GROWTH RATINGS	N/A
7:7-13.7 ENVIRONMENTAL SENSITIVITY	N/A
7:7-13.8 DEVELOPMENT POTENTIAL	N/A
7:7-13.9 DEVELOPMENT POTENTIAL FOR A RESIDENTIAL OR MINOR COMMERCIAL DEVELOPMENT SITE	N/A
7:7-13.10 DEVELOPMENT POTENTIAL FOR A MAJOR COMMERCIAL OR INDUSTRIAL DEVELOPMENT SITE	N/A
7:7-13.11 DEVELOPMENT POTENTIAL FOR A CAMPGROUND DEVELOPMENT SITE	N/A
7:7-13.12 DEVELOPMENT INTENSITY	N/A
7:7-13.13 IMPERVIOUS COVER LIMITS FOR A SITE IN THE UPLAND WATERFRONT DEVELOPMENT AREA	N/A
7:7-13.14 VEGETATIVE COVER PERCENTAGES FOR A SITE IN THE UPLAND WATERFRONT DEVELOPMENT AREA	N/A
7:7-13.15 COASTAL PLANNING AREAS	N/A
7:7-13.16 BOUNDARIES FOR COASTAL PLANNING AREAS,	N/A

**CONSISTENCY REVIEW OF
 APPLICABLE NEW JERSEY COASTAL ZONE MANAGEMENT POLICIES
 (N.J.A.C. 7:7E as amended 20 February 2020) FOR
 NATIONAL REGIONAL SEDIMENT MANAGEMENT (RSM) PROGRAM
 WATER RESOURCES DEVELOPMENT ACT 2016 SECTION 1122
 BENEFICIAL USE PILOT PROJECT**

RULE	APPLICABLE SECTIONS
CAFRA CENTERS, CAFRA CORES, AND CAFRA NODES; NON-MAINLAND COASTAL CENTERS	
7:7-13.17 IMPERVIOUS COVER LIMITS FOR A SITE IN THE CAFRA AREA	N/A
7:7-13.18 VEGETATIVE COVER PERCENTAGES FOR A SITE IN THE CAFRA AREA	N/A
7:7-13.19 MAINLAND COASTAL CENTERS	N/A
SUBCHAPTER 14 - GENERAL LOCATION RULES	
7:7-14.1 RULE ON LOCATION OF LINEAR DEVELOPMENT	N/A
7:7-14.2 BASIC LOCATION RULE	Policies a, b
7:7-14.3 SECONDARY IMPACTS	Policies a, b
SUBCHAPTER 15 - USE RULES	
7:7-15.1 PURPOSE AND SCOPE	N/A
7:7-15.2 HOUSING	N/A
7:7-15.3 RESORT/RECREATIONAL	N/A
7:7-15.4 ENERGY FACILITY	N/A
7:7-15.5 TRANSPORTATION	N/A
7:7-15.6 PUBLIC FACILITY	N/A
7:7-15.7 INDUSTRY	N/A
7:7-15.8 MINING	N/A
7:7-15.9 PORT	N/A
7:7-15.10 COMMERCIAL FACILITY	N/A
7:7-15.11 COASTAL ENGINEERING	Policies a, b
7:7-15.12 DREDGED MATERIAL PLACEMENT ON LAND	N/A
7:7-15.13 NATIONAL DEFENSE FACILITIES	N/A
7:7-15.14 HIGH-RISE STRUCTURES	N/A
SUBCHAPTER 16 - RESOURCE RULES	
7:7-16.1 PURPOSE AND SCOPE	N/A
7:7-16.2 MARINE FISH AND FISHERIES	Policies a, b, c
7:7-16.3 WATER QUALITY	Policies a, b
7:7-16.4 SURFACE WATER USE	N/A
7:7-16.5 GROUNDWATER USE	N/A
7:7-16.6 STORMWATER MANAGEMENT	N/A
7:7-16.7 VEGETATION	N/A
7:7-16.8 AIR QUALITY	Policies a, b
7:7-16.9 PUBLIC ACCESS	N/A

**CONSISTENCY REVIEW OF
APPLICABLE NEW JERSEY COASTAL ZONE MANAGEMENT POLICIES
(N.J.A.C. 7:7E as amended 20 February 2020) FOR
NATIONAL REGIONAL SEDIMENT MANAGEMENT (RSM) PROGRAM
WATER RESOURCES DEVELOPMENT ACT 2016 SECTION 1122
BENEFICIAL USE PILOT PROJECT**

RULE	APPLICABLE SECTIONS
7:7-16.10 SCENIC RESOURCES AND DESIGN	N/A
7:7-16.11 BUFFERS AND COMPATIBILITY OF USES	N/A
7:7-16.12 TRAFFIC	N/A
7:7-16.13 SUBSURFACE SEWAGE DISPOSAL SYSTEMS	N/A
7:7-16.14 SOLID AND HAZARDOUS WASTE	N/A

**CONSISTENCY REVIEW OF APPLICABLE NEW JERSEY COASTAL ZONE
MANAGEMENT POLICIES
(N.J.A.C. 7:7 as amended 15 July 2019)
NATIONAL REGIONAL SEDIMENT MANAGEMENT (RSM) PROGRAM
WRDA 2016 Section 1122 BENEFICIAL USE PILOT PROJECT
Oyster Creek Channel, New Jersey**

7:7-9.2 SHELLFISH HABITAT

(a) The project area is not located in shellfish habitat.

7:7-9.3 SURF CLAM AREAS

(a) The project area does not contain surf clam coastal waters which can be demonstrated to support significant commercially harvestable quantities of surf clams (*Spisula solidissima*), or areas important for recruitment of surf clam stocks.

(b) The project would not result in the destruction, condemnation, or contamination of surf clam areas. Any impacts to surf clam habitat will be temporary in nature.

7:7-9.4 PRIME FISHING AREAS

(a) The project does not occur in prime fishing areas.

(b) The project does not entail sand or gravel submarine mining which would alter existing bathymetry to a significant degree so as to reduce the high fishery productivity of these areas. Furthermore, this project does not entail disposal of domestic or industrial wastes.

7:7-9.5 FINFISH MIGRATORY PATHWAYS

(a) The project does not occur in a waterbody designated as finfish migratory pathway. Fish utilize Barnegat Bay, however it is a very large/wide bay with strong currents that flush the minor turbidity created by the draghead.

(b-c) The project would not create a physical barrier to the movement of fish. There would also be no adverse impact to water quality. Turbidity will increase during construction (deposition of dredged material) in the nearshore placement zone however this will be temporary due to ocean currents. Turbidity is naturally high in the shallow bay waters. At the dredging location within Oyster Creek, due to the nature of the material being predominantly sand, the material will settle quickly and inlet currents flush turbidity swiftly.

7:7-9.6 SUBMERGED VEGETATION HABITAT

(a) No known existing Submerged Aquatic Vegetation (SAV) beds occur in the channel or proposed placement areas. The Pilot Program allows for flexibility to adjust the placement location and methodology to avoid impacts to SAV.

(b) Maintenance dredging of the existing, authorized Barnegat Inlet Federal navigation channel is acceptable. There are no SAV beds within the footprint of the channel.

7:7-9.7 NAVIGATION CHANNELS

(a-b) Oyster Creek is a Federal navigation channel. The dredging is authorized, ongoing, and would improve navigation and is acceptable. The dredging is in compliance with 7:7-12.6 Maintenance Dredging and Appendix G.

7:7-9.9 INLETS

(a-b) The project does occur in an inlet.

7:7-9.15 INTERTIDAL AND SUBTIDAL SHALLOWS

(a) The depth of the project area is greater than 4 feet below mean low water and is therefore, not defined as intertidal and subtidal shallows.

7:7-9.34 HISTORIC AND ARCHAEOLOGICAL RESOURCES

(a) The Barnegat Inlet will only be dredged to its previously authorized depth. There are no known archaeological resources within the project area. Therefore, a preliminary determination has been made that the proposed action will have *No Effect* on historic properties eligible for or listed on the National Register of Historic Places pursuant to 36CFR800.4(d)(1).

7:7-9.36 ENDANGERED OR THREATENED WILDLIFE OR PLANT SPECIES HABITATS

(a-b) The project is being coordinated with the New Jersey Division of Fish and Wildlife, U.S. Fish and Wildlife Service, and the National Marine Fisheries Service (NMFS) pursuant to the Federal Endangered Species Act.

The project will not result in any adverse impact to Federal or state listed endangered or threatened wildlife or plant species or their habitats as described in the Environmental Assessment. The impacts of dredging for the proposed aquatic placement would be identical to the current practice. While Atlantic sturgeon, sea turtles, and whales have the potential to occur in the vicinity, it is unlikely during the operation. The species are highly mobile and able to avoid the dredge and areas of temporarily elevated turbidity

due to operations. Any effects from placement of sand or an increase in turbidity would be insignificant and temporary. Additionally, the dredge crew would continually keep watch for protected marine species and employ all required NMFS vessel avoidance measures to avoid interactions with protected marine species.

The intent of the project is to monitor sediment placement with the goal of informing future beneficial uses, habitat creation, and shoreline protection, which would provide indirect benefits to federal and state-listed birds and migratory birds.

7:7-9.37 CRITICAL WILDLIFE HABITATS

(a-b) The project area may provide important foraging habitat for migratory birds and sea turtles and potentially Atlantic sturgeon may occasionally transit through the area. Maintenance dredging in the Oyster Creek navigation channel and aquatic placement of material would not adversely impact the habitat.

7:7-9.48 LANDS AND WATERS SUBJECT TO PUBLIC TRUST RIGHTS

(a-b) Lands and waters subject to public trust rights are tidal waterways and their shores. Development that adversely affects lands and waters subject to public trust rights is discouraged. The project would not adversely affect public trust rights or public access to lands or waterways.

7:7-11 STANDARDS FOR CONDUCTING AND REPORTING THE RESULTS OF AN ENDANGERED OR THREATENED WILDLIFE OR PLANT SPECIES HABITAT IMPACT ASSESSMENT AND/OR ENDANGERED OR THREATENED WILDLIFE SPECIES HABITAT EVALUATION

(a,b,d) Transient threatened and endangered species have the potential to occur in the project area but are unlikely to occur during the operation. An Environmental Assessment has been prepared and includes an endangered or threatened wildlife or plant species impact assessment (in accordance with 7:7-11.4 (b,d)).

7:7-12.1 GENERAL WATER AREAS PURPOSE AND SCOPE

(a-b) General Water Areas include all water areas located below the spring high water line. General Water Areas are divided into eight categories. The project area is included in 7:7E-4.1(b) 1 "Atlantic Ocean" and 7 "Semi-enclosed and back bays."

7:7-12.6 MAINTENANCE DREDGING

(a-c) The project will continue authorized maintenance dredging and is in compliance with the standards in (c). Previous testing and maintenance dredging efforts indicate that shoaling in the inlet is predominantly sand and presumed to be free of chemical contamination. Due to a larger mean grain size (>0.0625 mm) and small smaller fines content, the sand is expected to be more stable and produce less turbidity in the nearshore environment.

7:7-12.9 DREDGED MATERIAL DISPOSAL

(a-b) The project includes dredged material placement in waters of Barnegat Bay (7-8 feet MLLW). It is a beneficial use project with placement for the purposes of retaining the high quality dredged material within the Barnegat Bay system, shoreline resilience and habitat creation.

7:7-12.11 FILLING

The purpose of the project is to establish the first lift of a submerged mound in Barnegat Bay with the future potential to eventually establish an emergent island as natural habitat with subsequent lifts. Filling is the deposition of material including, but not limited to, sand, soil, earth, and dredged material, into water areas for the purpose of raising water bottom elevations to create land areas.

7:7-12.23 LIVING SHORELINES

(a-c) In addition to gaining practical insight into innovative methods, this project addresses habitat creation and shoreline resiliency. This project will evaluate strategic placement of sediment in order to maximize beneficial use of maintenance dredged sand to provide additional protections. This project is consistent with 7:7-12.23 (b-c) and complies with Appendix G.

7:7-14.2 BASIC LOCATION RULE

(a-b) This project does not pose a threat to the public, natural resources, property, or the environment. This project is designed to benefit the environment and to advance practice and improve techniques to implement habitat enhancement projects more effectively.

7:7-14.3 SECONDARY IMPACTS

(a-b) Dredging for maintenance of Oyster Creek Federal navigation channel and aquatic placement of the dredged material to improve habitat by reducing water depths and

provide further shoreline protection by keeping the material in the system. The project will not result in any additional development. The proposed project will not result in any secondary impacts.

7:7-15.11 COASTAL ENGINEERING

(a-b) Placement of channel maintenance dredged material to create SAV habitat and eventual nesting habitat is considered a beneficial use project.

7:7-16.2 MARINE FISH AND FISHERIES

(a-c) Dredging for maintenance of the Oyster Creek channel and aquatic placement of high quality dredged material in 7-8 feet MLLW depths within Barnegat Bay will not result in any long-term adverse impacts to marine fish or fisheries. Placement methodologies employed can minimize water turbidity.

7:7-16.3 WATER QUALITY

(a-b) Proper precautions will be taken to ensure that the proposed project will not violate any applicable Federal or state water quality requirements in New Jersey. Previous testing and maintenance dredging efforts indicate that Oyster Creek shoaling is predominantly large grain sand material and presumed to be free of chemical contamination. Due to a larger mean grain size (>0.0625 mm) and small fines content, the sand is expected to be more stable and produce less turbidity in the nearshore environment.

7:7-16.8 AIR QUALITY

(a-b) Based on a conformity analysis, the proposed project conforms to the New Jersey State Implementation Plan (SIP). The selected plan complies with Section 176 (c)(1) of the Clean Air Act Amendments of 1990.



DEPARTMENT OF THE ARMY
PHILADELPHIA DISTRICT, CORPS OF ENGINEERS
100 PENN SQUARE EAST, 7th FLOOR WANAMAKER BUILDING
PHILADELPHIA, PENNSYLVANIA 19107-3390

1 September 2020

Environmental Resources Branch

Katherine Marcopul
Deputy State Historic Preservation Office
Mail Code 501-043
New Jersey Department of Environmental Protection
Historic Preservation Office
PO Box 420
Trenton, NJ 08625-0420
kate.marcopul@dep.nj.gov

Dear Dr. Marcopul:

This letter is to notify you that the Philadelphia District, U.S. Army Corps of Engineers (USACE) has prepared a draft Environmental Assessment (EA) titled: *National Regional Sediment Management (RSM) Program, Water Resources Development Act (WRDA 2016) Section 1122 Beneficial Use Pilot Project, Oyster Creek Channel, Barnegat Inlet Federal Navigation Project, Ocean County, New Jersey.*

Section 1122 of WRDA requires USACE to establish a pilot program to implement ten projects nationwide for the beneficial use of dredged material. The Barnegat Inlet Beneficial Use Pilot Project was selected as one of ten nationwide projects from a field of 95 proposals, based on the criteria of having a high likelihood of delivering environmental, economic, and social benefits. The initial phase of this Pilot Project entails dredging the authorized Barnegat Inlet navigation entrance channel to authorized depth utilizing a split-hull hopper dredge and placing the high quality sand in the nearshore zone of the ocean beach fronting the community of Harvey Cedars, a known erosional hotspot. Another component of this Section 1122 pilot program is the subject of the aforementioned EA.

The channel at Oyster Creek is 200 feet wide by 8 feet deep (MLLW). The western portion of the channel shoals frequently and is typically dredged every 3 years based on when funding is appropriated. USACE proposes to initially dredge approximately 25,000 cubic yards (cy) to bring the channel back to authorized depth. Dredging will be conducted utilizing a hydraulic pipeline (cutterhead) dredge and the material will be placed at an aquatic placement area known as Site 6 in Barnegat Bay west of previously created islands known as Sites 26A and 26B. In subsequent maintenance dredging operations, USACE proposes to place approximately 3,000 cy annually at either Site 6 or at nearshore locations identified as Sites 10 and 11 to provide a supplemental sand source for shoreline protection and to promote marsh migration in

an areas of shoreline erosion. The New Jersey Department of Environmental Protection's (NJDEP) Bureau of Coastal Engineering will serve as the non-Federal sponsor.

The EA can be downloaded from our District website:
<http://www.nap.usace.army.mil/Missions/CivilWorks/PublicNoticesReports.aspx>

Since Oyster Creek Navigation Channel will only be dredged to its authorized depth, and since the placement of dredged material within the two nearshore locations of Site 10 and 11 and the deeperwater of Site 6, the USACE has determined that the proposed action will have *No Effect* on historic properties eligible for or listed on the National Register of Historic Places pursuant to 36CFR800.4(d)(1).

We request your review of the proposed project EA and your concurrence with our *No Effect* determination. If you have any questions or comments please contact our District Cultural Resource Specialist, Nikki Minnichbach via email at Nicole.C.Minnichbach@usace.army.mil or by phone at 215-656-6556. Thank you for your participation in the Section 106 review process.

Sincerely,

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FOR
Peter R. Blum, P.E.
Chief, Planning Division



DEPARTMENT OF THE ARMY
PHILADELPHIA DISTRICT, CORPS OF ENGINEERS
100 PENN SQUARE EAST, 7th FLOOR WANAMAKER BUILDING
PHILADELPHIA, PENNSYLVANIA 19107-3390

1 September 2020

Environmental Resources Branch

Mr. Eric Schrading
Field Supervisor
U.S. Fish and Wildlife Service
4 East Jimmie Leeds Road, Suite 4
Galloway, NJ 08205-4465
Eric_Schrading@fws.gov

Dear Mr. Schrading:

This letter is to notify you that the Philadelphia District, U.S. Army Corps of Engineers (USACE) has prepared a draft Environmental Assessment (EA) titled: *National Regional Sediment Management (RSM) Program, Water Resources Development Act (WRDA 2016) Section 1122 Beneficial Use Pilot Project, Oyster Creek Channel, Barnegat Inlet Federal Navigation Project, Ocean County, New Jersey.*

Section 1122 of WRDA requires USACE to establish a pilot program to implement ten projects nationwide for the beneficial use of dredged material. The Barnegat Inlet Beneficial Use Pilot Project was selected as one of ten nationwide projects from a field of 95 proposals, based on the criteria of having a high likelihood of delivering environmental, economic, and social benefits. The initial phase of this pilot project entails dredging the authorized Barnegat Inlet navigation entrance channel to authorized depth utilizing a split-hull hopper dredge and placing the high quality sand in the nearshore zone of the ocean beach fronting the community of Harvey Cedars, a known erosional hotspot. Another component of the Section 1122 pilot program is the subject of the current EA.

The channel at Oyster Creek is 200 feet wide by 8 feet deep (MLLW). The western portion of the channel shoals frequently and is typically dredged every 3 years based on when funding is appropriated. USACE proposes to initially dredge approximately 25,000 cubic yards (cy) to bring the channel back to authorized depth. Dredging will be conducted utilizing a hydraulic pipeline (cutterhead) dredge and the material will be placed at an aquatic placement area known as Site 6 in Barnegat Bay west of previously created islands known as Sites 26A and 26B. In subsequent maintenance dredging operations, USACE proposes to place approximately 3,000 cy annually at either Site 6 or at nearshore locations identified as Sites 10 and 11 to provide a supplemental sand source for shoreline protection and to promote marsh migration in an areas of shoreline erosion. Site 10 is adjacent to the Edwin B. Forsythe National Wildlife Refuge. The New Jersey Department of Environmental Protection's (NJDEP) Bureau of Coastal Engineering will serve as the non-Federal sponsor.

The draft EA was prepared in accordance with National Environmental Policy Act (NEPA) regulations, the Council on Environmental Quality's regulations for implementing

NEPA and *U.S. Army Corps of Engineers Procedures for Implementing NEPA, Engineering Regulation (ER) 200-2-2*. The EA evaluates existing environmental, cultural, and socio-economic conditions in the study area, and the effects of the project on existing resources in the immediate and surrounding areas.

The EA can be downloaded from our District website:
<http://www.nap.usace.army.mil/Missions/CivilWorks/PublicNoticesReports.aspx>

Pursuant to the Endangered Species Act we request informal consultation with your office for the proposed project. The listed species within your jurisdiction identified as potentially occurring in the Barnegat Bay region include: seabeach amaranth (*Amaranthus pumilus*), piping plover (*Charadrius melodus*), roseate tern (*Sterna dougallii*), and red knot (*Calidrus canutus*). Because the proposed dredging and placement areas occur entirely in marine waters (depths approximately 7-8 feet MLLW), we have determined that the proposed beneficial use of dredge material is not likely to adversely impact the continued existence of the aforementioned species. The proposed project may create in the future habitat more suitable for foraging by listed bird species by reducing water depths over time in the placement areas.

In accordance with the Fish and Wildlife Coordination Act (FWCA), USACE requests your review and comment on the draft EA. Steps proposed to be taken in order to reduce potential adverse impacts to natural resources are presented in the report. All necessary permits and approvals issued by the regulatory agencies will be obtained prior to construction. Placement operations will be monitored to inform future Beneficial Use design plans using maintenance material. USACE is committed to continuing to work closely with Federal and State resource agencies, prior to and during project construction for projects such as this one.

We request your review and comments on the draft report within 45 days of the date of this letter.

If you have any questions please contact Ms. Barbara Conlin of our Environmental Resources Branch at 215-656-6557 or via email Barbara.E.Conlin@usace.army.mil or, Ms. Monica Chasten of our Operations Division at 215-656-6683 or via email Monica.A.Chasten@usace.army.mil. Thank you for your attention to this matter.

Sincerely,

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FOR

Peter R. Blum, P.E.

Chief, Planning Division

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DEPARTMENT OF THE ARMY
PHILADELPHIA DISTRICT, CORPS OF ENGINEERS
100 PENN SQUARE EAST, 7th FLOOR WANAMAKER BUILDING
PHILADELPHIA, PENNSYLVANIA 19107-3390

1 September 2020

Environmental Resources Branch

Mr. Keith M. Hanson
Marine Habitat Resource Specialist
NOAA Fisheries
Greater Atlantic Region
Habitat & Ecosystem Services Division (Habitat Conservation)
200 Harry S. Truman Parkway, Suite 460
Annapolis, MD 21401
Keith.Hanson@noaa.gov

Dear Mr. Hanson:

This letter is to notify you that the Philadelphia District, U.S. Army Corps of Engineers (USACE) has prepared a draft Environmental Assessment (EA) titled: *National Regional Sediment Management (RSM) Program, Water Resources Development Act (WRDA 2016) Section 1122 Beneficial Use Pilot Project, Oyster Creek Channel, Barnegat Inlet Federal Navigation Project, Ocean County, New Jersey.*

Section 1122 of WRDA requires USACE to establish a pilot program to implement ten projects nationwide for the beneficial use of dredged material. The Barnegat Inlet Beneficial Use Pilot Project was selected as one of ten nationwide projects from a field of 95 proposals, based on the criteria of having a high likelihood of delivering environmental, economic, and social benefits. The initial phase of this Pilot Project entails dredging the authorized Barnegat Inlet navigation entrance channel to authorized depth utilizing a split-hull hopper dredge and placing the high quality sand in the nearshore zone of the ocean beach fronting the community of Harvey Cedars, a known erosional hotspot. Another component of this Section 1122 pilot program is the subject of the aforementioned EA.

The channel at Oyster Creek is 200 feet wide by 8 feet deep (MLLW). The western portion of the channel shoals frequently and is typically dredged every 3 years based on when funding is appropriated. USACE proposes to initially dredge approximately 25,000 cubic yards (cy) to bring the channel back to authorized depth. Dredging will be conducted utilizing a hydraulic pipeline (cutterhead) dredge and the material will be placed at an aquatic placement area known as Site 6 in Barnegat Bay west of previously created islands known as Sites 26A and 26B. In subsequent maintenance dredging operations, USACE proposes to place approximately 3,000 cy annually at either Site 6 or at nearshore locations identified as Sites 10 and 11 to provide a supplemental sand source for shoreline protection and to promote marsh migration in

an areas of shoreline erosion. The New Jersey Department of Environmental Protection's (NJDEP) Bureau of Coastal Engineering will serve as the non-Federal sponsor.

The draft EA was prepared in accordance with National Environmental Policy Act (NEPA) regulations, the Council on Environmental Quality's regulations for implementing NEPA and *U.S. Army Corps of Engineers Procedures for Implementing NEPA, Engineering Regulation (ER) 200-2-2*. The EA evaluates existing environmental, cultural, and socio-economic conditions in the study area, and the effects of the project on existing resources in the immediate and surrounding areas.

The EA can be downloaded from our District website:
<http://www.nap.usace.army.mil/Missions/CivilWorks/PublicNoticesReports.aspx>

USACE is initiating consultation with your office pursuant to the Magnuson Stevens Fishery Conservation and Management Act (MSA). The EA includes a discussion on EFH and Federally-managed species as well as a NOAA Fisheries Greater Atlantic Regional Fisheries Office Essential Fish Habitat (EFH) Assessment & Fish and Wildlife Coordination Act (FWCA) Worksheet for the proposed project. We have concluded that the effect on EFH is not substantial and that any adverse effects are no more than minimal and temporary. We will provide our response to your comments in a separate letter, pursuant to the MSA section 305(b)(4).

Pursuant to the NEPA, and the FWCA, we request your review and comments on the draft report within 30 days of the date of this letter. Pursuant to the MSA, we request your comments no later than 30 October 2020.

If you have any questions please contact Ms. Rachel Ward of our Environmental Resources Branch at 215-656-6733 or via email Rachel.J.Ward@usace.army.mil, or Ms. Monica Chasten of our Operations Division at 215-656-6683, or via email Monica.A.Chasten@usace.army.mil. Thank you for your attention to this matter.

Sincerely,

LEARY.ADRIAN.13
84973384

FOR
Peter R. Blum, P.E.
Chief, Planning Division

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Enclosure



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

October 2, 2020

Michael Landis, Chief
Operations Division
Philadelphia District
U.S. Army Corps of Engineers
Wanamaker Building
100 Penn Square East
Philadelphia, PA 19107-3390

RE: Oyster Creek Channel Dredging and Placement Project; under
Section 1122 of the Water Resources Development Act of 2016

Dear Mr. Landis:

We have reviewed the essential fish habitat (EFH) assessment worksheet and its attachments dated August 31, 2020, and the Draft Environmental Assessment (DEA) and cover letter dated September 1, 2020, for the proposed Oyster Creek channel dredging and aquatic placement project in Barnegat Bay, Ocean County, New Jersey. The U.S. Army Corps of Engineers (Corps), Philadelphia District (District), is proposing to dredge the Oyster Creek Channel in Barnegat Bay and place the material in three open water placement sites in the bay. None of the information provided to us includes the number of dredging events proposed or to what elevation the bay bottom will be raised, though the documents do mention potential creation of an “emergent island” at one of the sites. The proposed project is identified as a pilot project being funded through Section 1122 of the Water Resources Development Act (WRDA) of 2016, which authorizes the Corps to establish a pilot program for beneficial use of dredged material. The New Jersey Department of Environmental Protection’s (NJDEP) Bureau of Coastal Engineering is the non-federal sponsor for this project.

The Magnuson Stevens Fishery Conservation and Management Act (MSA) requires you to consult with us on projects that may adversely affect essential fish habitat (EFH). In addition, the Fish and Wildlife Coordination Act (FWCA) as amended in 1964, requires consultation with us when proposed actions might result in modifications to a natural stream or body of water. The FWCA also requires that you consider effects that these projects would have on fish and wildlife and must also provide for improvement of these resources. Through these authorities, we seek to protect, conserve and enhance aquatic resources in marine, estuarine and riverine ecosystems. As the nation’s federal trustee for the conservation and management of marine, estuarine, and anadromous fishery resources, we provide the following comments and recommendations



pursuant to the authorities of the MSA and FWCA.

Although the September 1, 2020 DEA discusses two actions, the Barnegat Inlet and Atlantic Ocean-Harvey Cedars (Phase 1) and the Oyster Creek Channel and Barnegat Bay (Phase 2) dredging and placement projects, we have previously consulted on the Barnegat Inlet project, where a separate EA was produced. As a result, our comments below focus only on the dredging of the Oyster Creek Channel and the placement of the material at Sites 6, 10, and 11 in Barnegat Bay. However, should you propose to place material from any other location at these sites, or if any other entity proposes to use these sites, reinitiation of your EFH and FWCA consultation with us will be necessary.

Because none of the materials provided include an end date for this proposed pilot project and do not identify final proposed water depths, project goals, performance measures or success criteria, it is difficult to evaluate the long-term and cumulative effects, both positive and negative, to aquatic resources including EFH. As a result, several of our EFH conservation recommendations focus on the development of appropriate monitoring plans, and ways to measure progress and success. In addition, annual coordination is necessary to ensure the proposed project does not result in adverse impacts to EFH or other NOAA trust resources and the project meets the District's beneficial use goals.

Lastly, since the proposed action is a pilot project, the District should identify an end date for the activities after which the results of the pilot are to be evaluated. Following an evaluation of the monitoring data collected during the pilot and whether or not the success criteria have been achieved, a decision on the continued practice of placing material in the aquatic environment of the bay should be made in coordination with us and other federal and state agencies and regional experts (e.g., Barnegat Bay Partnership, Stockton, Rutgers and others). A pilot project, by definition, is a small scale preliminary study conducted in order to evaluate the feasibility, cost, adverse effects, and other elements of a concept or study design prior to implementation of a full-scale project. Pilots are not intended to continue indefinitely. Depending upon the end date selected and the results of the annual meetings, reinitiation of the EFH and FWCA consultations with us may be necessary before the end of the pilot project.

Project Description

According to the information provided, the channel at Oyster Creek is 200 feet wide by 8 feet deep at mean lower low water (MLLW). The western portion of the channel shoals frequently and is typically dredged every three years. Initially approximately 25,000 cubic yards (cy) of material will be dredged during November and December of 2020 to bring the channel back to its authorized depth. Dredging will be conducted using a hydraulic pipeline (cutterhead) dredge and the material will be placed at an aquatic placement area known as Site 6 (approximately 39.786912, -74.155386) in Barnegat Bay, located west of previously created islands known as Sites 26A and 26B. In subsequent maintenance dredging operations, approximately 3,000 cy annually will be dredged and placed at either Site 6 or at nearshore locations identified as Sites 10 (approx. 39.782191, -74.183820) and 11 (approx. 39.767881, -74.188094) during November and December. Sites 10 and 11 are located west of Site 6, near the mainland shoreline in Waretown, NJ. Future dredging and disposal at Sites 10 and 11 will be done using the

government-owned small split-hull hopper dredge *Currituck*. The material (250-300 cy quantities/hopper) would be placed in shallow water as close to the shoreline as the *Currituck's* draft will allow (i.e. approximately 7-8 feet deep MLLW). The goal of these placements, as stated in the District's documents, is to provide a supplemental sediment source for shoreline protection and to promote marsh migration in areas experiencing shoreline erosion.

Project Setting: Barnegat Bay-Little Egg Harbor Estuary

The Barnegat Bay-Little Egg Harbor (BB-LEH) Estuary is a distinct and productive coastal lagoonal ecosystem composed of three shallow, micro-tidal bays: Barnegat Bay, Manahawkin Bay, and Little Egg Harbor. Compared to many other estuaries and bays along the U.S. East Coast, BB-LEH is not characterized by high flow rates or regular flushing (low retention). BB-LEH is a shallow (average depth of 1.5 meters) highly eutrophic system susceptible to water quality degradation because of relatively low freshwater inflow, poor flushing, and highly developed coastal watershed areas (Kennish et al. 2007). Tidal range generally averages less than 1m (range: about 60cm in inlets to 15-20 cm at point furthest away from the inlets; Psuty 2004). Due to the shallow depths, the photic zone can extend to large portions of the lagoonal floor, resulting in benthic production by seagrasses, macroalgae, epiphytic microalgae, and others comprising a significant fraction of the total primary production of the system (Bricelj et al. 2017). There is strong benthic-pelagic coupling due to high metabolic rates of the benthic primary producers that mediate nutrient cycling processes (McGlathery et al. 2007). Strong coupling between coastal lagoons, their watersheds and the atmosphere, with limited buffering due to protracted water residence times may thus result in low resilience to stressors (Bricelj et al. 2017). The physiographic features of the bay and barrier island complex result in limited flushing and protracted bay water residence with a strong seasonal component, ranging from a low of 24 days in winter, up to a maximum of 74 d in summer, and an annual average of 49 d (summarized in Bricelj et al. 2017). Exchange with ocean waters only occurs through Point Pleasant Canal, Barnegat Inlet, and Little Egg Inlet.

Fish and Wildlife Coordination Act (FWCA)

BB-LEH Estuary, including the Oyster Creek channel, is habitat for many aquatic species including both state and federally managed species and their forage, including bluefish (*Pomatomus saltatrix*), summer flounder (*Paralichthys dentatus*), scup (*Stenotomus chrysops*), black sea bass (*Centropristis striata*), Atlantic butterfish (*Peprilus triacanthus*), winter flounder (*Pseudopleuronectes americanus*), windowpane flounder (*Scophthalmus aquosus*), weakfish (*Cyanoscion regalis*), striped bass (*Morone saxatilis*), tautog (*Tautoga onitis*), spot (*Leiostomus xanthurus*), alewife (*Alosa pseudoharengus*), blueback herring (*Alosa aestivalis*), Atlantic croaker (*Micropogonias undulatus*), blue crab (*Callinectes sapidus*), Atlantic menhaden (*Brevoortia tyrannus*), killifish (*Fundulus spp.*), Atlantic silversides (*Menidia menidia*), bay anchovies (*Anchoa mitchilli*), hard clam (*Mercenaria mercenaria*), soft clam (*Mya arenaria*), oyster (*Crassostrea virginica*) blue mussel (*Mytilus edulis*), bay scallop (*Argopecten irradians*), horseshoe crab (*Limulus polyphemus*), and other assorted fish and invertebrates (e.g., *Neomysis americana*, *Mysidopsis bigelowi*). The Barnegat Inlet also supports strong recreational fishing from April to November for numerous species, including bluefish, striped bass and weakfish.

Anadromous species such as alewife, blueback herring, and striped bass transit the project area to reach spawning and nursery habitat in numerous streams and rivers, including Westecunk Creek, Cedar Creek, Kettle Creek, Polhemus Creek, Toms River and its tributaries including Mill Creek, Jakes Branch, and others, as well as the tributaries to Little Egg Harbor Bay such as Tuckerton Creek. The NJDEP's Bureau of Freshwater Fisheries has confirmed spawning runs of alewife and blueback herring, collectively known as river herring, in these waterways (NJDEP 2005). Alewife and blueback herring have complex lifecycles where individuals spend most of their lives at sea then migrate great distances to return to freshwater rivers to spawn during the late winter and spring. Alewife and blueback herring are also believed to be repeat spawners, generally returning to their natal rivers to spawn (Collette and Klein-MacPhee 2002).

Magnuson Stevens Fishery Conservation and Management Act (MSA)

The BB-LEH Estuary has been designated EFH for various life stages of species managed by the New England Fishery Management Council, Mid-Atlantic Fishery Management Council, and NOAA Fisheries. These areas provide feeding, spawning, resting, nursery, and staging habitat for a variety of commercially, recreationally, and ecologically important species. Species for which EFH has been designated in the project area include, but are not limited to, Atlantic butterfish, bluefish, black sea bass, scup, summer flounder, windowpane flounder, winter flounder, clearnose skate (*Raja eglanteria*), little skate (*Leucoraja erinacea*), and winter skate (*Leucoraja ocellata*). These areas are also designated EFH for several Atlantic highly migratory species (tuna, swordfish, billfish, small and large coastal sharks, and pelagic sharks) including, but not limited to, sandbar shark (*Carcharhinus plumbeus*) and sand tiger shark (*Carcharias taurus*). The sand tiger shark is listed as a Species of Concern by NOAA.

Submerged Aquatic Vegetation (SAV)/Habitat Area of Particular Concern

Portions of the proposed project area, or directly adjacent to the project area, have been designated as Habitat Areas of Particular Concern (HAPC) for federally managed summer flounder. HAPCs are a subset of EFH that are either rare, particularly susceptible to human-induced degradation, especially important ecologically, or located in an environmentally stressed area. The summer flounder HAPC is designated as all native species of macroalgae, seagrasses, and freshwater and tidal macrophytes in any size bed, as well as loose aggregations, within adult and juvenile summer flounder EFH. In locations where native species have been eliminated from an area, then exotic species are included. In addition, the USEPA has designated SAV as a special aquatic site under Section 404(b)(1) of the federal Clean Water Act, due to its important role in the marine ecosystem for nesting, spawning, nursery cover, and forage areas for fish and wildlife. It is a priority habitat for us for these same reasons.

Dense beds of submerged aquatic vegetation (SAV) occur near or directly adjacent to the proposed project dredging and disposal locations. SAV habitats are among the most productive ecosystems in the world and perform a number of irreplaceable ecological functions which range from chemical cycling, physical modification of the water column, and binding sediments to providing food and shelter for commercially and recreationally important fishery species (Stephan and Bigford 1997). A recent study evaluating over 11,000 comparisons from 160 peer-reviewed studies of structured habitats found that SAV is one of the most productive nearshore-structured nursery habitats; outperforming other structured habitats such as reefs and marshes in

fish and invertebrate density and growth (Lefcheck et al. 2019). SAV provides valuable nursery, forage, spawning, resting, and refuge habitat for a variety of resident and migratory fish species including summer flounder, winter flounder, black sea bass, striped bass, alewife, blueback herring and others. SAV is also an important food source for waterfowl.

Studies by Weinstein and Brooks (1983), Adams (1976) and Lascara (1981) in Packer et al. (1999) indicate that SAV is important habitat for juvenile summer flounder. Rogers and Van Den Avyle (1983) also suggest that SAV beds are important to summer flounder, and that any loss of these areas along the Atlantic Seaboard may affect summer flounder stocks. Studies from the lower Chesapeake Bay found that SAV beds are important for the brooding of eggs and for fishes with demersal eggs and as habitat for the larvae of spring-summer spawners such as anchovies (*Anchoa spp.*), gobies, (*Gobiosoma spp.*), weakfish, and silver perch (*Bairdiella chrysoura*) (Stephan and Bigford 1997). Heckman and Thoman (1984) concluded that SAV beds are also important nursery habitats for blue crabs and Peterson (1982) in Kenworthy et al. (1988) indicated that shallow dwelling hard clams may be protected from predation by the rhizome layer of seagrass beds. Seagrasses support many commercially and recreationally important shellfish and finfish species such as mussels and bay scallops, with a very close association (dependency) for bay scallops (Bricelj et al. 2017).

Water quality and, in particular, water clarity is considered among the most critical, if not the most critical, factor in the maintenance of healthy SAV habitats (Stephan and Bigford 1997). Seagrasses require at least 15% to 25% of the incident solar radiation (at the water surface) just for maintenance (Kenworthy et al. 1988). Increases in suspended sediments and the subsequent reductions in water transparency caused by construction activities, limits photosynthesis. Experiments by Short et al. (1991) with eelgrass have shown that reductions in light decrease growth, promote a reduction in plant density and can ultimately eliminate an eelgrass population altogether.

While we appreciate that one of the goals of the project is to create or enhance SAV habitat, this should not be done at the expense of existing, fully functional SAV, including SAV that may colonize the placement areas. Impacts to existing SAV beds should be minimized by avoiding dredging within 500 feet of any bed between April 15 and October 15 of any given year. This will decrease the potential impact of elevated turbidity that can reduce percent light transmittance through the water column (and photosynthesis) and reduce SAV growth and survival. Additionally, dredging and placement of material should be avoided in areas where SAV occurs to eliminate impacts to existing, fully functional SAV beds and the habitat and ecosystem services SAV provides.

Because the project documentation lacks information on sediment characterization and hydrodynamics at the placement sites, important variables for SAV establishment, growth, and survival (Koch 2001), all SAV beds located within 1,000 feet of any placement sites should be systematically monitored for potential impacts of the dredging and placement. Monitoring should take place prior to placement (baseline), as well as during and post-placement. If SAV becomes established in the placement sites, future dredging and placement should be avoided.

For Site 6, due to its close proximity to dense, expansive SAV beds, and in the absence of any sediment characterization and hydrodynamic information, only the deepest, western-most portion of the site should receive any dredged material during the initial placement (2020) or the entire site should be shifted to the west. The western-most area of Site 6 is currently 8.00-9.00 feet deep at MLLW according to bathymetry maps provided. Following initial placements and subsequent monitoring, the District should meet with us and other federal and state agencies and regional experts to review monitoring results, and to evaluate and provide input on future plans/placements prior to the next cycle of dredging and placement. This coordination should also take place for sites 10 and 11.

Shellfish and Other Invertebrates

The area of the proposed project is habitat for various ecologically, economically, and recreational important shellfish species, including hard clam, soft clam, oyster, bay scallop and others. Hard clam in particular supports important commercial and recreational fisheries and is one of the most valuable aquaculture species on the East Coast (summarized in Bricelj et al. 2017). In addition, infaunal species such as clams filter significant volumes of water, effectively retaining organic nutrients from the water column (Nakamura and Kerciku 2000; Forster and Zettler 2004). Shellfish populations and the species which rely on them for food or habitat, can be adversely affected by dredging and dredge disposal due to the physical destruction of organisms and habitat, increased turbidity and sedimentation (i.e., burial and smothering), interruption of feeding processes and success, and habitat alteration/degradation.

Of particular concern in this case are impacts to federally managed species such as summer, windowpane, and winter flounder and scup, which feed on benthic organisms including the siphons of shellfish, juvenile crabs, and various shrimp species (Steimle et al. 2000). As discussed above, elements of the proposed project may adversely impact shellfish, other invertebrates and their habitats. This can result in a decrease in the quantity and quality of prey for federally managed species, thus adversely affecting their EFH.

We recommend dredging and placement of material be avoided in areas where hard clam, soft clam, or bay scallop occur in moderate or high density aggregations or where oyster or mussel reefs occur. Pre-project surveying and sampling for shellfish should be conducted to determine occurrence and density, and should be compared to existing maps. Because the project documentation lacks information on sediment characterization and hydrodynamics at the placement sites, all mapped shellfish beds of moderate or high density located within 1,000 feet of any placement sites should be systematically monitored for potential impacts of the dredging and placement. Monitoring should take place prior to placement (baseline) and during and post-placement at adjacent sites. Post-placement monitoring should take place at/in the placement sites to evaluate project impacts. If shellfish become established and abundant in the placement sites, future dredging and placement should be avoided.

Winter flounder

Winter flounder numbers are at or near historic lows, as stocks have steadily declined since the 1980s. The most recent stock assessment for the Southern New England/Mid-Atlantic winter flounder stock concluded that the stock is overfished and that the spawning stock biomass is only 18% of the biomass target and 36% of the biomass threshold. Additionally, recruitment remains

near the historic low of 2013 (NEFSC 2017). Recruitment is directly related to spawning success and subsequent egg and larval development and juvenile survivorship, therefore, avoiding and minimizing impacts to the sensitive life stages influencing recruitment is especially important. The area of the proposed project is important spawning and nursery habitat for winter flounder and other species. EFH for winter flounder eggs (and adults) include sub-tidal estuarine and coastal benthic habitats from mean low water to five meters in areas of mud, muddy sand, sand, gravel, macroalgae, and submerged aquatic vegetation. Winter flounder larvae and juvenile EFH also includes the bottom types and depths found in the area of the proposed project and are generally the same to those of eggs and adults in estuarine environments.

Winter flounder ingress into spawning areas within mid-Atlantic estuaries when water temperatures begin to decline in late fall. Tagging studies show that most return repeatedly to the same spawning grounds (Lobell 1939, Saila 1961, Grove 1982 in Collette and Klein-MacPhee 2002). Winter flounder typically spawn in the winter and early spring, although the exact timing is temperature dependent and thus varies with latitude; with spawning taking place from January to May throughout the northeast U.S. (Able and Fahay 1998). In the New York Bight, spawning in estuaries generally occurs from January to April (Scarlett and Allen 1992; Stoner et al. 1999) with spawning peaks observed in February and March (Scarlett and Allen 1992; Wilber et al. 2013). Egg and larval development are largely temperature dependent.

Winter flounder have demersal, adhesive eggs that are deposited in clusters on the bottom and remain on the bottom until they hatch. Hatching generally occurs in two to three weeks, depending on temperature (i.e., low temperatures lead to longer hatching time) (Fahay 1983). After hatching, the larvae are initially planktonic, but following metamorphosis they assume an epibenthic existence and appear “flounder-like.” Metamorphosis begins around five to six weeks after hatching, and is completed about eight weeks after hatching (Bigelow and Schroeder 1953). Winter flounder larvae are negatively buoyant (Pereira et al. 1999) and are typically more abundant near the bottom (Able and Fahay 1998). These life stages are less mobile and are thus more likely to be adversely affected by impacts to benthic habitat, such as dredging and dredge material placement. Therefore, to avoid and minimize impacts to spawning adults, eggs, and other early life stages of winter flounder, and other smaller pelagic life stages, dredging and dredge material placement should be avoided from January 1 to May 31 of any given year.

Prey Species

The dredging of the Barnegat Inlet will also adversely impact EFH through impacts to prey species. The EFH final rule states that the loss of prey may be an adverse effect on EFH and managed species because the presence of prey makes waters and substrate function as feeding habitat and the definition of EFH includes waters and substrate necessary to fish for feeding. Therefore, 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.

As discussed above, anadromous fish such as alewife, blueback herring and striped bass migrate through the Barnegat Inlet and use the Barnegat Bay-Little Egg Harbor and their tributaries as spawning, nursery and forage habitat. Water quality degradation, increased turbidity, noise and vibrations from dredging operations may impede the migration of anadromous fish through the

inlets to their upstream spawning grounds. Alosine fish, such as alewife and blueback herring, are important forage for several species managed by the NEFMC and MAFMC as they provide trophic linkages between inshore and offshore systems. Buckel and Conover (1997) in Fahay et al. (1999) report that diet items of juvenile bluefish include Alosa species such as blueback herring and alewife as well as bay anchovy, silversides and other fish species. Additionally, juvenile Alosa species have all been identified as prey species for summer flounder, windowpane flounder, and winter skate in Steimle et al. (2000). Avoiding dredging from March 1 to June 1 will also avoid and minimize impacts to various prey species.

Project-Specific Survey/Sampling and Monitoring

The project documents provided to us include primarily desktop analyses of potential sensitive resources or resources of concern in the project area. These resources include, but are not limited to, SAV and shellfish, which are mapped by the State (NJDEP), though other entities also conduct work on these resources in Barnegat Bay. Although this desktop analysis provides insights into past temporal and spatial distribution and abundance of specific resources (mainly hard clam and SAV), project-specific sampling and habitat characterization is necessary to determine the current site conditions and resources present at each site, and to fully evaluate the potential short, medium, and long-term temporary and permanent/chronic impacts of the proposed project. Therefore, we recommend the District conduct surveys/sampling prior to initial placements and after all future placements at each site. Surveys/sampling should include depth (bathymetry), benthic fauna (including shellfish), SAV and macroalgae, in addition to sediment characterization, dissolved oxygen, temperature and salinity. Depths (bathymetry) have been provided for all sites, and sediment characterization information has been provided for the dredging site, but not placement sites.

The project goals and success criteria are poorly defined and monitoring appears to be observational and generalized, lacking the specificity necessary for adequate data collection and analysis needed to reach any conclusions regarding project success. The lack of clearly defined goals and performance measures is concerning, as it would also be difficult to make decisions regarding adaptive management and to determine “success” of the project. For example, the District states a goal of the project (at Sites 10 and 11) is to provide a supplemental sediment source for shoreline protection and to promote marsh migration in areas experiencing shoreline erosion. However, it is unclear how success would be measured and what monitoring would occur to determine if the project is successful. At a minimum, sediment migration-transport monitoring would be required to evaluate whether or not sediment placed at Sites 10 or 11 is being transported and accreting on the shorelines and achieving the goal of shoreline protection and providing a sediment source for marsh migration.

Ecological goals and performance metrics need to be clearly outlined prior to project implementation to avoid confusion and need to be specific, objective, verifiable, obtainable, and practicable. These ecological goals should be stated prior to project implementation. We also recommend ecological performance standards be developed to determine if the project is achieving its objectives of benefitting, restoring and enhancing aquatic habitat that resembles an ecological reference. An ecological reference should be established and be based on the characteristics of an intact aquatic habitat of the same type within the same watershed. The

ecological reference should be used to establish the elements of each fully functional habitat that the District is targeting to create/enhance.

In addition to pre-project surveys/sampling, monitoring of the site and adjacent areas during and post-placement is important to evaluate project impacts and to determine if the project is meeting its defined goals (e.g., achieving success). The data resulting from monitoring efforts is critical to any pilot project. Pilot projects, by nature, are small-scale implementations that are generally used to test or support the viability of an idea that may be applied or used more broadly in the future. In order to make any conclusions regarding the viability or success of a pilot project, rigorous data must be collected on all elements of the project. However, as you are aware, we would recommend rigorous monitoring (as we have in the past) in order to determine the ecological impacts of the project regardless of the project's designation as a "pilot."

We recommend a comprehensive monitoring plan be developed and monitoring take place prior to project implementation (as mentioned above) and for a minimum of five years post-construction or every year after placement at each site for three years. A long-term management plan and adaptive management strategies should also be developed for the proposed project. All plans and monitoring reports should be submitted to us for review. As part of any monitoring plan, during and post-placement sampling should be conducted in areas of targeted sediment placement and migration, as well as adjacent areas (outside of targeted and migration areas and especially in existing SAV beds), to determine the extent of impacts. Sampling plots/locations should be maintained for the 5-year post-sampling period. Variables for sampling and monitoring should include, at a minimum, sediment physical and chemical properties, elevations (topography/bathymetry), emergent and submerged aquatic vegetation, turbidity, benthic invertebrates (infauna and epifauna), and nekton (including fisheries).

There is potential for short-term, medium- and long-term temporary and permanent/chronic physical and biological impacts from the proposed dredging and placement of sediment in the BB-LEH. The potential impacts to aquatic resources, including species and their habitats, is largely addressed above. To summarize, dredging can damage fishery resources and their habitats through direct impingement of eggs and larvae, through the creation of elevated suspended sediment levels in the water column, and through deposition of sediments on immobile eggs and early life stages. Physical removal and burial/smothering of benthic faunal communities, degradation of habitats, and disturbance of foraging habitat for fish and invertebrates is also likely. Additional impacts may include disturbance to benthic communities by altering sediment transport characteristics and overall community structure. Sustained water column turbulence can reduce the feeding success of sight-feeding fish such as winter flounder and summer flounder, as well as black sea bass and tautog.

Dredging can also remove the substrate used by federally managed species as spawning, refuge and forage habitat. Benthic organisms that are food sources for federally managed species may also be removed during the dredging. These impacts may be temporary in nature if the substrate conditions return to pre-construction conditions and the benthic community recovers with the same or similar organisms. The impacts may be permanent if the substrate is altered in a way that reduces its suitability as habitat, if the benthic community is altered in a way that reduces its suitability as forage habitat, or if the dredging and placement occurs so often that the area does

not have time to recover. In consideration of the complex interactions of various vertebrates, invertebrates, and their habitats, our EFH conservation recommendations also avoid and minimize impacts to various other NOAA-trust resources under our purview.

Essential Fish Habitat Conservation Recommendations

The District has determined the adverse effect on essential fish habitat (EFH) or federally managed fisheries is not substantial, and effects can be alleviated with minor project modifications or EFH conservation recommendations. While we agree that impacts to EFH and federally managed species can be minimized with project modifications and EFH conservation recommendations, we cannot agree with this determination over the long-term due to the wide range of activities proposed, the open ended nature of the project, the yet-to-be determined project plans, and the lack of specific, identifiable, measurable goals, success criteria and monitoring plan.

We recommend the District meet with us and other federal agencies, state agencies and regional experts (e.g., Barnegat Bay Partnership, Stockton, Rutgers and others) at least annually to share monitoring results, discuss future placements and plans, and develop a long-term, comprehensive plan for the project and placement sites. In addition, a monitoring and management plan should be developed with input from federal and state agencies, and regional experts (as mentioned above). A number of these recommendations are stated as specific project objectives by the District in the September 1, 2020 DEA: “specific project objectives include: establish cooperative working relationships with stakeholder groups/natural resource agencies to collaboratively support improved sediment management practices and coastal resiliency; use monitoring results to understand design, techniques, processes, and benefits associated with island creation and other innovative sediment management practices for application to future backbay projects.” We expect the District to fully commit and follow through with these specific project objectives.

Pursuant to Section 305 (b) (4) (A) of the MSA, we recommend the following EFH conservation recommendations be incorporated into the project:

- Meet with us, other federal and state agencies, and regional experts at least annually to provide monitoring updates on the pilot project and to coordinate decision-making on future project goals and actions.
- Identify an end date for the pilot project activities, after which the cumulative results of annual monitoring are assessed, shared, and discussed with us, other federal and state agencies, and regional experts to evaluate project “success” and large-scale viability.
- To avoid and minimize the impacts of dredging on aquatic habitat, eggs, larvae, free swimming fish, and invertebrates, dredging should be avoided from January 1 to June 1 of any given year.

- Comprehensive biological and physical surveying/sampling should take place at each placement site prior to any placement and the results should be transmitted to us for review, comment, and planning input/assistance.
 - Survey/sampling should include habitat characterization in the form of depth, sediment grain size analysis, hydrology/hydrodynamics, benthic fauna (including shellfish), SAV and macroalgae, temperature, salinity, and dissolved oxygen.
 - Survey/sampling should take place prior to any/each placement cycle (inter annual). For example, if placement in Site 6 occurs in Dec. 2020, and is planned again for Dec. 2022, pre-placement survey/sampling should take place between April and October of 2022 and results shared with us, as mentioned above.

- Shellfish and submerged aquatic vegetation (SAV) occur and are mapped within/near the project areas (both dredging and placement sites).
 - Pre-placement surveys (see above) of shellfish and SAV should take place to determine the current distribution and abundance of shellfish and SAV in the proposed placement sites prior to all placements throughout the life of the project.
 - Dredging and placement of material should be avoided in areas where shellfish (moderate or high density or reefs/aggregations) and SAV occur or have been mapped.
 - Dredging should be avoided during the SAV growing season (April 15 to October 15) of any given year to avoid/minimize the impacts of turbidity (including shading) and sedimentation.
 - Barges should not be moored in areas where SAV occurs or has been mapped.
 - Because the sites are being placed in close proximity to areas where SAV and shellfish occur or have been mapped, recruitment and colonization is possible and likely. Therefore, surveys for shellfish and SAV should also take place prior to any subsequent placements (inter annual), and if shellfish (moderate or high density or reefs/aggregations) or SAV occur, material should not be placed.

- All placement sites should remain subtidal during the life of the project to allow for aquatic species use during all phases of the tide and shellfish and SAV colonization. In order to maintain all areas as subtidal, a two (2) foot buffer should be used at all sites. More specifically, material should be placed in a way that always maintains at least 2 feet of depth at MLLW. Should shellfish (moderate or high density or reefs/aggregations) or SAV colonize the placement site, additional material should not be placed.

- Due to the lack of information regarding grain size characterization at the placement sites and hydrodynamics, combined with the proximity of dense, healthy submerged aquatic vegetation (SAV) beds, placement of material at/in Site 6 should be limited to the furthest west and deepest portions of the site, provided it is not shellfish (moderate or high density) habitat or the entire site should be shifted to the west. These areas are currently 8 – 9 feet deep at MLLW. Monitoring (see below) of existing, adjacent SAV beds should occur to determine if placements are causing adverse impacts. If placements (and resulting turbidity and sedimentation) are resulting in adverse impacts to the adjacent SAV beds, all placements at Site 6 should cease.

- The dredge pipeline should be floating to avoid damage to existing mudflats, SAV and shellfish beds. In areas where the pipeline must cross these habitats, minimize anchor placement. Anchors should be placed and removed/moved in a manner that minimizes turbidity and damage to SAV.
- Ecological performance standards should be developed to determine if the project is achieving its objectives of benefitting, restoring and enhancing aquatic habitat that resembles an ecological reference. An ecological reference should be established and be based on the characteristics of an intact aquatic habitat of the same type within the same watershed. The ecological reference should be used to establish the elements of a fully functional habitat that is targeted for restoration/enhancement.
- A comprehensive monitoring plan should be developed and monitoring should take place prior to project implementation and for a minimum of five years post-construction. A long-term management plan and adaptive management strategies should also be developed for the proposed project. All plans and monitoring reports should be submitted to us for review.
- As part of any monitoring plan, systematic pre- (baseline) and post-construction sampling should be conducted in areas of targeted sediment placement and migration, as well as adjacent areas (outside of targeted and migration areas and especially in existing SAV beds), to determine the extent of impacts. Sampling plots/locations should be maintained for the 5-year post-sampling period. Variables for sampling and monitoring should include, at a minimum, sediment physical and chemical properties, elevations (topography/bathymetry), emergent and submerged aquatic vegetation, turbidity, benthic invertebrates (infauna and epifauna), and nekton (including fisheries).

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 the 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 effect pursuant to 50 CFR 600.920 (k). Such a response must be provided at least 10 days prior to final approval of the action if the response is inconsistent with any of our EFH conservation recommendations, unless we agree to use alternative time frames for your response. If your decision is inconsistent with our EFH conservation recommendation, the Assistant Administrator for Fisheries may request a meeting with the Assistant Secretary for Civil Works, as well as with any other agencies involved, to discuss the action and opportunities for resolving any disagreements.

Please also note that further EFH consultation must be reinitiated pursuant to 50 CFR 600.920(j) if new information becomes available, or if the project is revised in such a manner that affects the basis for the above determination, including a change in project schedule or timing

We look forward to continued coordination with your office on this project as it moves forward. If you have any questions or need additional information, please do not hesitate to contact Keith Hanson in our Annapolis, MD field office at keith.hanson@noaa.gov.

Sincerely,



Louis A. Chiarella
Assistant Regional Administrator
for Habitat Conservation

cc: ACOE – R. Ward, B. Conlin, M. Chasten
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NJDEP – S. Biggins, K. Dacanay
BBP – S. Hales
MAFMC – C. Moore
NEFMC – T. Nies
ASMFC –L. Havel

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100 PENN SQUARE EAST, 7th FLOOR WANAMAKER BUILDING
PHILADELPHIA, PENNSYLVANIA 19107-3390

October 22, 2020

Environmental Resources Branch

Mr. Louis A. Chiarella
Assistant Regional Administrator for Habitat Conservation
National Marine Fisheries Service
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lou.chiarella@noaa.gov

Dear Mr. Chiarella:

The U.S. Army Corps of Engineers (USACE), Philadelphia District has received your October 2, 2020 letter commenting on our draft Environmental Assessment (DEA, dated September 1, 2020) and our Essential Fish Habitat assessment (EFH) worksheet and Impacts Evaluation attachment (dated August 31, 2020) for the *National Regional Sediment Management (RSM) Program WRDA 2016 Section 1122 Beneficial Use Pilot Project, Oyster Creek Channel, Barnegat Inlet Federal Navigation Project, Ocean County, New Jersey*.

We appreciate the resource information you provided with respect to the Fish and Wildlife Coordination Act (FWCA) and the Magnuson Stevens Fishery Conservation and Management Act (MSA). This letter serves to provide clarification on the plan as well as provide responses to your Conservation Recommendations, pursuant to Section 305 (b)(4)(B) of the Magnuson Stevens Fishery Conservation and Management Act (MSA). In accordance with the MSA, the proposed action was evaluated with respect to its potential direct, indirect, and cumulative effects on EFH and was developed with the intention to avoid or minimize impacting special aquatic sites, pursuant to Section 404(b)(1) Guidelines of the Clean Water Act (CWA).

Under the Water Resources Development Act (WRDA) 2016 Section 1122 program, the subject project is one of two phases of a pilot project to dredge the Oyster Creek federal navigation channel in Barnegat Bay to authorized depth and place the high quality dredged material in an area that would be beneficial to the Barnegat Bay ecosystem and overall coastal system resilience. The Philadelphia District's authorized Barnegat Inlet Navigation Channel complex, which includes the Oyster Creek channel, was selected as one of only 10 selected projects out of 95 proposals nationwide to be implemented under the Section 1122 program due to its high likelihood to provide environmental, economic, and social benefits. An open water area in Barnegat Bay, located immediately southeast of the Oyster Creek channel (Site 6) was identified as the placement location for this Section 1122 pilot project by an evaluation team

comprised of natural resource agencies that included the U.S. Fish & Wildlife Service (USFWS), New Jersey Department of Environmental Protection (NJDEP) and the Barnegat Bay Partnership's Scientific and Technical Advisory Committee (BBP STAC) which includes your agency, the Jacques Cousteau National Estuarine Research Reserve, Stockton University, and others. Your October 2, 2020 letter acknowledges that a pilot project, by definition, is a small-scale preliminary study conducted in order to evaluate the feasibility, cost, adverse effects or successes. As noted in the DEA, the Philadelphia District will use the monitoring results of this pilot project to understand design, techniques, processes, and benefits associated with building natural infrastructure in coastal areas using dredged material beneficially. This Section 1122 pilot project entails a one-time placement of approximately 25,000 cubic yards (cy) of material by the hydraulic pipeline dredge Fullerton (see Section 4.4 Selected Plan of the DEA). The DEA and this consultation address potential future maintenance material placements at the pilot project Site 6 (and two additional potential future beneficial use Sites 10 and 11 discussed below).

Your October 2, 2020 letter notes that the information we provided to your office did not include the number of dredging events proposed, the elevation the bay bottom will be raised, an end date for the proposed pilot project or identify the final proposed water depths, project goals, performance measures or success criteria. We refer you to the following:

- Pilot project end date: See DEA: Section 9 (provided September 1, 2020) and Impacts Analysis attachment to the NMFS EFH Assessment Worksheet (provided September 11, 2020). These documents note that the pilot project dredging and placement operation will take approximately 4 weeks and will occur in November/December 2020. The monitoring program incorporates pre-, during, and post-construction data collection and is summarized below. The pilot project dredging and beneficial use placement operation is a one-time event.
- Final proposed water depths: See DEA: Section 4.4 (Selected Plan); NMFS EFH Assessment Worksheet and Impacts Evaluation attachment. Current bathymetry and the anticipated lift of approximately 1-2 feet over approximately 11 acres is expected for the Section 1122 pilot project. Any future placements by the Philadelphia District at the pilot project Site 6 (or at Sites 10 or 11) are expected to be smaller quantities (estimated at approximately 3,000 cy annually via government-owned hopper dredge or periodically via a contract hydraulic pipeline dredge for approximately 25,000 cy, depending on navigation needs, shoaling rates and dredge and funding availability). Future year maintenance placements will be surveyed.

- Project goals: See DEA: Section 1.0 Introduction and Project Authority; Section 2.0 Purpose and Objectives; Section 4.3 Future Beneficial Use of Dredged Material; Section 9.0 Section 404(b)(1) Analysis; and the target objectives: Section 4.4 The Selected Plan. Project specific goals are also described in detail on the NMFS EFH Assessment Worksheet (Project Description section) and in the Impacts Evaluation Attachment. The Section 1122 pilot project will be monitored to inform future long-term beneficial use strategies for the development of natural infrastructure.
- Performance measures or success criteria: An identified project goal of the Section 1122 pilot project is to beneficially use dredged material from navigation channels to keep it in the natural aquatic system. The eventual goal is to develop an emergent island approximately 11 acres in size to create approximately 60 acres of habitat suitable for SAV establishment fringing the island. This goal, however, will not be achieved following completion of the one-time placement (first lift) under the Section 1122 pilot program. Therefore, performance or success criteria post-construction of the initial pilot program placement is not applicable to island or SAV habitat creation. The monitoring plan under the Section 1122 program will include the results of the pre-construction grain size, chemical analysis of channel sediments, water quality, and bathymetric surveys of the channel and proposed placement area, the baseline field assessment, during-construction monitoring, and post-construction sampling and evaluation. The monitoring plan is currently being developed in collaboration with natural resource area experts and the USACE Engineer Research and Development Center (ERDC) in conjunction with your recommendations. As stated above, the Section 1122 pilot project is expected to reduce water depths over 11 acres at Site 6 by approximately 1-2 feet during the November/December 2020 placement. Since the starting elevation averages approximately 7-8 feet NAVD88 (MLLW) at the site, post-construction depths are not expected to reach depths suitable for SAV colonization as a result of this initial pilot project. As described in the DEA (Section 4.4 Selected Plan) and the Impacts Evaluation attachment of the NMFS EFH Assessment Worksheet, an emergent island and fringing SAV habitat will require several successive placements (lifts) of maintenance material over many years to reduce water depths, as was required at nearby created islands 26A and 26B.

In addition to the Section 1122 selected site (Site 6), the DEA (Section 4.4) and NMFS EFH Assessment Worksheet and Impacts Evaluation attachment identify two other potential future placement locations selected by the environmental agency evaluation team (Sites 10 and 11) for future Oyster Creek channel maintenance beneficial use placement options. Future estimated quantities of maintenance material to be dredged annually using a government-owned small split-hull hopper dredge are approximately 3,000 cy. These future maintenance dredging operations would take approximately 3

days. The aforementioned documents provided to you note that these two additional sites are being considered as potential future placement sites for maintenance dredging outside of the scope of the Section 1122 pilot program. In addition to Site 6, Sites 10 and 11 were selected by the resource agency evaluation team identified above for the purpose of adding a supplemental sand source and resilience in areas of eroding undeveloped shoreline. Although weather conditions and shoaling rates in the future cannot be predicted with any certainty, based on past dredging requirements, it is noted in Section 4.4 that Oyster Creek channel has been dredged roughly every 3 years, based on funding availability in the Philadelphia District's Operations & Maintenance Program. Approximately 25,000 cy was removed from Oyster Creek channel utilizing a contracted hydraulic pipeline dredge in 2017. With consistent annual maintenance dredging of smaller quantities, we anticipate that we can best control shoaling that impacts navigation safety and thereby reduce larger maintenance dredging events.

To summarize, the short-term goal under the Section 1122 pilot project is a one-time placement event and monitoring program to better inform future beneficial use placement operations. The Philadelphia District's long-term goal is to continue to beneficially place maintenance dredged material at sites 6, 10, or 11, identified by the natural resource agency evaluation team to be the most environmentally beneficial options. The collaboration process with multiple natural resource agencies and stakeholders that was implemented in support of this Section 1122 pilot project was very valuable for providing both short and long-term strategies for sediment management.

The following responds directly to your letter discussion on EFH resources:

Submerged Aquatic Vegetation (SAV)/Habitat Area of Particular Concern (HAPC): Your letter notes that portions of the proposed project area, or areas directly adjacent to the project area, have been designated as HAPC for summer flounder. These areas include macroalgae, seagrasses, and freshwater and tidal macrophytes in any bed size or loose aggregations. Water clarity is critical for healthy SAV habitat and dredging and placement of material should be avoided in areas where SAV occurs. The three sites proposed for sediment placement were selected by the natural resource agency evaluation team because they are expected to be devoid of SAV, macroalgae, or macrophytes due to excessive depths. One of the project goals is to beneficially utilize dredged material to place in an area within Barnegat Bay in order to reduce water depths to that which may eventually be conducive to SAV colonization. Bathymetric survey data provided to your office showed depths in the 7-8 foot NAVD88 (MLLW) range. A dive team subsequently conducted a pre-construction SAV/macroalgae survey September 2, 2020 and found depths as deep as -13 feet NAVD88 at the western portion of Site 6 that decreased to -5 feet NAVD88 at the easternmost edge of the site. Sporadic clumps of SAV were not found until the divers traveled further east outside of the proposed placement site, where depths as shallow as -2 to -4 feet

NAVD88 occur. These shallow depths (and SAV) to the east resulted from the creation of the island at Site 26B. Site-specific best management practices at the time of construction to strategically place dredged material will reduce the potential for construction-generated turbidity to reach neighboring SAV beds. A similar on-site evaluation would be conducted at Sites 10 or 11 if either of these sites are considered for future maintenance dredging placement operations to confirm absence of SAV or to adjust the deposition location in order to avoid turbidity impacts to any nearby beds.

Shellfish and Other Invertebrates: Your letter indicates that the area of the proposed project is habitat for various ecologically, economically, and recreationally important shellfish species. The three sites were selected by the natural resource agency evaluation team primarily because they were identified by the NJDEP as not likely to possess significant populations of important benthic resources such as shellfish. Dredging involves the direct removal of substrate and benthic organisms at the dredging site. Oyster Creek channel has been maintained periodically for decades and these dredging events open the area for recolonization that resembles the original community as the bottom substrate is not changed and can be considered representative of existing baseline conditions.

Dredged material placement may affect benthos due to burial, however some of these organisms can migrate vertically with the newly placed sediments (Maurer *et al.*, 1986). The impact to dissolved oxygen due to placement is temporary, and re-establishment of the benthic community at the placement site occurs quickly (Oliver *et al.*, 1977; Conner and Simon, 1979). Oliver *et al.* (1977) found that most infaunal mortality occurred near the center of the placement area. Benthic communities inhabiting highly variable and easily disrupted environments, such as those found in the shallow waters of Barnegat Bay, recovered more quickly from dredging operations than communities observed in less variable environments, such as in deep offshore waters. Recovery at the placement site depends on the speed and success of adult migration or larval recruitment from adjacent undisturbed areas (Hirsch, Disalvo and Peddicord, 1978). The placement of 25,000 cy of sand at Site 6 may result in some mortality of benthic species, however, as noted above, a significant portion of these populations are likely to migrate vertically through the placed material. Potential future annual maintenance placements of 3,000 cy of dredged sand is not expected to adversely impact shellfish and other benthic invertebrates that may occur at the placement site during the 3-day operation.

Winter Flounder: Your letter notes that the area of the proposed project is important spawning and nursery habitat for winter flounder and other species. Winter flounder have demersal, adhesive eggs that are deposited in clusters on the bottom and remain on the bottom until they hatch. Adult winter flounder are expected to temporarily leave the action area (the actual deposition area comprises a much smaller area than the identified Site 6 area). Potential future placement operations at either Sites 10 and 11

would entail small quantities (250 cy/load) in a grid pattern adjacent to the shoreline 1,000 feet long by 500 feet wide; which may not be detected in post-construction bathymetric surveys; and is not expected to result in any significant adverse effect over the 3-day operation.

Barnegat Bay encompasses over 865,000 acres of predominately aquatic habitat. The placement operation will occur in November/December, prior to the January to May winter flounder spawning period. We do not agree that placement of dredge material of similar character to create a mound in Barnegat Bay will permanently alter the community structure. Similar infaunal and epifaunal invertebrate species will recruit from adjacent areas. Studies have shown that topographical relief can provide fish foraging habitat. A depositional mound (and eventual island) can reduce the strength or pattern of currents moving around it, creating preferred foraging and refugia habitat for predatory fish species such as winter flounder.

Prey Species: Your letter indicates that the area is EFH as it provides feeding habitat for managed species and the reduction of prey species is an adverse effect. Your letter also notes that water quality degradation (turbidity) and dredge noise and vibration may impede anadromous fish migration through inlets to upstream spawning grounds. Dredging and placement operation temporarily increase water turbidity in the action area which can adversely affect prey (benthic and planktonic) species for many EFH-managed species. Turbidity results in scattering and absorption of light by water molecules that may affect EFH-managed species to forage (Clarke and Wilbur, 2000; DeRobertis *et al.*, 2003). However, in areas where dredged sediments are composed predominately of sand such as the Oyster Creek channel sediments, potential impacts to prey abundance and foraging ability are expected to be minimal. The reduction in the number of benthic invertebrate prey species is a temporary impact over a small fraction of bottom habitat within the placement site directly and Barnegat Bay. These r-selected species are well documented as recruiting back into the action area following cessation of the dredging or placement action (Brooks *et al.*, 2006; Maurer *et al.*, 1981a,b; 1982, Maurer *et al.*, 1986; Saloman *et al.*, 1982; Van Dolah *et al.*, 1984). The proposed action is short-term and entails placing sediments of like character which settle quickly (*i.e.* sand) from an area (*i.e.* the channel) in close proximity to the placement site (Adriaanse and Coosen, 1991). McCauley *et al.* (1977) documented that the total abundance of benthic organisms at a dredging site returned to pre-dredging levels 7-28 days after dredging ceased during much larger operations. The study also showed a similar pattern at the aquatic dredged material placement site, with total abundance levels rebounding to pre-dredging numbers within seven days. In a similar study, Diaz (1994) found that almost all species of benthic organisms had re-colonized disturbed areas within 3 weeks of dredging. Diaz (1994) also demonstrated that benthic organisms continued to sustain pre-disturbance population densities 3 months after dredging was completed. The study demonstrated similar benthic community structure and species composition in undisturbed areas and in the dredged material placement areas. The

dredging and placement operation will not occur near or in an inlet but in an expansive area of Barnegat Bay. Therefore, dredge noise and vibration are not expected to impede anadromous fish migration.

Project-Specific Survey/Sampling and Monitoring: You recommend that the monitoring program include a pre-construction site-specific evaluation of bathymetry, benthic fauna (including shellfish), SAV and macroalgae, sediment characterization, dissolved oxygen, temperature, and salinity. You also note that the project goals and success criteria are poorly defined and monitoring appears to be observational and generalized, lacking the specificity necessary for adequate data collection and analysis needed to reach conclusions regarding project success. Given the short pre-construction time frame available to meet the Section 1122 schedule, the pre-construction bathymetric survey was completed in April 2020 and will be conducted again just prior to placement in November 2020. A pre-construction site-specific evaluation was completed September 2, 2020. Additional pre-placement monitoring will be collected immediately prior to placement by the ERDC field team in November. The pre-construction information will be incorporated into a monitoring report for your review. Your agency input will continue to be included in the development of monitoring plans for all future maintenance dredging events and adaptive management efforts. One of the long-term plan objectives is the creation of shallow depths conducive to the natural colonization of SAV. As noted above, annual placements of small quantities of dredged material will not result in an emergent island for many years. The monitoring program is currently being developed by the Philadelphia District in partnership with the experienced ERDC scientific research team in full consideration of your recommendations. The monitoring plan will be coordinated with your staff prior to construction.

Section 305 (b)(4)(B) of the MSA requires that we provide a detailed written response to your EFH Conservation Recommendations (CRs), including the measures we may adopt to avoid, minimize, or offset project impacts to EFH. We concur with the majority of your CRs. In the case of a response that is inconsistent with your recommendations, we have provided logistical and scientific justifications in support of our reasons for not following the recommendations. Our responses to your CRs are provided as an attachment to this letter.

In conclusion, our determination is that the proposed effort will not have a substantial adverse effect on EFH and that an expanded EFH consultation is not required. Our rationale for this determination is based on the expected minor short-term nature of the direct impacts; the small size of the action area at any given time; the minimal and temporary anticipated increases in turbidity; no anticipated changes in water temperature or salinity caused by the proposed work; and the absence of submerged aquatic vegetation and shellfish resources in the action area. Best management practices will be implemented to reduce potential impacts of dredging and placement operations. The pilot project is designed specifically to reduce the adverse effects of

dredging and dredged material placement on Barnegat Bay's aquatic ecosystem as a whole and in the long-term, improve the area by increasing important SAV habitat and resilience in the face of sea level rise on the bay's existing island and wetland habitats. The short and long-term strategies developed in this project work effectively with the natural processes while accomplishing the navigation mission, applying best Regional Sediment Management (RSM) and Engineering With Nature (EWN) practices and principles for significant benefits and minimal impacts.

The proposed project provides an opportunity for beneficial use of high quality dredged material and as outlined above and in the documents provided for your review, beneficial use projects result in improvements that directly benefit EFH and EFH-managed species, as well as the overall ecosystem of Barnegat Bay. We consider this approach to our Operations and Maintenance program to be an improvement to the historical practice of removing these valuable sediments from the aquatic system to be placed in upland confined disposal facilities (CDFs) and aligns with our long-term strategy of EWN and our RSM plan. Based on the information provided in the DEA, the EFH Assessment and accompanying attachment, the Philadelphia District believes that the overall benefits of these type of beneficial use projects far outweigh the potential adverse effects of historical dredging and disposal practices.

Pursuant to 50 CRF 600.920(j), EFH consultation will also be reinitiated if any new information becomes available for future placement operations or if the project is revised in such a manner that affects the basis for the EFH conservation recommendations. The USACE Philadelphia District is committed to continuing to work closely with Federal and State resource agencies, prior to, during, and post-project construction.

If you have any further questions regarding this project, please contact Ms. Barbara Conlin of the Environmental Resources Branch at (215) 656-6557, email Barbara.E.Conlin@usace.army.mil or Ms. Monica Chasten of Operations Division at 215-656-6683, email Monica.A.Chasten@usace.army.mil.

Sincerely,

LEARY.ADRIAN.

1384973384

FOR Peter R. Blum, P.E.
Chief, Planning Division

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Enclosure

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Conservation Recommendation Responses

National Regional Sediment Management (RSM) Program WRDA 2016 Section 1122 Beneficial Use Pilot Project, Oyster Creek Channel, Barnegat Inlet Federal Navigation Project, Ocean County, New Jersey

CR #1: *Meet with us, other federal and state agencies, and regional experts at least annually to provide monitoring updates on the pilot project and to coordinate decision-making on future project goals and actions.* The Philadelphia District will continue to consult with NMFS in the development of the monitoring program and its results along with other federal and state agencies and regional experts. We are collaborating with ERDC to monitor before, during and following the pilot program placement event and annual funding permitting, for future maintenance dredging beneficial use placements at the proposed sites. We have been coordinating with your agency and other members of the natural resource evaluation team members on the proposed plan since January 2020 and we will continue to coordinate with you. We advocate for your agency and others (e.g. NJDOT, NJDEP, The Wetlands Institute, Barnegat Bay Partnership) to collaborate with area universities to develop and implement parallel research studies that may contribute additional valuable information on these beneficial use operations.

CR#2: *Identify an end date for the pilot project activities, after which the cumulative results of annual monitoring are assessed, shared, and discussed with us, other federal and state agencies, and regional experts to evaluate project “success” and large-scale viability.* The pilot project is approximately 30 days plus any additional time required to complete post-construction monitoring and report preparation. Any future monitoring efforts conducted for future maintenance dredging and beneficial use placements at the proposed sites will be dictated by the frequency of maintenance dredging needs, results of the initial monitoring effort (adaptive management), and amount of future year funding available.

CR#3: *To avoid and minimize the impacts of dredging on aquatic habitat, eggs, larvae, free swimming fish, and invertebrates, dredging should be avoided from January 1 to June 1 of any given year.* Dredging and placement for the pilot project will occur during the off-season when fish and invertebrate populations are lower (November/December 2020). The turbidity plume resulting from aquatic disposal of dredged material disperses rapidly, and water column total suspended sediment levels from predominantly sand will return to near background levels within 15 to 20 minutes of release (Reilly *et al.* 1992). For future maintenance dredging and placement of small quantities of dredged material over an estimated 3-day period, the Philadelphia District will avoid the January 1 through June 1 period, however the maintenance dredging schedule is dependent upon the availability of government-owned hopper dredges coming to the area when they are not operating elsewhere along the east coast and Gulf of Mexico for other Districts. The Philadelphia District will re-initiate consultation with your office in the event that the January 1 through June 1 period cannot be avoided.

CR#4: *Comprehensive biological and physical surveying/sampling should take place at each placement site prior to any placement and the results should be transmitted to us for review, comment, and planning input/assistance. Survey/sampling should include habitat characterization in the form of depth, sediment grain size analysis, hydrology/hydrodynamics, benthic fauna (including shellfish), SAV and macroalgae, temperature, salinity, and dissolved oxygen. Survey/sampling should take place prior to any/each placement cycle (inter annual). As noted, The Philadelphia District is working with ERDC to develop the monitoring program that will be implemented for the placement operation. The monitoring will include habitat characterization data collection. The District is working collaboratively to leverage ERDC research work units¹ in this effort, serving as a case study site for ongoing R&D.*

CR#5: *Shellfish and submerged aquatic vegetation (SAV) occur and are mapped within/near the project areas (both dredging and placement sites). Pre-placement surveys (see above) of shellfish and SAV should take place to determine the current distribution and abundance of shellfish and SAV in the proposed placement sites prior to all placements throughout the life of the project. Dredging and placement of material should be avoided in areas where shellfish (moderate or high density or reefs/aggregations) and SAV occur or have been mapped. Dredging should be avoided during the SAV growing season (April 15 to October 15) of any given year to avoid/minimize the impacts of turbidity (including shading) and sedimentation. Barges should not be moored in areas where SAV occurs or has been mapped. Because the sites are being placed in close proximity to areas where SAV and shellfish occur or have been mapped, recruitment and colonization is possible and likely. Therefore, surveys for shellfish and SAV should also take place prior to any subsequent placements (inter annual), and if shellfish (moderate or high density or reefs/aggregations) or SAV occur, material should not be placed. If placement in Site 6 occurs in Dec. 2020, and is planned again for Dec. 2022, pre-placement survey/sampling should take place between April and October of 2022 and results shared with us, as mentioned above. As previously noted, the sites were purposely selected by the natural resource agency evaluation team based on NJDEP shellfish mapping noting the absence of or presence of low populations, and the absence of SAV due to excessive water depths. The DEA and the EFH Assessment Worksheet state that dredging and placement operations for the pilot project will occur in November/December 2020. A pre-construction field assessment confirmed the absence of SAV at the pilot project Site 6. If future placements are proposed at Sites 10 or 11, a similar SAV field assessment will be conducted prior to placement. Dredging and placement operations will not occur in areas that would impact SAV. Sediments have been characterized and since they are predominantly sand, they are expected to drop out quickly during the placement process. The project was designed based on prototype examples (Sites 26A and 26B) in the same environment and the new site has been selected with an adequate buffer around the placement site. Additionally, the operation will be conducted and adaptively managed in a manner that avoids adverse impact to any shellfish or SAV located near but outside of the placement site.*

CR#6: All placement sites should remain subtidal during the life of the project to allow for aquatic species use during all phases of the tide and shellfish and SAV colonization. In order to maintain all areas as subtidal, a two (2) foot buffer should be used at all sites. More specifically, material should be placed in a way that always maintains at least 2 feet of depth at MLLW. Should shellfish (moderate or high density or reefs/aggregations) or SAV colonize the placement site, additional material should not be placed. Due to the lack of information regarding grain size characterization at the placement sites and hydrodynamics, combined with the proximity of dense, healthy submerged aquatic vegetation (SAV) beds, placement of material at/in Site 6 should be limited to the furthest west and deepest portions of the site, provided it is not shellfish (moderate or high density) habitat or the entire site should be shifted to the west. These areas are currently 8 – 9 feet deep at MLLW. Monitoring (see below) of existing, adjacent SAV beds should occur to determine if placements are causing adverse impacts. If placements (and resulting turbidity and sedimentation) are resulting in adverse impacts to the adjacent SAV beds, all placements at Site 6 should cease. See response to CR#5. The long-term goal under the O&M dredging program is to create island habitat for birds and surrounding shallow water habitat and saltmarsh habitat for birds, fish, and invertebrates and the establishment of SAV habitat-habitat that is continually subjected to losses due to sea level rise. The long-term goal will not be accomplished under the Section 1122 initial, one-time placement of 25,000 cy of material. Prototype island creation sites 26A and 26B were established over a 20-year period. The placement site was selected to be of sufficient distance west of nearby SAV beds that occur in shallow water. Site 6 possesses water depths that are currently not sufficiently shallow for SAV to establish. The proposed project was designed so that construction-related turbidity would not pose an adverse effect on neighboring SAV where it exists in shallow water. Maintenance dredging is conducted on an as-needed basis.

CR#7: The dredge pipeline should be floating to avoid damage to existing mudflats, SAV and shellfish beds. In areas where the pipeline must cross these habitats, minimize anchor placement. Anchors should be placed and removed/moved in a manner that minimizes turbidity and damage to SAV. The dredge pipeline will be floated and anchor placement will be minimized to avoid adversely affecting natural resources.

CR#8: Ecological performance standards should be developed to determine if the project is achieving its objectives of benefitting, restoring and enhancing aquatic habitat that resembles an ecological reference. An ecological reference should be established and be based on the characteristics of an intact aquatic habitat of the same type within the same watershed. The ecological reference should be used to establish the elements of a fully functional habitat that is targeted for restoration/enhancement. As defined in the DEA and EFH Assessment Worksheet, the ecological performance objective is to beneficially use dredged channel sediments to eventually create more habitat than currently exists (i.e. SAV beds and eventual nesting/foraging habitat), as was successfully established through dredged material placements at the nearby sites 26A and 26B. Placement activities will be monitored to inform future beneficial use opportunities to keep channel sediments within the natural system as opposed to

removal and placement in upland CDFs. The Philadelphia District and ERDC are currently developing the monitoring program and as a team will manage the field sampling for the placement operation with the Philadelphia District. Water quality data (sondes) and current velocity will be measured at the placement site and between the proposed placement site and island 26B, where SAV presently exists. ERDC proposes to also conduct roving surveys to monitor turbidity and bed elevation changes. The monitoring plan will be coordinated with your staff.

CR#9: A comprehensive monitoring plan should be developed and monitoring should take place prior to project implementation and for a minimum of five years post-construction. A long-term management plan and adaptive management strategies should also be developed for the proposed project. All plans and monitoring reports should be submitted to us for review. As part of any monitoring plan, systematic pre-(baseline) and post-construction sampling should be conducted in areas of targeted sediment placement and migration, as well as adjacent areas (outside of targeted and migration areas and especially in existing SAV beds), to determine the extent of impacts. Sampling plots/locations should be maintained for the 5-year post-sampling period. Variables for sampling and monitoring should include, at a minimum, sediment physical and chemical properties, elevations (topography/bathymetry), emergent and submerged aquatic vegetation, turbidity, benthic invertebrates (infauna and epifauna), and nekton (including fisheries). See response to CRs #1, #4, #5, and #8. As noted previously, a comprehensive monitoring plan is currently being developed with ERDC researchers under the 1122 and RSM programs and other R&D work units. The pilot project monitoring plan will include pre-, during, and post-placement monitoring. The number of years duration will be dictated by both maintenance dredging needs and future years' funding availability. We will continue to consult with your agency with respect to the initial and future monitoring plans.

Footnote

¹EMRRP work unit: "Framework for optimum selection of source material and geomorphological characteristics for desired vegetation & SAV in restoration projects" (Ecosystem Management and Restoration Research Program Project Record).

EMRRP work unit: "Risk Informed Management Approach for Evaluating Potential Dredging Related Effects on Sensitive Habitats".

DOER EWN work unit: "Promoting Long-Term Health and Viability of Sensitive SAV Habitats by Leveraging Strategic Placement of Sediment and Other Innovative Dredging Practices" (Dredging Operations and Environmental Research Engineering with Nature).



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Commissioner

October 14, 2020

Peter Blum, P.E., Chief, Planning Division
US Army Corps of Engineers
Philadelphia District
100 Penn Square East
Philadelphia, PA19107

Re: Draft Environmental Assessment
National Regional Sediment Management Program
Beneficial Use Pilot Project
Oyster Creek Channel, Barnegat Inlet Federal Navigation Project, Ocean County

The New Jersey Department of Environmental Protection's (NJDEP) Office of Permitting and Project Navigation (OPPN) distributed, for review and comment, the Draft Environmental Assessment (EA) for the National Regional Sediment Management Program, Beneficial Use Pilot Project, Oyster Creek Channel, Barnegat Inlet Federal Navigation Project.

The NJDEP offers the following comments on the draft EA:

Division of Fish & Wildlife

Endangered Non-game Species Program (ENSP)

Page 16, 5.4 – It appears as though the dredged material is not being tested for radionuclides. The Army Corp states, “No facilities with potential HTWR impacts are known to occur near the study area.” The Oyster Creek Nuclear Generating Station is located right across the bay in Forked River, and although no longer operational, the facility released cooling water into Oyster Creek for almost 50 years. During the first year of operation, the plant was legally allowed to dump waste directly into the creek. Factoring in controlled (and accidental) effluent releases containing radioactive isotopes, shifting sediments due to currents, Sandy and other storms, past dredging, etc. it may be prudent to conduct limited testing of sediments during Phase II before placing dredged material onto ecologically sensitive or important areas.

Page 27 – The Army Corp states, “Seals are not expected to occur in the Barnegat Bay study area.” ENSP highly recommends seeking guidance from NOAA Fisheries' Office of Protected Resources regarding the possibility of obtaining appropriate Marine Mammal Protection Act incidental harassment authorizations (if required) and/or developing BMP's to minimize disturbance to hauled-out individuals during dredging operations. A timing restriction of Nov-April, when seals are known to be present, may be warranted. ENSP will provide a map of known seal haul out sites in the immediate vicinity of Barnegat Inlet as a follow up to this correspondence.

Pages 42 – The Army Corp states “...the placements at either site 10 or 11 will provide a supplemental sand source adjacent to an important undeveloped but eroding shoreline.” Site 11 is the Lighthouse Center for Natural Resource Education. The beach at this location serves as an important nesting area for diamondback terrapins. In 2020, numerous terrapins were observed nesting along the beach north of Tuscarora Avenue. Subsequent sightings of hatchling tracks were documented and photographed. We strongly recommend a timing restriction of May 31 – Aug 1 to prevent disruption of nesting activities at this important site. The same timing restriction is recommended for the pilot area along Harvey Cedars.

General

The project has the potential to create and/or enhance nesting habitat for diamondback terrapins.

It is not likely that terrapins are hibernating in the areas where dredging is scheduled to occur. However, if possible, a person on the dredging vessel monitoring for disturbed terrapins during the period between 15 Nov and 31 March may help prevent mortality.

Marine Fisheries Administration (MFA)

Site 6

Given that Site 6 appears to be the primary site of interest, MFA is considering this site separately in our comments. Site 6 is generally located in moderate commercial value hard clam habitat and scallop production area per the 1963 charts, in a moderate density hard clam area in 1986, and in a low-moderate density area in 2012. Despite these data, the MFA recognizes this pilot project as opportunity to study the outcomes and potential net environmental benefits of reusing dredged material in the Barnegat Bay system.

In order to determine if the pilot project satisfies the objective of improving subaquatic vegetation (SAV) growth in the area, the MFA concurs with the applicant that pre- and post- SAV investigations of the proposed placement location and the adjacent area should occur. The MFA is also happy to assist with study design or to discuss other logistics regarding the surveying protocols. Because a portion of Site 6 was mapped for SAV habitat in 2003, a site investigation to delineate current SAV boundaries is recommended to help fine-tune the ultimate location for placement. The MFA also requests that the data from any pre- or post- construction surveys for any marine resources (not just SAV) be shared when it becomes available.

The draft EA (Page 9) summarized considerations for each of the numbered potential sites for the pilot project. The summaries for Site 10 and Site 11 both include the statement “*The site will be carried forward for further, more in-depth review as a potential future placement site outside of the scope of the Section 1122 pilot program.*” It would be helpful to clarify the full scope and intent of the EA and Federal Consistency requests relative to these statements. It seems that additional details regarding the scope of work at these two locations would be needed and helpful for a thorough review prior to actual construction. It does not appear that Sites 10 and 11 received the same level of analysis as did Site 6 (i.e., purpose, habitat improvement goals, etc.).

Site 10 and 11

The following SAV resources were identified at sites 10 and 11. The majority of this information, with the exception of the recent site inspection observations (at Site 11 on 2 October 2020), was provided by MFA on August 26, 2020.

Site 10:

Submerged Aquatic Vegetation Considerations

- Part of the proposed site is mapped for SAV in 2003 and 2009 (CRSSA).
- A site investigation to delineate current presence and boundaries of SAV is recommended to fine tune the location for placement.
- If appropriate boundaries are delineated, target placement within those boundaries should minimize, to the extent practicable, areas with SAV and to avoid the smothering of existing plants.

Shellfish Resource Considerations

To follow is a list of shellfish data found at or nearby Site 10. Despite these data and relative to shellfish resources, the MFA recognizes that these pilot projects may be an opportunity to study the outcomes and potential net environmental benefits of reusing dredged material in the Barnegat Bay system.

- 2013 Inventory (Post-Sandy) – likely to be a combination of moderate and high density for hard clams
- 2012 Inventory of NJ's Estuarine Shellfish Resources – half the site appears to be mapped for low density of hard clams, half for moderate density, and a sliver of high density (northern edge)
- 1986 Inventory of NJ's Estuarine Shellfish Resources – combination of moderate and high density for hard clams
- 1963 U.S. Dept of the Interior – portions are mapped as moderate value commercial and recreational value for hard clams

Site 11:

Submerged Aquatic Vegetation Considerations

- Part of the proposed site is mapped for SAV in 2003 and 2009 (CRSSA).
- A site investigation to delineate current presence and boundaries of SAV is recommended to fine tune the location for placement.
- It should be noted this site appears to be in the same area as a proposed living shoreline project taking place at the Light House Center. Aligning these activities would potentially improve both efforts.
- A cursory site inspection was performed by the MFA on October 2, 2020 for a large portion of the area within the nearshore areas of the wildlife management area. This cursory inspection did not extend north of the existing pier. *Zostera marina* and *Ruppia maritima* were located in fairly dense areas both in front of and behind the 1977 tidelands claim line.

- If appropriate boundaries are delineated, target placement within those boundaries should minimize, to the extent practicable, areas with SAV and to avoid the smothering of existing plants.

Shellfish Resource Considerations

To follow is a list of shellfish data found at or nearby Site 11. Despite these data and relative to shellfish resources, the MFA recognizes that these pilot projects may be an opportunity to study the outcomes and potential net environmental benefits of reusing dredged material in the Barnegat Bay system.

- 2013 Inventory (Post-Sandy) - no sampling/data immediately near the project site; project site is flanked seaward (offshore) by moderate density for hard clams to the north of the site and high density to the south,
- 2012 Inventory of NJ's Estuarine Shellfish Resources – low density for hard clams seaward for most of the property, with a small area of moderate density adjacent to the northern portion of the site
- 1986 Inventory of NJ's Estuarine Shellfish Resources – low density for hard clams
- 1963 U.S. Dept of the Interior – scallop production area nearby

Finfish Considerations:

The MFA recommends a timing restriction of March 15th – June 30th of any project year to reduce adverse impacts to anadromous fishery resources.

If you have any questions regarding the comments please feel free to contact Joseph Corleto at Joseph.Corleto@dep.nj.us.

Division of Air Quality

Bureau of Evaluation and Planning

Section 5.2 of the draft EA states, “New Jersey air quality has improved significantly over the past 40 years but exceeds the current standards for ozone throughout the state and for fine particles in urban areas.” New Jersey is in maintenance for the 2012 PM2.5 standard, the 2006 PM2.5 standard and the 1997 PM-2.5 standard in multiple counties. There are no counties in New Jersey that are classified as nonattainment for fine particulates (PM2.5). Please revise the above to reflect that New Jersey is in maintenance for fine particulates (PM2.5).

Section 4.4 of the draft EA states, “The two other sites proposed for future placements of maintenance dredged material from the Oyster Creek channel are Sites 10 and 11 (see Figure 4).” In addition, “... future maintenance dredging operations may also consider placements at sites 10 and 11 utilizing the government-owned small split-hull hopper dredge Currituck (Figure 6).” A press release (1-9-19) on the Army Corps website describes the pilot program, which includes the Oyster Creek Channel project, to be “implemented as a one-time dredging and beneficial use placement effort...” The draft EA indicates that there will be multiple future placements of the dredged material from Oyster Creek at Sites 10 and 11. Please clarify if the placement of the dredged material from Oyster Creek taking place at Sites 10 and 11 will go through individual NEPA reviews.

If you have any questions, please contact Connor Milligan at Connor.Milligan@dep.nj.gov.

Bureau of Mobile Sources

The heavy-duty construction equipment that will be used during the dredge event must meet the EPA's emissions reduction criteria, especially as it is being used in a marine environment where oil, fuel, or hydraulic fluid leaks can severely contaminate a fragile coastal ecosystem. The EA from Phase I of this project has estimated that the "air emissions from the dredge equipment is to be below the *de minimis* levels for each annual dredging event", which complies with no idling and EPA emissions regulations.

All non-road medium and heavy-duty equipment should adhere to the following:

1. Heavy duty equipment used for construction must adhere to the No Idling regulations, including not idling for more than 15 minutes above 25 deg. F.
2. All light duty vehicles on the premises during construction should not idle for more than 3 minutes. Heavy duty equipment used for construction and demolition must minimize idling whenever possible
3. It is imperative that all medium and heavy-duty equipment used for construction should meet the US EPA Tier 4 non-road emission standards and should use Ultra Low Sulfur Diesel (ULSD) fluid when applicable. The EPA standards for non-road equipment can be found here: <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockkey=P1000A05.pdf>
4. All non-road heavy-duty equipment should have a Selective Catalytic Reduction (SCR) emissions control technology system. This system should also be paired with the use of diesel exhaust fluid (DEF), commonly referred to as "AdBlue".
5. All non-road heavy-duty equipment should have a Diesel Particulate Filter (DPF), an exhaust aftertreatment device that reduces particulate matter.

For New Jersey's Idling Restrictions regulations, please refer to the following link:

<https://www.nj.gov/dep/stophesoot/sts-idle.htm>

If you have any questions, please contact Kris Dahl of the Bureau of Mobile Sources Survey at Kris.Dahl@dep.nj.gov.

Division of Water Quality

Bureau of Surface Water Permitting

If a NJPDES Discharge to Surface Water permit will be needed for any surface water discharge during construction (i.e., dewatering; etc.), please see below:

If the discharge is shown to not contain pollutants at levels exceeding applicable standards, the applicant may be eligible for a t B7 - Short Term De Minimis NJPDES discharge to surface water permit

(see <http://www.nj.gov/dep/dwq/gp-b7.htm>). This is determined by running a pollutant scan as described in the application checklist where the data can be collected up to a year in advance of the discharge. However, if the discharge does contain pollutants at levels exceeding applicable standards, (see <http://www.state.nj.us/dep/dwq/pdf/b7-deminimis-final-permit-5-20-15.pdf>), the applicant must obtain a BGR – General Remediation Cleanup permit (see http://www.nj.gov/dep/dwq/gp_bgr.htm).

If you have any questions, please contact Dwayne Kobesky at Dwayne.Kobesky@dep.nj.gov

Thank you for providing the New Jersey Department of Environmental Protection the opportunity to comment on the information provided in the Draft Environmental Assessment for the National Regional Sediment Management Program, Beneficial Use Pilot Project -Oyster Creek Channel, Barnegat Inlet Federal Navigation Project. If you have any additional questions, please do not hesitate to email me at Megan.Brunatti@dep.nj.gov or call (609) 292-3600.

Sincerely,

A handwritten signature in black ink that reads "Megan Brunatti". The signature is written in a cursive style and is positioned above a horizontal line.

Megan Brunatti, Bureau Chief

Office of Permitting & Project Navigation

Cc: William Dixon, Division of Coastal Engineering

From: Keller, Colleen <Colleen.Keller@dep.nj.gov>

Sent: Friday, October 23, 2020 2:41 PM

To: Chasten, Monica A CIV (US) <Monica.A.Chasten@usace.army.mil>

Cc: Cobb, Jessica <Jessica.Cobb@dep.nj.gov>; Dixon, William <William.Dixon@dep.nj.gov>; Biggins, Suzanne <Suzanne.Biggins@dep.nj.gov>; Staffieri, Kelley <Kelley.Staffieri@dep.nj.gov>; Conlin, Barbara E CIV USARMY CENAP (USA) <Barbara.E.Conlin@usace.army.mil>

Subject: [Non-DoD Source] RE: USACE Draft EA- Beneficial Use Pilot Project- Barnegat Inlet Phase 2 Oyster Creek Channel

As per our conversation, I have followed up Joe Corleto from NJDEP Division of Fish and Wildlife with a response to their comments that was provided for the pending Federal Consistency review for the ACOE Section 1122 project. Please see the below responses that I discussed with Joe, and forwarded to him via email. He agreed that he did not think that additional comment/conditions would be required, but I have asked that he get back to me early next week to confirm. I asked if he would coordinate with Megan Brunatti's office (Permit Coordination) regarding the EA because these comments were also included in the EA comment that was released from their office. Joe said that he would not be doing any additional coordination with that office. Therefore, I have forwarded my DFW response to her office as an FYI/follow up. At this point, we are on track to issue the Federal Consistency next week. Monica, could you forward the SAV survey that you conducted in September for Site 6, so we have that information for the file? Please let me know if you have any additional concerns/comments. Enjoy the weekend.

- 1) **Sediment Sampling:** A comment was provided from ENSP that it may "be prudent to conduct limited testing of sediments during Phase II (western-most side of Oyster Creek Channel, se) before placing dredged material onto ecologically sensitive or important areas". It appears that this sampling was focused specifically for radionuclide testing. It should be noted that early sampling of sediment, conducted by the NJDEP, Bureau of Nuclear Engineering, in proximity to the Excelon Nuclear Generating Station, including the east side of Barnegat Bay, has not shown the presence of radionuclides at detectable levels. In addition, the sampling of dredged material previously deposited in the Excelon Upland Confined Disposal Facility from dredging projects in the Forked River state channel complex and the intake and discharge canal of the generating station did not show the presence of radionuclides in the material at detectable levels. The Barnegat Bay Inlet Federal Navigation Channel and the Oyster Creek Channel are located approximately 5 miles away from the Excelon Nuclear Generating Station. The material to be dredged from the channels is primarily sand, and given the coarse grained nature of the sediments, any pollutants will not likely bind to the sand. Sampling of other state channels in the inlet area have reported results that indicate the sediments in the area meets the Department's applicable ecological soil screening criteria. Based on the above, the DLRP has determined that further sediment testing does not appear to be necessary, and the material from the Barnegat Inlet Federal Navigation Channel and the Oyster Creek Channel is acceptable for beneficial use in the 1122 Beneficial Use Project at Site 6, Site 10 and 11.

- 2) **Seals:** A recommendation was provided to seek “guidance from NOAA Fisheries’ Office of Protected Resources regarding the possibility of obtaining appropriate Marine Mammal Protection Act incidental harassment authorizations (if required) and/or developing BMP’s to minimize disturbance to hauled-out individuals during dredging operations”. The comment further stated that based on this additional consultation, a timing restriction for seals may be warranted. Based on information provided by the ACOE, they have consulted with NMFS and did not receive conservation recommendations, or timing restrictions, relative to seals in their response letter. Therefore, guidance has been provided from NOAA and it was determined that additional authorizations were not necessary for the work to proceed, nor was a timing restriction recommended. It should also be noted that seals are protected under the Federal MMPA, and we would typically defer to the Federal review for this review/possible conditions.
- 3) **Additional SAV Surveys:** A site investigation was requested, for the placement areas within Sites 6, 10 and 11, to delineate current presence and boundaries of SAV to fine tune the location for placement. For Site 6, a SAV survey was completed by the ACOE on September 2, 2020 and no SAV was observed within the proposed placement areas in Site 6. For Sites 10 and 11, the proposed placement depths are within about 8 feet of water, and therefore additional surveys were not performed within these areas because SAV typically does not thrive in water of that depth. It should also be noted that proposed placement within these areas will only be small bursts of sediment (250 cy at a time) over a grid, with a final placement quantity of only 3,000 cy, and therefore the placement area is minimized and only small quantities of material will be placed within these areas, not within typical conditions of SAV habitat.

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Sent: Wednesday, October 14, 2020 4:57 PM

To: Conlin, Barbara E CIV USARMY CENAP (USA) <Barbara.E.Conlin@usace.army.mil>; Chasten, Monica A CIV (US) <Monica.A.Chasten@usace.army.mil>

Cc: Dixon, William <William.Dixon@dep.nj.gov>; Corleto, Joseph <Joseph.Corleto@dep.nj.gov>; Dahl, Kris <Kris.Dahl@dep.nj.gov>; Milligan, Connor <Connor.Milligan@dep.nj.gov>; Golden, Glenn <Glenn.Golden@dep.nj.gov>; Keller, Colleen <Colleen.Keller@dep.nj.gov>; Biggins, Suzanne <Suzanne.Biggins@dep.nj.gov>; West-Rosenthal, Jesse <Jesse.West-Rosenthal@dep.nj.gov>

Subject: [Non-DoD Source] USACE Draft EA- Beneficial Use Pilot Project- Barnegat Inlet Phase 2 Oyster Creek Channel

Dear Barbara and Monica,

Please see attached for NJDEP's comments on the Draft EA for the Beneficial Use Pilot Project- Barnegat Inlet Phase 2 Oyster Creek Channel.

If you have any questions, please let me know.

Thanks,
Megan

Megan Brunatti, Program Manager
Office of Permitting & Project Navigation
New Jersey Department of Environmental Protection



15 October 2020

Mr. Peter R. Blum
Environmental Resources Branch
U.S. Army Corps of Engineers
Wanamaker Building
100 Penn Square East
Philadelphia, Pennsylvania 19107-3390.

RE: Environmental Assessment, National Regional Sediment Management Program, WRDA 2016
Section 1122 Beneficial Use Pilot Project, Barnegat Inlet, NJ

Dear Mr. Blum,

I am submitting these comments to the U.S. Army Corps of Engineers (USACE or Corps), Philadelphia District, regarding Public Notice No. CENAP-PL-E-20-02 (Environmental Assessment, National Regional Sediment Management Program, WRDA 2016, Section 1122 Beneficial Use Pilot Project Barnegat Inlet, NJ) on behalf of Barnegat Bay Partnership (BBP), which comprises federal, state, and local government agencies, academic institutions, nongovernmental organizations, and businesses working together to restore and protect a nationally significant estuary, the Barnegat Bay. As described in the Public Notice, USACE has completed a draft Environmental Assessment (EA) for the National Regional Sediment Management (RSM) Program under the Water Resources Development Act (WRDA) 2016 Section 1122 Beneficial Use Pilot Project at Oyster Creek Channel, NJ. According to the PN, the stated purpose of the pilot project “is to maintain the authorized depths within Oyster Creek Channel Federal navigation channel and placing the high quality dredged material in an aquatic area within Barnegat Bay to keep the material in the system and reduce water depths and eventually over time establish an emergent island.” The New Jersey Department of Environmental Protection (NJDEP) Bureau of Coastal Engineering is the non-federal sponsor for this project.

AUTHORITY

The BBP submits these comments pursuant to Section 320 of the Clean Water Act (33 U.S.C. 1330; as amended by P.L. 100-4 and P.L. 114-162), which established the Barnegat Bay as an estuary of national significance and further identified important purposes of our management conference: addressing point and nonpoint sources of pollution, maintaining sustainable populations of fishes and wildlife, protecting their habitats, and assuring that the designated uses of the estuary are protected. In accordance with the BBP’s Memorandum of Understanding Regarding the Roles and Responsibilities of Partners and its attendant charters and policies, the U.S. Environmental Protection Agency, NJDEP, and the Corps neither participated in the development of these comments nor reviewed them for endorsement.

ONE OF 28 NATIONAL ESTUARY PROGRAMS ADMINISTERED BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY.

GENERAL COMMENTS

The BBP congratulates the USACE Philadelphia District Planning staff and the NJDEP for their success in being selected for this innovative Water Resources Development Act Section 1122 project, and welcome the opportunities it presents to address a number of Living Resource (Habitat) and Land Use priorities of the BBP's 2020 Comprehensive Conservation and Management Plan (CCMP). The BBP also thanks the USACE Philadelphia District Planning staff for its coordination regarding Phase 2 (see the communication dated May 6, 2020, attached), which provided preliminary project ideas for 11 sites identified by USACE and the NJDEP as potential components, and identified broad questions (*e.g.*, goals of any Phase 2 projects, application of successful strategies used in other Mid-Atlantic estuaries) regarding project planning.

As stated in the EA, the purpose of this project is to maintain the Barnegat Inlet Federal Navigation Project by dredging the channels to authorized depth and utilizing the dredged material for economic and environmental benefits. Under the Section 1122 program, the Corps seeks to develop innovative approaches for the beneficial use of maintenance material for shoreline protection and habitat creation/restoration in Barnegat Bay that will inform and support beneficial use projects in the future and keep sediments in the natural system.

PROJECT PURPOSE, NEED, AND OBJECTIVES

The BBP 2020 CCMP includes support for reusing dredged material for environmental and economic benefits (*i.e.*, placing of high quality dredged material in some aquatic areas, keeping dredged materials within the Barnegat Bay Study area, *etc.*). As such, we support the *general* purpose and objectives of the project. However, the EA is lacking much-needed detail (*e.g.*, specific habitat and resiliency objectives, project need, success metrics, monitoring components) that would allow for a full assessment of the potential environmental impacts of the project. While the reuse of dredge material within the system should be an overall net ecological benefit compared to upland disposal, the details of how the materials are placed, what happens to that material from a hydrogeomorphic standpoint, what project success metrics are developed, and how monitoring guides any future adaptive management will dictate whether the project actually provides ecological uplift or possibly speeds loss of material from the system (Ganju, 2019). One concern is that the project inadvertently may hasten sediment losses because the material makes its way through erosional processes from the pilot site to the inlet, and is then dredged from the inlet and deposited on coastal beaches as part of inlet maintenance. With the asymmetry in material movements through the entire bay, a related concern is that the project could contribute to additional transport of fine sediment materials into more southern portions of the bay, increase the turbidity and further degrade water quality there.

IMPACTS TO AQUATIC RESOURCES

It is clear that the Corps has spent considerable time working with local partners to identify potentially suitable pilot project sites that minimize direct impacts to resources of concern (*i.e.*, submerged aquatic vegetation, shellfish, essential fish habitat) due to *initial* placement of the material, and this is documented in the draft EA. What is not clear are what considerations have been made in regard to what happens once the material has been placed and hydrodynamic forces take over. While most of the local stakeholders agreed that Pilot Project Site 6 was appropriate, the caveat was always that most of

the material would remain in that general location. The draft EA does not provide any evidence that any investigations (modelling, current measurements, *etc.*) were made to confirm this would be the case. The project is in close proximity to extensive areas of SAV and shellfish beds; the BBP is concerned that the project could impact those nearby resources, many of which are of high quality. What steps are being taken to protect those resources? How will subsequent placement of materials be undertaken to avoid and minimize impacts to those resources?

ISLAND CREATION

We have previously expressed concerns regarding the placement of dredged materials in uplands. We have some concerns about the use of materials to create uplands. It is unclear how or on what schedule the creation of the upland island will be achieved. Dewatering some dredged materials is likely to drop pH values of materials below 4.0; moreover, the pH of some dredged materials may drop below 2.0 at times (Simpson *et al.*, 2018). These acid sulfate soil conditions will not be conducive to establishing coastal scrub habitats without considerable amendments and likely impacts to aquatic resources fringing the island during any placement and dewatering process.

INNOVATION

This project was approved as part of the Regional Sediment Management Program because of the potential for innovative processes and techniques that could be documented resulting from the pilot project. While that is undoubtedly true, we think that the real potential for innovation with this project lies in its ability to take an “upland to inlet” approach to managing sediment resources across a watershed. Thus, this is an excellent opportunity for the USACE Philadelphia District and the NJDEP to work with regional partners to develop a regional sediment management plan to identify agreed-upon priorities and provide the foundation for decision-making regarding future dredging and beneficial reuse projects in New Jersey.

Truly innovative use of sediment requires better integration of techniques with natural patterns of sediment transport. The Barnegat Bay Inlet complex may *seem* sediment-rich, but wetlands throughout Barnegat Bay are recognized as “sediment-starved” (Ganju *et al.*, 2017). This widespread sediment starvation has profound implications for the fates of wetland-creek complexes and the longer-term resiliency of communities along the entire bay (Friederich and Perry, 2001; Ganju, 2019). Recent studies have found that routine maintenance dredging may have promoted hydrogeomorphic processes that further contributed overall to marsh erosion and net movement downstream through the estuary (see Ganju 2019), creating a cycle that feeds the need for continuous dredging. Taking a watershed-wide approach to sediment management would make wetlands and coastal communities more resilient to a changing environment. It could also align the decisions of the Regulatory Branch with the restoration activities of the Planning Branch. After 36 years of dredging and “haphazard” restoration, what could be more innovative?

INFORMATION GAPS AND FUTURE MONITORING AND RESEARCH

In regard to the draft EA it is not clear what monitoring and science are to be pursued in support of the proposed project(s), but a better understanding of sediment budgets and processes appear needed to ensure that the projects function as anticipated. In addition, the BBP recommends that USACE and NJDEP work with other governmental, regional academic, and other partners to grow our collective understanding of the hydrogeomorphology of the Barnegat Bay, which, as a microtidal estuary bounded

by extensive development in the Mid-Atlantic, is highly vulnerable to SLR (Friedrichs and Perry, 2001; Donatelli *et al.*, 2018). Subtle changes in wetland physiography have been recognized already to have significant impacts on some of New Jersey's coastal wildlife (*e.g.*, Erwin *et al.*, 2004).

SUMMARY

We thank USACE Philadelphia Planning Staff for starting the conversation about dredging, material reuse, estuary restoration, and community resiliency. These issues are increasingly important to address as our climate continues to change, sea levels rise in the coastal ocean and bay, and more people move to the coast. Additional work appears needed to address our concerns regarding the projects identified in this Draft Environmental Assessment; we look forward to working with you to address our concerns. Please do not hesitate to contact me (shales@ocean.edu) or Dr. Jim Vasslides (jvasslides@ocean.edu) if you have additional questions.

Sincerely,



L. Stanton Hales, Jr., Ph.D.
Director

References Cited

- Donatelli, C., N.K. Ganju, X. Zhang, S. Fagherazzi, and N. Leonardi. 2018. Saltmarsh loss affects tides and the sediment budget in shallow bays. *Journal of Geophysical Research: Earth Surface* 123: 2647–2662. <https://doi.org/10.1029/2018JF004617>.
- Erwin, R.M., G.M. Sanders, and D.J. Prosser. 2004. Changes in lagoonal marsh morphology at selected northeastern Atlantic coast sites of significance to migratory waterbirds, *Wetlands* 24(4): 891-903. [https://doi.org/10.1672/0277-5212\(2004\)024\[0891:CILMMA\]2.0.CO;2](https://doi.org/10.1672/0277-5212(2004)024[0891:CILMMA]2.0.CO;2)
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To: Monica Chasten, USACE, Philadelphia District
Bill Dixon, NJDEP, Coastal Engineering
Scott Douglas, NJDOT
From: Stan Hales, BBP
Sent via email May 6, 2020

A group of federal and state agency personnel, faculty conducting research in the bay, and BBP staff reviewed the sites discussed on the NJDEP conference call and compiled the following comments, which should NOT be considered as any official federal/state agency perspectives.

Broader Issues/Uncertainties

What are the goals of this effort? Resource protection and restoration, community resilience? This should be agreed to. Does 1122 only pay for movement of materials from the ICW?

Rather than give you some ideas/designs used in other areas, would it be possible for ERDC technical staff to provide an overview of: 1) what restoration approaches/structures are most applicable to these sites, and 2) what shoreline approaches have been effective over the long term?

Is there any relevant information available from the island creation efforts undertaken elsewhere (*e.g.*, Maryland Coastal Bays NEP)?

Site Specific Issues

We have the following comments/suggestions about the specific sites we discussed.

Site 1 (western side of the bay, a long shoreline area in front of both eroding wetlands and a lagoon community): Though dismissed on the call for various reasons (*e.g.*, its distance from the “core” 1122 area [?]), this site has the potential to serve as a test site for different shoreline protection effort

Site 2 (eastern side of the bay near the IBSP kayak launch): We object to the use of the site as proposed (*i.e.*, speed bumps, berm), even if moved because of the value of resources there. Even if carefully designed, movement of any materials has the potential to degrade resources and possibly impact the use of the site as a kayak launch. Use of this site requires some delineation of SAV/shellfish resources.

Site 3 (mid-bay, west of IBSP): We discussed relocating this site, slightly to the north and west. Use of this site requires some delineation of SAV/shellfish resources. Building/extending a sill to the north of the bed might provide a wave break and/or making the area more shallow (depth TBD) might create better conditions for natural SAV settlement/recruitment.

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Site 4 (Sedge Island Natural Resource Education Center east site): We support “growing” the island or the elevation of parts of the house site, but note that the ebb currents on the south side of that marsh island are strong. Use of this site requires some delineation of SAV/shellfish resources.

Site 5 (Other end of creek by the Sedge Island Natural Resource Education Center): There was less interest in using this site; the comment for site 4 also applies. This site is confounded by user conflicts, potentially interfering with ongoing DOT mitigation/research activities.

Site 6 (west of 26B in deeper water?): There was strong support for island creation at this site.

Site 7 (south of 26A): There was little interest in using this area of what appears to be highly dynamic sand bars: any materials placed there are not likely to remain under storm conditions (?). Again, this site is confounded by user conflicts, potentially interfering with ongoing DOT mitigation/research activities.

Site 8 (south of 26B): There was strong concern about using this site, which is nearly surrounded by SAV. The direction and extent of sand movement cannot be predicted with confidence; any movement can smother and degrade existing resources.

Site 9 (south and east of EBFNWR property adjoining Long Beach Township): This site is very shallow and was identified as a shallow intertidal mudflat thought to heavily used by migratory shorebirds.

Site 10 (EBFNWR site, western side of the bay): We believe that this site has potential for testing shoreline protection measures to improve community resilience/promote marsh migration. Use of this site requires some delineation of SAV/shellfish resources.

Site 11 (NJDEP-owned [currently leased to NGO] Lighthouse Camp, western side of the bay): We believe that this site has potential for testing shoreline protection measures to improve community resilience/promote marsh migration. The site also houses SAV “grow-out” facility used to support SAV mitigation/restoration. Use of this site requires some delineation of SAV/shellfish resources.

Other Site Issues/Concerns

We have a questions about two other sites, where changes due to SLR or storms may have considerable impacts to the “mid-bay projects.”

1. The geotube: this area is highly dynamic, and changes are thought to affect inlet hydrodynamics/sediment transport. Should this be addressed prior to/during/shortly after any 1122 projects?
2. Training dike: the back side of this structure appears highly erosional. If this structure is breached, the bay physiography south of the state’s Oyster Creek Channel could change significantly. Has this site been considered for island building or other enhancements/engineering?

We appreciate the discussions to date and welcome further conversation to restore/protect the bay’s resources and communities.



United States Department of the Interior

NATIONAL PARK SERVICE
DOI Region I
1234 Market Street, 20th Floor
Philadelphia, PA 19107

IN REPLY REFER TO:
(GREG)

10/20/2020

Peter R. Blum
ATTN: Environmental Resources Branch
U.S. Army Corps of Engineers
Wanamaker Building, 100 Penn Square East
Philadelphia, Pennsylvania 19107-3390

RE: Environmental Assessment, *National Regional Sediment Management Program, WRDA 2016 Section 1122 Beneficial Use Pilot Project Barnegat Inlet, NJ*

Dear Mr. Blum:

The National Park Service (NPS) thanks the U.S. Army Corps of Engineers for the opportunity to comment on *the National Regional Sediment Management Program WRDA 2016, Section 1122 Beneficial Use Pilot Project Barnegat Inlet, NJ* Environmental Assessment (EA).

The Great Egg Harbor and Maurice National Wild and Scenic Rivers were designated into the National Wild and Scenic River System in 1992, and 1993, respectively. The National Wild and Scenic Rivers Act (Act) (P.L. 90-542) provides the NPS with prescriptive authority to protect and enhance National Wild and Scenic River water quality, and other values under the Act's Sections 7 and 10(a). The Wild and Scenic Great Egg Harbor and Maurice Rivers both empty into New Jersey waterways where dredging for navigational access and safety is common.

The benefits of keeping high-quality, dredged sediment near associated dredged areas to benefit habitat and coastal resilience are made plainly in the Regional Sediment Management (RSM) strategy, and through the Engineering With Nature (EWN) approach, as described in the EA. The NPS supports using high-quality dredged sediment to enhance marsh habitat, stabilize shorelines, and build and enhance islands to benefit the same ecological systems from where dredge sediment has been removed.

The NPS is aware that dredged sediments resulting from permits the COE has issued in the past have been proposed for disposal in confined disposal facilities (CDF) in municipalities along the Great Egg Harbor and Maurice Rivers. The NPS views such proposals as potentially harmful to National Wild and Scenic River water quality, and could potentially conflict with NPS Wild and Scenic River protection and enhancement responsibilities under the Act.

The NPS is also aware that permitting required for dredged sediment disposal rests chiefly with NJDEP under New Jersey's CAFRA implementation of the federal Coastal Zone Management Act. However, the NPS proposes that once the Barnegat Inlet Pilot Project concludes, the Philadelphia District COE require beneficial-use dredging sediment plans as part of the COE's Clean Water Act permitting requirements.

An EWN, beneficial-use requirement for dredged sediment disposal will benefit intracoastal habitat and shoreline stabilization efforts. The NPS also believes its coastal National Wild and Scenic Rivers will benefit from an EWN sediment-plan disposal permitting requirement, as it will eliminate CDF disposal sites threatening the Great Egg Harbor and Maurice Rivers' water quality.

Should you have questions or would like to respond to these comments, please contact me at paul_kenney@nps.gov, or (610) 203-4248.

Sincerely,

A handwritten signature in cursive script that reads "Paul Kenney".

Paul Kenney
River Manager, Maurice, Musconetcong and Great Egg Harbor Wild & Scenic Rivers
Partnership Wild and Scenic Rivers Program

Copy:

NJDEP – Division of Land Use Protection
Great Egg Harbor Wild & Scenic River Council
Citizens United to Protect the Maurice River and Its Tributaries, Inc.

From: Marcopul, Kate <Kate.Marcopul@dep.nj.gov>
Sent: Tuesday, October 27, 2020 10:54 AM
To: Minnichbach, Nicole C CIV USARMY CENAP (USA) <Nicole.C.Minnichbach@usace.army.mil>
Cc: Conlin, Barbara E CIV USARMY CENAP (USA) <Barbara.E.Conlin@usace.army.mil>; West-Rosenthal, Jesse <Jesse.West-Rosenthal@dep.nj.gov>
Subject: [Non-DoD Source] Re: Barnegat Inlet Phase 2 EA follow up

Hi Nikki,

Thank you for providing the Historic Preservation Office (HPO) the opportunity to review and comment on the potential for the proposed undertaking to affect historic properties. Based upon the documentation submitted, there are no buildings, structures, sites, objects, or historic districts on or adjacent to the project location that are listed on, or that have been identified as eligible for listing on the New Jersey or National Registers of Historic Places. Although the project setting is sensitive for archaeological sites, based upon a review of information on file at the HPO, the undertaking only has a low potential to affect archaeological remains. Therefore, I concur with your finding that there will be **no historic properties affected** by the proposed undertaking within the area of potential effects. Consequently, pursuant to 36 CFR 800.4(d)(1), no further Section 106 consultation is required unless additional resources are discovered during project implementation pursuant to 36 CFR 800.13.

Sincerely,

Katherine J. Marcopul, Ph.D., CPM
Administrator and
Deputy State Historic Preservation Officer
Historic Preservation Office
NJ Department of Environmental Protection
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State of New Jersey

PHILIP D. MURPHY
Governor
SHEILA Y. OLIVER
Lt. Governor

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Division of Land Resource Protection
Mail Code 501-02A
P.O. Box 420
Trenton, New Jersey 08625-0420
www.nj.gov/dep/landuse

CATHERINE MCCABE
Commissioner

October 29, 2020

Peter R. Blum, PE
Chief – Planning Division
Department of the Army
Philadelphia District, Corps of Engineers
Wanamaker Building
100 Penn Square East
Philadelphia, PA 19107-3390

RE: Federal Consistency Determination and Section 401 Water Quality Certification
DLRP File No. 1500-20-0001.1 CDT200002
ACOE Section 1122 Beneficial Use Pilot Project, Barnegat Inlet, Phase 2

Dear Mr. Blum:

The New Jersey Department of Environmental Protection (NJDEP), Division of Land Resource Protection (Division), acting under Section 307 of the Federal Coastal Zone Management Act (P.L. 92-583) as amended, has reviewed the Army Corps of Engineers (ACOE) request for authorization to perform periodic maintenance dredging of the Barnegat Inlet Federal Navigation channel, specifically the Oyster Creek channel portion, and the beneficial use of the material for island creation and shoreline stabilization/marsh restoration. The non-federal sponsor of the Section 1122 Beneficial Use Pilot Project Phase 2 is the NJDEP Division of Coastal Engineering.

The Division has reviewed the submitted information and has determined that the project is consistent, to the maximum extent practicable, and with the conditions implemented below, with New Jersey's Rules on Coastal Zone Management N.J.A.C. 7:7E-1.1 et seq., (as amended on February 20, 2020).

Project Description

Under the Water Resource Development Act (WRDA) 2016 Section 1122 Beneficial Use Pilot Project Phase 2, the Barnegat Inlet Federal Navigation Channel, Oyster Creek portion, would initially be dredged to its design width of 300 feet and depth of -8 feet below Mean Low Water (MLW). The initial 25,000 cubic yards (cy) of dredged material removed from the channel will be beneficially used at an aquatic placement area referred to as Site 6 in Barnegat Bay. Site 6 is located to the west of previously created islands, Sites 26A and 26B. Site 26A and 26B were previously used to manage dredged material from the federal navigation channels and have resulted in the creation of a heron rookery on Site 26A and submerged aquatic vegetation (SAV) habitat in the shallow water area adjacent to Site 26B. The ongoing beneficial use of material at Site 6 is anticipated to create similar habitats.

In subsequent, annual maintenance dredging operations of the Barnegat Inlet, Oyster Creek federal navigation channel, approximately 3,000 cy of dredged material will also be placed at Site 6 and at two nearshore areas, identified as Site 10 and 11, as sources of material for shoreline protection and marsh edge restoration. Site 10 is located on the Edwin B. Forsythe National Wildlife Refuge on the western side of Barnegat Bay. Placement would consist of direct or nearshore, aquatic placement on, or adjacent to an erosional shoreline area at Site 10. Site 11 is located on the Lighthouse Center property owned by the NJDEP and located on the western side of Barnegat Bay. Placement at Site 11 would consist of nearshore placement for shoreline protection and/or marsh restoration. The area of placement at both sites would be approximately 1,000 feet long, 500 feet wide and in depths of approximately 7-8 feet below MLLW.

The ACOE submitted the following documentation in support of the federal consistency determination:

“Draft Environmental Assessment, National Regional Sediment Management (RSM) Program, WRDA 2106 Section 1122, Beneficial Use Pilot Project, Oyster Creek Channel, Barnegat Inlet Federal Navigation Project, Ocean County” dated September 1, 2020; and

“Submerged Aquatic Vegetation Survey, Site 6” dated September 2, 2020.

This work is shown on site plans consisting of one sheet, prepared by ACOE, and entitled:

“FIGURE 4: PROPOSED SECTION 1122 PLACEMENT LOCATION (SITE 6) AND POTENTIAL FUTURE MAINTENANCE DREDGING PLACEMENT LOCATIONS (SITE 10 AND 11).”

This consistency determination is issued subject to compliance with the following conditions:

1. The ACOE shall implement the monitoring plan entitled “Barnegat Inlet 1122 Phase 2, Island Creation, Barnegat Inlet (Oyster Creek) Channel Maintenance and Beneficial Use of Dredged Material” dated October 20, 2020, and any amendment thereto.
2. Prior to placement of material at Sites 10 and 11, the ACOE shall submit a SAV resource evaluation to the NJDEP to minimize impacts to this resource and final design plans to the Division.
3. No dredging and associated in-water placement of material may occur from March 1st through June 30th of any given year to be protective of anadromous fish migration.

This Federal Consistency is authorized pursuant to all parties following the guidelines set forth, and agreed upon, for the proposed activities.

Pursuant to 15 CFR 930.44, the Division reserves the right to object and request remedial action if this proposal is conducted in a manner, or is having an effect on, the coastal zone that is substantially different than originally proposed.

Thank you for your attention to and cooperation with New Jersey’s Coastal Zone Management Program. If you have any questions regarding this determination, please do not hesitate to call Suzanne

U. Biggins of our staff at (609) 292-2023.

Sincerely,



Digitally signed
by Colleen Keller

Colleen Keller, Assistant Director
Division of Land Resource Protection

c: William Dixon, NJDEP Division of Coastal Engineering
Kim Springer, NJDEP Office of Policy Implementation



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

October 30, 2020

Michael Landis, Chief
Operations Division
Philadelphia District
U.S. Army Corps of Engineers
Wanamaker Building
100 Penn Square East
Philadelphia, PA 19107-3390

RE: Oyster Creek Channel Dredging and Placement Project; under
Section 1122 of the Water Resources Development Act of 2016

Dear Mr. Landis:

On October 2, 2020, we provided you with 11 essential fish habitat (EFH) conservation recommendations (CRs) to avoid, minimize, or otherwise offset adverse impacts to EFH that would result from the proposed Oyster Creek channel dredging and aquatic placement project in Barnegat Bay, Ocean County, New Jersey. The project will likely take place during November and December of 2020 and will remove an estimated 25,000 cubic yards of material from the Oyster Creek channel and place that material at an aquatic placement site known as Site 6 (approximately 39.786912, -74.155386) in Barnegat Bay, located west of previously created islands known as Sites 26A and 26B. We have reviewed the responses to our CRs provided by your staff via email dated October 22, 2020, and although we appreciate the responses, we continue to recommend that all CRs are adopted or incorporated into the project to avoid and minimize impacts to EFH, federally managed species, and other NOAA-trust resources. Additionally, because of the varied nature of proposed project actions and impacts, combined with lack of site-specific data, we request the District reinstate consultation or conduct a wholly separate consultation for any placement or disposal activities at sites other than Site 6.

Corps Responses to our Essential Fish Habitat CRs

In response to our CRs, provided as reference in Appendix A, you accepted in full and in part some recommendations and declined to incorporate other recommendations. In summary, CRs 1, 3, and 8 were accepted without modification. We appreciate these efforts, especially the commitment to continue coordination and consultation with us throughout the development of the project and for the assurance to reinstate consultation, if appropriate. We encourage the District to work with us and other federal and state agencies and regional experts as the Oyster



Creek dredging and Site 6 placement project moves forward. The development of a workgroup or committee could be beneficial in planning and coordinating future actions in a collaborative setting, where real-time decisions can be made in an iterative process using the results of monitoring data, changing environmental conditions, and other elements.

The responses to our remaining CRs indicate that the CRs have been addressed. However, some of the responses appear inconsistent with the CRs or omit important elements provided in the recommendations. We remain concerned about various issues, including project planning, site-specific surveying/sampling, and monitoring, which either have not been sufficiently addressed, or will not be conducted or provided for review prior to pilot project implementation (i.e., dredge material placement). More specifically, the purpose of site-specific surveying/sampling is not *post hoc* notification to us and other federal and state agencies and regional experts of the resources that were present in the dredge material placement areas. The purpose of site-specific surveys/sampling is to identify the resources present in the area as part of a comprehensive resource assessment to allow for the evaluation of potential impacts of the project and subsequent avoidance, minimization, and potential mitigation. Furthermore, confusion remains regarding various elements of the project, as well as which project actions are considered as part of the “pilot” and which actions will be part of a full-scale implementation project. As such, we offer further information and clarifications below. Based on our understanding, the “pilot” project appears to be a one-time placement in Fall of 2020, whereas the full-scale implementation is future maintenance dredging of Oyster Creek and subsequent placements at Site 6 over an indefinite period of time with an unknown number of placements potentially occurring at Sites 10 and 11 for an unknown period of time.

EFH CR 2

In the response cover letter, the pilot project, which includes dredging and aquatic placement of dredge material in Barnegat Bay, is considered a one-time event. The end date for the pilot project, as indicated in the response to CR 2, is 30 days plus additional time required to complete post-construction monitoring and reporting. However, the response goes on to state that future monitoring efforts conducted for future maintenance dredging and beneficial use placements will be dictated by the frequency of maintenance dredging needs, results of the initial monitoring effort, and amount of future year funding available. As such, there appears to be some uncertainty on the intended length of the project. If the project is only intended to be a one-time event, which includes dredging and placement at a single location (Site 6), then additional future efforts with placements at different locations, should be considered as a separate, non-pilot project, or be included in the analysis of effects of the current project.

As indicated in the response, results from the pilot project would be used to inform future dredging and placement in subsequent consultations. It is concerning that the pilot project appears to only include the minimal time for dredging and placement, and does not consider additional time for monitoring. Five years is the typical minimum time for monitoring to determine if a project is on a trajectory to meet its success criteria. Clarification should be provided to us which separates the intended timeline and elements included in the pilot project versus the overall future full-scale implementation project. We also encourage you to continue to coordinate with us and ensure full funding for the recommended five years of post-construction

monitoring. If the one-time placement at Site 6 is the only pilot project that is proposed, the area should be monitored for a period of 5 years without additional actions (e.g., material placement, dredging) to determine if the pilot is a success (success should be specifically defined), has not resulted in adverse impacts to adjacent submerged aquatic vegetation (SAV) and other habitats, and can be implemented on a larger scale. Additionally, as it appears Sites 10 and 11 are not considered as part of the pilot, have different goals and objectives, and will occur in another area of Barnegat Bay at another time in the future, they should not be included in the current project and consultation.

EFH CR 4

The response to CR 4 indicates that the District is working to develop a monitoring program to be implemented for the placement operation, which is intended to serve as a case study for ongoing research and development, and that the habitat characterization data will be incorporated. As indicated in our CR, pre-project survey/sampling should take place prior to any placements and the results should be submitted to us *prior* to placement for review, comment, and planning assistance and to evaluate ways to avoid, minimize, and mitigate potential impacts to aquatic resources. Based on your response, this data is intended to be presented *post hoc*, which does not aid in planning assistance or allow for avoidance and minimization measure, but is simply a notification. Additionally, since we have not been provided with the elements of the pre-placement habitat characterization, it is unclear what elements will be collected and how that data will inform the performance standards and future monitoring to reach the overall goals of the project. At present, we have not received information on grain sizes, hydrodynamics, and other physical, biological, and chemical elements at the proposed placement site.

EFH CR 5

In the response to EFH CR 5, you noted that the sites were purposely selected by the natural resource agency evaluation team, based on NJDEP shellfish mapping (noting absence or presence of low populations), the absence of SAV due to excessive water depths which were confirmed through a September 2, 2020, pre-construction field assessment, and that the pilot activities will take place outside of the SAV growing season. Your response also indicates a commitment to avoid adverse impacts to any shellfish or SAV located near, but outside of the placement site. However, it was unclear from the response if a project-specific shellfish survey of the area was conducted or if desktop analyses using previous mapping efforts were conducted. Although previous mapping efforts provide a general indication of historic shellfish distribution and abundance, we recommend ground-truthing this information and conducting project-specific sampling to determine current distribution and abundance within the project area during the year or season of project implementation. Additionally, it is unclear from your response if you accept the recommendation that barges used during construction will avoid being moored within SAV and what specific monitoring will take place to ensure adverse impacts to shellfish and SAV located near, but outside of the placement site.

EFH CRs 6 and 7

The response to CRs 6 and 7 was combined but did not address a majority of the substantive issues discussed in both CRs. You noted that one-time placement of 25,000 cy of material will not accomplish the long-term goal of the project, which is to create island habitat for birds, surrounding shallow water habitat and saltmarsh habitat for birds, fish, and invertebrates, and the establishment of SAV habitat. By creating island habitat, it appears that our CR to maintain 2 feet of depth at MLLW to allow for aquatic species use during all phases of the tide and shellfish and SAV colonization has been declined as it does not meet the long-term island creation project goal. However, in your cover letter, you discuss the amount of material to be placed is anticipated to lift approximately 1-2 feet over starting elevations of 7 to 8 feet (MLLW), which will result in depths that are not expected to be suitable for SAV colonization for this pilot study. As a result, it appears that this CR may have been accepted in the short-term, for the initial dredging and placement, but will not be accepted as future dredge material placements occur.

Because it appears multiple projects are being considered as part of this “pilot project” and consultation, your response states that the one-time pilot study is not intended to pose adverse impacts to neighboring SAV, but continues to reference future events and goals that convert existing habitats with little or no explanations of the functional uplift and ecological tradeoffs. As discussed above, a clear definition of the pilot study, including the timeline and project elements, should be provided, and should be compared to any future full-scale implementation project. Information presented in tabular format may aid in our understanding of the various proposed project elements. Based on the information provided, it appears as though the pilot project will adhere to the CRs, but future full-scale implementation will not. There is also no indication that future material placements will avoid SAV and shellfish if they colonize placement locations, as recommended by the CRs. Additionally, your response indicates that maintenance dredging will be conducted on an as-needed basis, which further confounds the pilot versus full-scale implementation issue.

EFH CR 9

It appears as though there is a misunderstanding on the design and use of ecological performance standards. It is also unclear if the nearby sites 26A and 26B are intended to be used as reference sites for the project. According to the response to CR 9, you indicate that the primary goal or objective of the project is to beneficially use dredged channel sediments to eventually create more upland and SAV habitat than currently exists (i.e. SAV beds and eventual nesting/foraging habitat), as was established through dredged material placements at the nearby sites 26A and 26B. However, ecological performance standards are developed to understand *how* a project is achieving the objective of benefitting, restoring and enhancing aquatic habitat that resembles an ecological reference. These standards should be measureable objectives which help inform how a project is progressing toward its overall goal and determine if adaptive management is necessary. Additionally, a general project goal that is related to ecological performance standards and monitoring is stated in the response as: placement activities will be monitored to inform future beneficial use opportunities to keep channel sediments within the natural system. Though this goal is worthwhile, it is not an ecological performance standard. Performance standards are observable and measurable, objective and verifiable, and can be measured and assessed in a practical manner; performance standards are also directly related back to the goal of the project.

We continue to recommend this CR be adopted and you work with us and other federal and state agencies and regional experts to develop ecological performance standards for this project.

EFH CRs 10 and 11

In your response, you indicated that a comprehensive monitoring plan is currently being developed and will include pre-, during, and post-placement monitoring. Although you have agreed to coordinate with us on the plan, your discussions and explanations provided in response to other CRs and the cover letter indicate that monitoring plans, data, and subsequent reporting will be combined as a single document, which are more consistent with a “construction completion report,” and provides no indication of subsequent yearly monitoring/reporting. The monitoring plan is intended to document pre-construction conditions and provide the guidance used to measure ecological performance standards to determine if a project is achieving its stated goals. The performance standards are then measured and monitored post-construction and yearly for a minimum of five years, with results summarized in an annual monitoring report that compares to pre-construction conditions and to a documented reference site or reference sites. Additionally, you indicated that the duration of the monitoring is to be dictated by both maintenance dredging needs and future years’ funding availability, which are both unknown. This funding issue is particularly concerning, as this project is stated to be a research and experimentation project designed to collect data for future projects, however the ecological processes and floral and faunal communities will take years and decades to recover from the currently proposed activities. We encourage you to continue to coordinate with us on development of the monitoring plan and ensure full funding for the recommended five years of post-construction monitoring. As indicated, five years is typically accepted as the minimum length of monitor needed to determine if a project is on a trajectory to meet its success criteria.

Conclusion

While we appreciate the District’s fully adopting of CRs 1, 3, and 8, and intent to address the remaining CRs, we continue to recommend adverse impacts to areas designated EFH and other resources under our purview be avoided and minimized and strongly encourage the District to reconsider incorporating our initial CRs into the project. We also encourage the District to provide a clearer project description, concise explanation and description of goals/objectives and success criteria, detailed and comprehensive monitoring plan with long-term management and adaptive management strategies, and commit to meeting with us and other partners to coordinate future actions at Site 6. In addition, please note that a distinct and further EFH consultation must be reinitiated pursuant to 50 CRF 600.920 (j) if new information becomes available, or if the project is revised in such a manner that affects the basis for the EFH determination.

Thank you for the opportunity to provide these comments. Please direct related correspondence to the attention of Keith Hanson at 200 Harry S. Truman Parkway, Suite 460, Annapolis, MD 21401. He may be reached by telephone at 410-267-5650 or by e-mail at Keith.Hanson@noaa.gov.

Sincerely,



Louis A. Chiarella
Assistant Regional Administrator
Habitat Conservation and Ecosystem Services

cc: ACOE – R. Ward, B. Conlin, M. Chasten
PRD - P. Johnsen
FWS- E. Schradling, S. Mars
NJDEP – S. Biggins, K. Dacanay
MAFMC – C. Moore
NEFMC – T. Nies
ASMFC –L. Havel

Appendix A. EFH Conservation Recommendations

The EFH CRs provided on October 2, 2020 are as follows:

1. Meet with us, other federal and state agencies, and regional experts at least annually to provide monitoring updates on the pilot project and to coordinate decision-making on future project goals and actions.
2. Identify an end date for the pilot project activities, after which the cumulative results of annual monitoring are assessed, shared, and discussed with us, other federal and state agencies, and regional experts to evaluate project “success” and large-scale viability.
3. To avoid and minimize the impacts of dredging on aquatic habitat, eggs, larvae, free swimming fish, and invertebrates, dredging should be avoided from January 1 to June 1 of any given year.
4. Comprehensive biological and physical surveying/sampling should take place at each placement site prior to any placement and the results should be transmitted to us for review, comment, and planning input/assistance.
 - a. Survey/sampling should include habitat characterization in the form of depth, sediment grain size analysis, hydrology/hydrodynamics, benthic fauna (including shellfish), SAV and macroalgae, temperature, salinity, and dissolved oxygen.
 - b. Survey/sampling should take place prior to any/each placement cycle (inter annual). For example, if placement in Site 6 occurs in Dec. 2020, and is planned again for Dec. 2022, pre-placement survey/sampling should take place between April and October of 2022 and results shared with us, as mentioned above.
5. Shellfish and submerged aquatic vegetation (SAV) occur and are mapped within/near the project areas (both dredging and placement sites).
 - a. Pre-placement surveys (see above) of shellfish and SAV should take place to determine the current distribution and abundance of shellfish and SAV in the proposed placement sites prior to all placements throughout the life of the project.
 - b. Dredging and placement of material should be avoided in areas where shellfish (moderate or high density or reefs/aggregations) and SAV occur or have been mapped.
 - c. Dredging should be avoided during the SAV growing season (April 15 to October 15) of any given year to avoid/minimize the impacts of turbidity (including shading) and sedimentation.
 - d. Barges should not be moored in areas where SAV occurs or has been mapped.
 - e. Because the sites are being placed in close proximity to areas where SAV and shellfish occur or have been mapped, recruitment and colonization is possible and likely. Therefore, surveys for shellfish and SAV should also take place prior to any subsequent placements (inter annual), and if shellfish (moderate or high density or reefs/aggregations) or SAV occur, material should not be placed.

6. All placement sites should remain subtidal during the life of the project to allow for aquatic species use during all phases of the tide and shellfish and SAV colonization. In order to maintain all areas as subtidal, a two (2) foot buffer should be used at all sites. More specifically, material should be placed in a way that always maintains at least 2 feet of depth at MLLW. Should shellfish (moderate or high density or reefs/aggregations) or SAV colonize the placement site, additional material should not be placed.
7. Due to the lack of information regarding grain size characterization at the placement sites and hydrodynamics, combined with the proximity of dense, healthy submerged aquatic vegetation (SAV) beds, placement of material at/in Site 6 should be limited to the furthest west and deepest portions of the site, provided it is not shellfish (moderate or high density) habitat or the entire site should be shifted to the west. These areas are currently 8 – 9 feet deep at MLLW. Monitoring (see below) of existing, adjacent SAV beds should occur to determine if placements are causing adverse impacts. If placements (and resulting turbidity and sedimentation) are resulting in adverse impacts to the adjacent SAV beds, all placements at Site 6 should cease.
8. The dredge pipeline should be floating to avoid damage to existing mudflats, SAV and shellfish beds. In areas where the pipeline must cross these habitats, minimize anchor placement. Anchors should be placed and removed/moved in a manner that minimizes turbidity and damage to SAV.
9. Ecological performance standards should be developed to determine if the project is achieving its objectives of benefitting, restoring and enhancing aquatic habitat that resembles an ecological reference. An ecological reference should be established and be based on the characteristics of an intact aquatic habitat of the same type within the same watershed. The ecological reference should be used to establish the elements of a fully functional habitat that is targeted for restoration/enhancement.
10. A comprehensive monitoring plan should be developed and monitoring should take place prior to project implementation and for a minimum of five years post-construction. A long-term management plan and adaptive management strategies should also be developed for the proposed project. All plans and monitoring reports should be submitted to us for review.
11. As part of any monitoring plan, systematic pre- (baseline) and post-construction sampling should be conducted in areas of targeted sediment placement and migration, as well as adjacent areas (outside of targeted and migration areas and especially in existing SAV beds), to determine the extent of impacts. Sampling plots/locations should be maintained for the 5-year post-sampling period. Variables for sampling and monitoring should include, at a minimum, sediment physical and chemical properties, elevations (topography/bathymetry), emergent and submerged aquatic vegetation, turbidity, benthic invertebrates (infauna and epifauna), and nekton (including fisheries).

United States Department of the Interior



FISH AND WILDLIFE SERVICE

New Jersey Field Office
4 E. Jimmie Leeds Road, Suite 4
Galloway, New Jersey 08205
Tel: 609/646 9310
www.fws.gov/northeast/njfieldoffice/



In reply refer to:
2020-I-1043a

November 3, 2020

Peter R. Blum, Chief
Planning Division, Philadelphia District
U.S. Army Corps of Engineers
100 Penn Square East
Philadelphia, Pennsylvania 19107-3390
Attention: Barbara.E.Conlin@usace.army.mil

Reference: National Regional Sediment Management (RSM) Program, Water Resources Development Act (WRDA 2016), Phase 2, Section 1122 Beneficial Use Pilot Project, Barnegat Inlet, New Jersey; placement of dredged material as a pilot project at Site # 6, Barnegat Bay, Ocean Township, Ocean County, New Jersey.

Dear Mr. Blum:

The U.S. Fish and Wildlife Service (Service) has reviewed the above-referenced proposed project by the U.S. Army Corps of Engineers, Philadelphia District (Corps) and draft Environmental Assessment (EA) pursuant to the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) (ESA) to ensure the protection of federally listed endangered and threatened species. The following comments also address Service concerns for fish and wildlife resources in accordance with National Environmental Policy Act (83 Stat. 852; 42 U.S.C. 4321 *et seq.*).

Endangered Species Act

The subject consultation is for dredging, with ten-year maintenance, of approximately 25,000 cubic yards of material from Oyster Creek Channel in association with the Barnegat Inlet Federal Navigational project, with the resultant dredged material placed in Barnegat Bay off of or in the vicinity of Ocean Township, Ocean County, New Jersey (Project). As there are no federally listed species in the action area (dredging or disposal area), the Service concludes that the Project will not affect a federally listed species under the jurisdiction of the Service. The Service makes this determination only for the initial construction of the Project and recommends that the Corps re-consult with the Service for all future maintenance cycles of the Project (anticipated approximately two to three times over the life of the ten-year maintenance period). No further consultation pursuant to the ESA is required. If additional information on federally listed species becomes available, or if project plans change, this determination may be reconsidered.

National Environmental Policy Act

The Service appreciates the Corps continued coordination in developing a pilot beneficial use project for the proposed dredging of the Oyster Creek Channel. To date, the Service has participated in numerous meetings, conference calls, and site visits over the last two years to identify a least environmental damaging practicable alternative for the Project. The Corps' selected alternative (Site #6) advances the idea of maintaining dredged sediments in the aquatic environment, while also determining what level of effects, if any, may be occurring on the aquatic environment. To that end, the Service finds the use of Site # 6 acceptable to meet the Corps stated purpose and need to beneficially using dredged material in Barnegat Bay. The Service recommends that the Corps continue to develop a robust monitoring plan to measure and determine Project success. The Service recommends that the Corps continue coordinating with the many stakeholders identified in Table 1 of the draft EA and consider adopting the monitoring protocols currently used at the placement sites associated with the Edwin B. Forsythe National Wildlife Refuge beneficial use project at Good Luck Point, Ocean County, New Jersey and also the protocols associated with the Corps' efforts at the Seven Mile Living Lab Project located in the Township of Avalon, Cape May County, New Jersey. The Service offers our continued assistance in the development of these performance measures.

If you have any question regarding the above recommendations and determinations, please contact Mr. Steve Mars at 609-382-5267. Thank you again for allowing us to participate on the development of this Project and for advancing evaluation on the effects of beneficially using dredged material in the aquatic environment.

Sincerely,

Eric Schradling Digitally signed by Eric Schradling
Date: 2020.11.03 13:29:46 -05'00'

Field Supervisor
Eric Schradling

Cc:

Corps - Monica Chasten
NMFS – Karen Greene
USEPA – Marco Finocchiaro, Barbara Spinweber
NJDEP – William Dixon
BBNEP – Dr. Stanton Hales



The Great Egg Harbor Watershed Association & River Council

Fred Akers - Administrator
P.O. Box 109
Newtonville, NJ 08346
856-697-6114
Fred_akers@gehwa.org

November 3, 2020

Peter R. Blum, P.E., Chief
Ms. Monica Chasten
Mr. Adrian Leary
Planning Division Philadelphia District
U.S. Army Corps of Engineers
(Sent Via Email)

RE: NATIONAL REGIONAL SEDIMENT MANAGEMENT (RSM) PROGRAM
WRDA 2016 SECTION 1122 BENEFICIAL USE PILOT PROJECTS

Dear Ms. Chasten, Mr. Blum, and Mr. Leary:

The Great Egg Harbor River Council and the Great Egg Harbor Watershed Association strongly supports the USACE Philadelphia District's Engineering With Nature (EWN) and Regional Sediment Management (RSM) program initiatives for the WRDA 2016 Section 1122 beneficial use pilot project in Barnegate Inlet and Barnegate Bay.

This pilot project provides the opportunity to test innovative placement concepts in order to keep dredged sediment in the natural system most effectively and strategically in support of natural habitats for wildlife and coastal resilience.

Utilizing dredged material beneficially to create or restore natural habitat can play a vital role in a variety of applications including marsh enhancement, beach nourishment, shoreline stabilization, and island creation/restoration.

We would like to see the USACE seek new opportunities in the Great Egg Harbor Estuary and Bay to utilize high quality dredged material as a resource to provide social, economic, and environmental benefits, and to reduce the need for upland confined disposal facilities (CDFs).

Over the past few years, the USACE and NJDEP have approved the creation and filling of two upland CDFs near the Tuckahoe River, and thousands of cubic yards of dredged sediment have been totally removed from coastal systems along with all the RSM benefits for coastal resilience. In addition to those lost RSM program benefits, there are now all the potential adverse impacts to the Tuckahoe River environment that upland CDFs are well known for. (Please see attached maps for reference).

www.gehwa.org – The Official Website of the Great Egg Harbor Watershed Assoc.

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President
Ed Curry
Vice President
Dick Colby
Treasurer
Lynn Maun
Secretary &
Coordinator

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Upper Twp.
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GEHWA

And also over the past few years, the USACE and NJDEP have approved some RSM consistent dredge placement initiatives in the Great Egg Harbor Bay area, in Somers Point. One of those was the placement of amended dredge materials from the Somers Point Waterfront to Block 1 Lots 26.01 and 26.02 on Route 9 in Linwood, and the placement of dredge material from the Higbee Ave. Marina to create a resiliency berm along Somers Point Mays Landing Road and elevate the Patcong Creek marina property at Block 1953, Lots 1.01, 1.02, and 1.03.

We encourage the USACE and its state and federal partners to develop more RSM consistent projects in the Great Egg Harbor Bay area to build off your successes in the Barnegate Bay area. The Back Bay Study may provide a reference to possible opportunities, and the Shooting Island Historic Shoreline Restoration Project might be enhanced by adding dredge material behind the new sills. And there are several additional islands in Great Egg Harbor Bay that could be studied for similar restoration.

The Great Egg Harbor River Council and the Great Egg Harbor Watershed Association strongly supports the USACE's RSM initiatives in Barnegate Bay, and we request that the USACE and NJDEP do more in new permitting to discourage the creation and filling of CDFs outside of the coastal region where the dredge material originates, thereby removing it from the aquatic system where it no longer provides a sediment source benefit to the environment and coastal resilience.

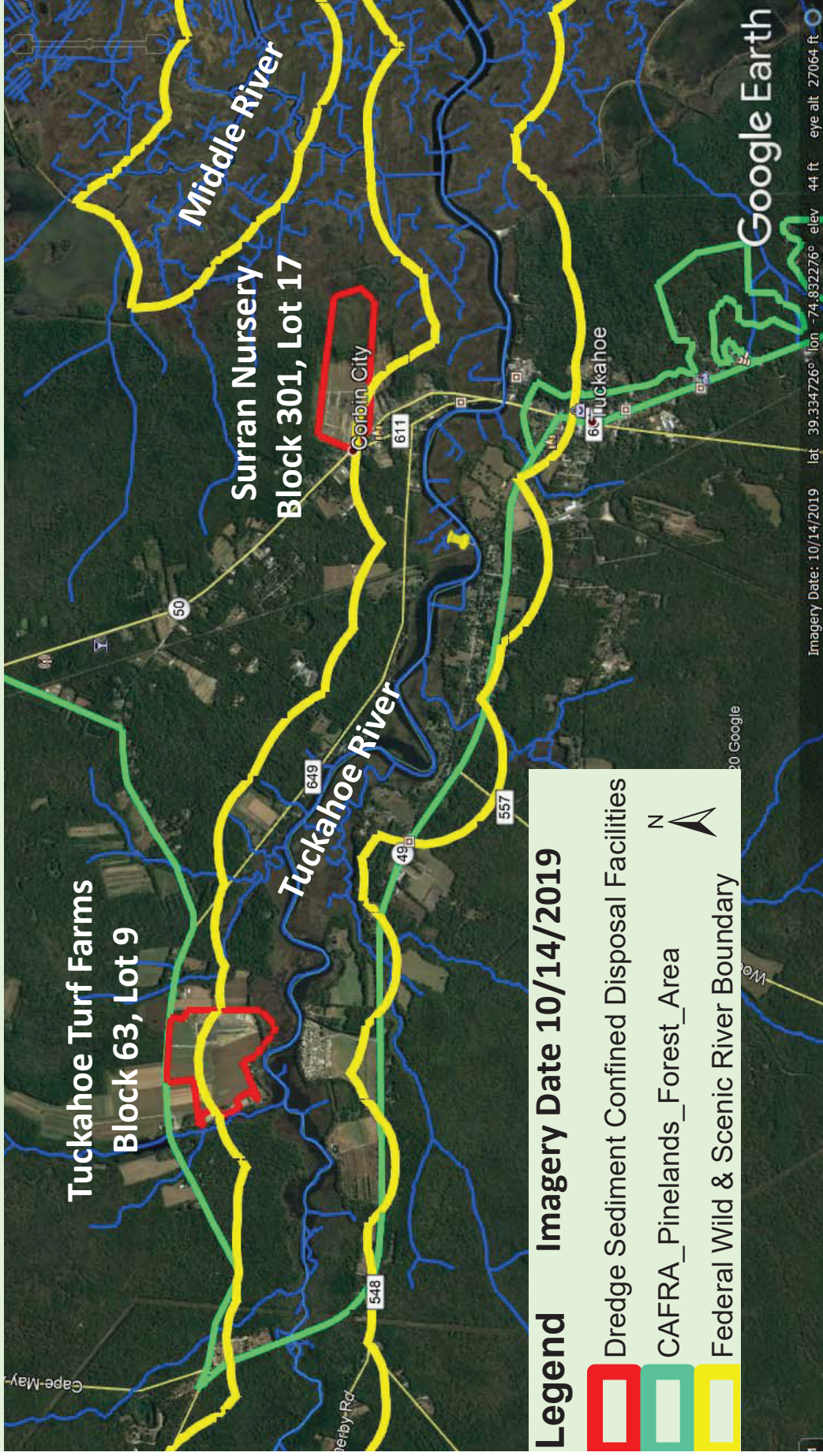
Sincerely,

A handwritten signature in dark ink that reads "Fred Akers". The signature is written in a cursive, slightly slanted style.

Fred Akers, Administrator

CC: Paul Kenney, National Park Service,
Stephen Rochette, USACE
Steve Mars, USFWS
Vince Mazzei, NJDEP Watershed and Land Use Management
David Rosenblatt, NJDEP Coastal Engineering
Nancy Wittenberg, NJ Pinelands
Michael Kent, Cape Atlantic Soil Conservation District
John Peterson, Atlantic County Planning

Dredge Sediment Confined Disposal Facilities in Corbin City and Estell Manor on Upland Agricultural Sites, above the head of tide, in the CAFRA Pinelands Forest Area, within the Federal Great Egg Harbor National Scenic and Recreational River Boundary, and 15 to 35 miles from the source of the dredged sediment.



Tuckahoe Turf Farms Upland Agriculture Dredge Sediment CDF at Block 63 Lot 9 in Estell Manor.

FARMLAND RESTORATION PROJECT

Recycle, Restore, Regrow

Using river silt to create fertile Farmland. In cooperation with New Jersey Department of Environmental Protection, Cape Atlantic Conservation District and M.V. Engineering.

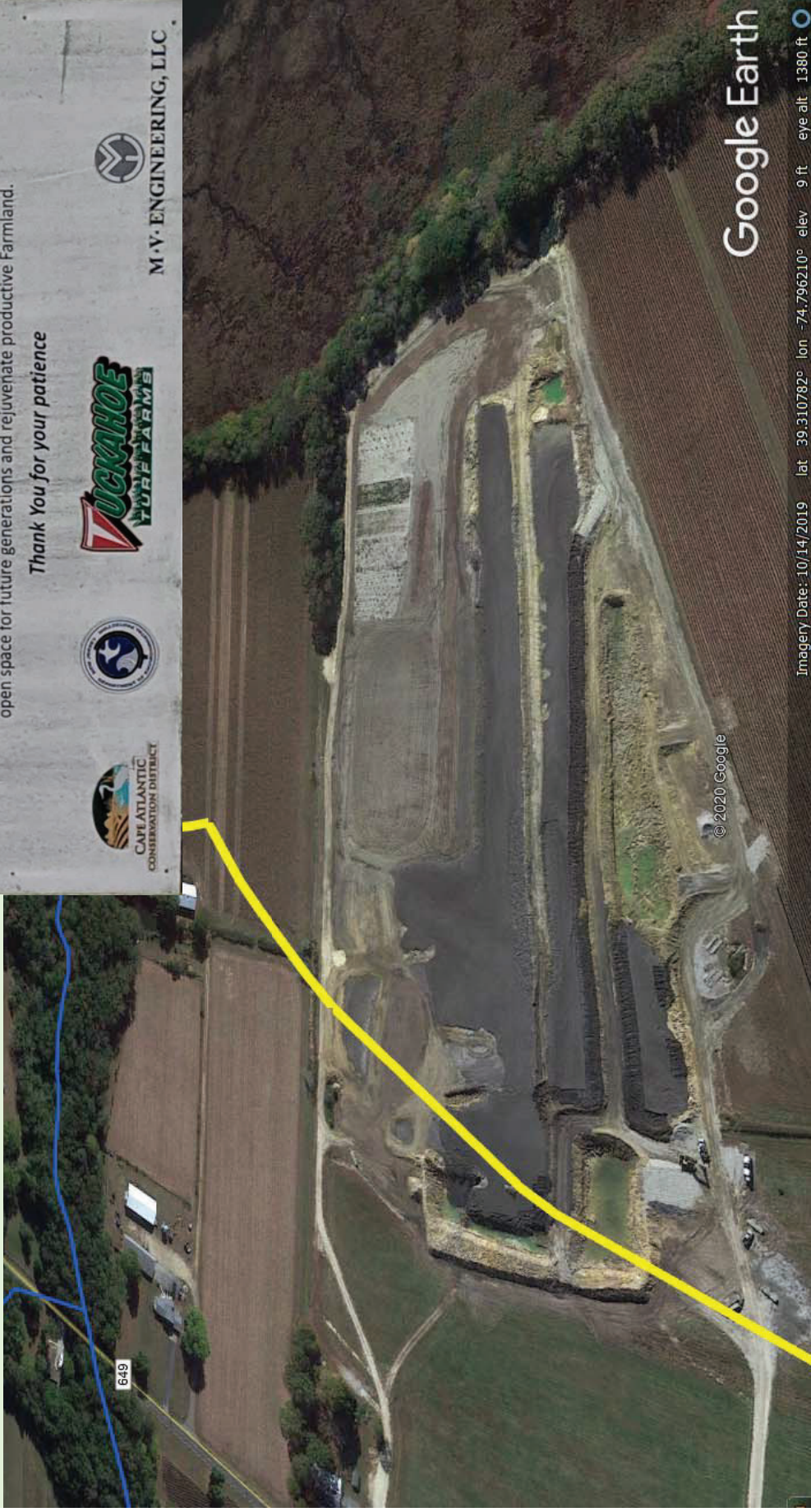
We apologize for any inconveniences the project may cause during the restoration project. The project will keep open space for future generations and rejuvenate productive Farmland.

Thank You for your patience

CAPE ATLANTIC CONSERVATION DISTRICT

TUCKAHOE TURF FARMS

M.V. ENGINEERING, LLC



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Google Earth

Imagery Date: 10/14/2019 lat 39.310782° lon -74.796210° elev 9 ft eye alt 1380 ft



**Surran's Soil Replenishment
Facility upland CDF at Block
301 Lot 17 in Corbin City**