CORRESPONDENCE

New England Fishery Management Council
50 WATER STREET | NEWBURYPORT, MASSACHUSETTS 01950 | PHONE 978 465 0492 | FAX 978 465 3116
John F. Quinn, J.D., Ph.D., *Chairman* | Thomas A. Nies, *Executive Director*

September 11, 2020

Dr. Lyndie Hice-Dunton
Executive Director
Responsible Offshore Science Association
via email

Dear Dr. Hice-Dunton:

I am writing to follow up on our July 22 letter regarding the Council's representation on ROSA's Advisory Council. I would like to appoint Michelle Bachman from my staff to serve as Dr. Sissenwine's alternate. Please let me know if you have questions.

Sincerely,

Thomas A. Nies

Thomas A. Nies
Executive Director

Cc: Dr. Mike Sissenwine, Dr. John Quinn, Mr. Eric Reid

New England Fishery Management Council

MID-ATLANTIC FISHERY MANAGEMENT COUNCIL

August 31, 2020

Brendan Deyo
Chief, Office of Environmental Management
United States Coast Guard Stop 7714
2703 Martin Luther King Jr. Ave SE
Washington, DC 20593-7714

Dear Northeast Fish Habitat and Ecosystem Partner,

The Mid-Atlantic and New England Fishery Management Councils are two of the eight regional Councils responsible for managing fisheries in the federal Exclusive Economic Zone in accordance with the Magnuson-Stevens Fishery Conservation and Management Act (MSA). Sustainable fisheries depend on healthy habitats and a healthy ecosystem. The Councils are directed by the MSA to identify Essential Fish Habitat (EFH) and reduce, to the maximum extent practicable, the impact of fishing on EFH and to identify and recommend actions to reduce impacts of non-fishing activities on EFH. Although NOAA Fisheries conducts EFH consultations, agencies and other regional habitat partners are encouraged to coordinate their actions that impact EFH designated by the Council.

Following this introduction is a letter from the Council Coordination Committee acknowledging the shared interests of the U.S. Regional Fishery Management Councils in addressing habitat issues. The letter explains how the Councils collaborate with NOAA Fisheries and other federal agencies in designating and conserving EFH. As an organization involved in habitat consultation, you are undoubtedly aware of the process and your responsibilities. However, you may be less aware of our Councils roles in designating EFH and guiding habitat conservation. Through this letter we hope to increase awareness and express our willingness to partner with your organization to ensure cooperative fish habitat protection and conservation.

Thank you for your ongoing contributions to fish habitat conservation. If you have any questions about the Councils or their activities or wish to discuss how we can improve regional coordination, please contact Council staff responsible for habitat in the Mid- Atlantic, Jessica Coakley (jcoakley@mafmc.org; 302-526-5252) and New England, Michelle Bachman (mbachman@nefmc.org; 978-465-0492 ext. 120). We look forward to enhancing and developing new partnerships for habitat conservation in the Northeast.

Sincerely,

Christopher M. Moore, Ph.D.
Executive Director, Mid-Atlantic Fishery Management Council

Thomas A. Nies
Executive Director, New England Fishery Management Council

cc: C. Bisignano, W. Gregory Jr., R. Marino, T. Nies, C. Kellogg, J. Quinn, E. Reid, C. Moore, M. Luisi, W. Townsend, M. Bachman, J. Coakley

U.S. Regional Fishery Management Councils

www.fisherycouncils.org

Caribbean
Miguel Rolon
Executive Director
Marcos Hanke
Chair

Gulf of Mexico
Dr. Carrie Simmons
Executive Director
Dr. Thomas Frazer
Chair

Mid Atlantic
Dr. Christopher Moore
Executive Director
Mike Luisi
Chair

New England
Thomas Nies
Executive Director
Dr. John Quinn
Chair

North Pacific
David Witherell
Executive Director
Simon Kinneen
Chair

Pacific
Chuck Tracy
Executive Director
Phil Anderson
Chair

South Atlantic
John Carmichael
Executive Director
Jessica McCawley
Chair

Western Pacific
Kitty Simonds
Executive Director
Taotasi Archie Soliai
Chair

May 28, 2020

Dear Habitat Partners,

The Council Coordination Committee (CCC) represents the shared interests of the U.S. Regional Fishery Management Councils (Councils). With this letter we seek to explain how the Councils collaborate with NOAA Fisheries and other federal agencies in the designation and conservation of essential fish habitat (EFH). As an agency that undertakes EFH consultations, you are undoubtedly aware of the process and your responsibilities. However, you may be less aware of the role Councils play in EFH designation and in guiding habitat conservation in our respective regions. We hope that your agency will see Councils as a partner in habitat conservation, and that we can foster productive relationships to cooperatively improve protection and conservation of EFH across all regions.

We look forward to continuing, or perhaps developing, a meaningful partnership around habitat conservation for our nation's fishery resources. Toward that end, we encourage you to establish a relationship with your regional habitat-focused Council staff. Communicating with your regional Council staff can lead to more informed Council discussions and recommendations on specific EFH actions and/or assessments. For example, agencies and Councils working together to identify the types of actions for which an EFH assessment should be provided to Councils would mark a substantial step toward building strong partnerships to better conserve valuable EFH.

Attached to this letter please find some additional information as it relates to the role of Councils in EFH issues. The letter also includes key EFH contacts at each of the Regional Fishery Management Councils. Please do not hesitate to reach out to staff with questions about our designations or related fishery management measures, or if you have information or suggestions for improving our EFH-related work or how it is communicated.

Sincerely,

Taotasi Archie Soliai, Chair
Western Pacific Fishery Management Council

Mike Luisi, Chair
Mid-Atlantic Fishery Management Council

Phil Anderson, Chair
Pacific Fishery Management Council

Marcos Henke, Chair
Caribbean Fishery Management Council

Dr. John Quinn, Chairman
New England Fishery Management Council

Jessica McCawley, Chair
South Atlantic Fishery Management Council

Simon Kinneen, Chair
North Pacific Fishery Management Council

Dr. Thomas Frazer, Chair
Gulf of Mexico Fishery Management Council

U.S. Regional Fishery Management Councils
www.fisherycouncils.org

The Regional Fishery Management Council's Role in Essential Fish Habitat

Under the federal fisheries management system, Councils are responsible for developing fishery management plans that minimize impacts of fishing on fish habitats to the extent practicable. To support this effort, Councils are mandated to identify and designate EFH for all managed species. EFH designation is required by Section 303 of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) and defined at 50 CFR 600, Subpart J as "waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." Councils base EFH designations on the best available scientific information. The purpose of designations is not only to aid our fishery management work, but also to serve as a robust foundation for the consultation process, which seeks to minimize impacts to EFH from fishing and non-fishing activities alike. EFH regulations (600 CFR Subpart K) require federal agencies to consult with NOAA Fisheries on any actions authorized, funded, or undertaken by the agency that may adversely affect EFH.

Beyond developing EFH designations, Councils consider the impacts of non-fishing activities on EFH during development of fishery management plans. As such, they are authorized to make recommendations to any federal or state agency concerning activities that, in the view of the Council, may affect the habitat of a fishery resource under its authority (MSA Sec. 305(b)(3)). While NOAA Fisheries Regional Offices are responsible for conducting EFH consultations, Councils often partner with NOAA Fisheries colleagues as they coordinate with regional partners to minimize such impacts.

As an example, in Alaska, Council staff have recently begun to attend meetings between the NOAA Fisheries Alaska Regional Office's Habitat Conservation Division and U.S. Army Corps of Engineers (USACE) Civil Works to identify projects authorized or conducted by the USACE that might affect nearshore EFH. The intention is to identify EFH conservation measures that could be designed to *avoid* impacts, rather than implemented after the fact to *mitigate* impacts.

As another example, the South Atlantic Fishery Management Council and staff engage regional partners in EFH and policy development through an advisory panel that includes seats for the NOAA Fisheries Southeast Regional Office's Habitat Conservation Division, Bureau of Ocean and Energy Management, US Navy, other federal agencies, state coastal zone management and fishery agencies, as well as regional fishing industry members and NGOs. Early coordination between the Navy and NOAA Fisheries panel members regarding the Navy's Atlantic Fleet Testing and Training Area resulted in effective and extensive integration of EFH consultation recommendations based on Council EFH designations and policies.

Many Councils have drafted habitat policies to inform and guide the consultation process. These policies are typically focused on specific non-fishing activities (e.g., coastal

development, offshore energy, etc.) and often incorporate best management practices for habitat conservation. NOAA Fisheries staff often reference these policies as they provide conservation recommendations. We encourage you to take note of these policies in your region, and consider them in the early phases of project development.

The CCC encourages federal partners to participate in the Councils' public meetings and the EFH identification process. During this process, Councils work closely with NOAA Fisheries Regional Offices and Science Centers. The core scientific data to support designations is often collected by the Science Centers and by state fishery management agencies, but the Councils also rely on information from additional sources. Council responsibilities include convening technical working groups to review habitat information, and ensuring the continued scientific validity of EFH designations, which are reviewed periodically, ideally every five years. Regional Offices convey how changes in designations may affect consultations. Federal partners may have valuable data to inform designations, and can convey how changes to designations might affect consultation activities, given knowledge about specific types of projects and the environments in which they occur.

For more information on EFH: https://www.fisheries.noaa.gov/national/habitat-conservation/essential-fish-habitat

Council EFH Points of Contact

Regional Fishery Management Council	Habitat Representative	Email	Office Phone
Caribbean	Graciela Garcia- Moliner	graciela_cfmc@yahoo.com	787-766-5926
Gulf of Mexico	Lisa Hollensead	lisa.hollensead@gulfcouncil.org	813-348-1630
Pacific	Kerry Griffin	kerry.griffin@noaa.gov	503-820-2409
Mid-Atlantic	Jessica Coakley	jcoakley@mafmc.org	302-526-5252
New England	Michelle Bachman	mbachman@nefmc.org	978-465-0492 x120
North Pacific	Steve MacLean	steve.maclean@noaa.gov	907-271-2809
South Atlantic	Roger Pugliese	roger.pugliese@safmc.net	843-302-8434
Western Pacific	Joshua DeMello	joshua.demello@wpcouncil.org	808-522-7493

New England Fishery Management Council

MID-ATLANTIC FISHERY MANAGEMENT COUNCIL

August 31, 2020

Regina Lyons, Manager
Ocean and Coastal Protection Unit
United States Environmental Protection Agency
Region 1
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Dear Northeast Fish Habitat and Ecosystem Partner,

The Mid-Atlantic and New England Fishery Management Councils are two of the eight regional Councils responsible for managing fisheries in the federal Exclusive Economic Zone in accordance with the Magnuson-Stevens Fishery Conservation and Management Act (MSA). Sustainable fisheries depend on healthy habitats and a healthy ecosystem. The Councils are directed by the MSA to identify Essential Fish Habitat (EFH) and reduce, to the maximum extent practicable, the impact of fishing on EFH and to identify and recommend actions to reduce impacts of non-fishing activities on EFH. Although NOAA Fisheries conducts EFH consultations, agencies and other regional habitat partners are encouraged to coordinate their actions that impact EFH designated by the Council.

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Thank you for your ongoing contributions to fish habitat conservation. If you have any questions about the Councils or their activities or wish to discuss how we can improve regional coordination, please contact Council staff responsible for habitat in the Mid- Atlantic, Jessica Coakley (jcoakley@mafmc.org; 302-526-5252) and New England, Michelle Bachman (mbachman@nefmc.org; 978-465-0492 ext. 120). We look forward to enhancing and developing new partnerships for habitat conservation in the Northeast.

Sincerely,

Christopher M. Moore, Ph.D.
Executive Director, Mid-Atlantic Fishery Management Council

Thomas A. Nies
Executive Director, New England Fishery Management Council

cc: T. Nies, C. Kellogg, J. Quinn, E. Reid, C. Moore, M. Luisi, W. Townsend, M. Bachman, J. Coakley

New England Fishery Management Council

MID-ATLANTIC FISHERY MANAGEMENT COUNCIL

August 31, 2020

Emily Biondi
Chief
Office of Project Development and Environmental Review
US Department of Transportation Federal Highway Administration
1200 New Jersey Ave. SE
Washington, DC 20590

Dear Northeast Fish Habitat and Ecosystem Partner,

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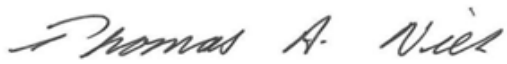
Christopher M. Moore, Ph.D.
Executive Director, Mid-Atlantic Fishery Management Council



Thomas A. Nies
Executive Director, New England Fishery Management Council

cc: K. Lynch, D. Suciu Smith, T. Nies, C. Kellogg, J. Quinn, E. Reid, C. Moore, M. Luisi, W. Townsend, M. Bachman, J. Coakley

New England Fishery Management Council

MID-ATLANTIC FISHERY MANAGEMENT COUNCIL

August 31, 2020

Michelle Morin
Chief, Environmental Branch
Office of Renewable Energy Programs
Bureau of Ocean Energy Management
45600 Woodland Road, AM-OREP
Sterling, VA 20166

Dear Northeast Fish Habitat and Ecosystem Partner,

The Mid-Atlantic and New England Fishery Management Councils are two of the eight regional Councils responsible for managing fisheries in the federal Exclusive Economic Zone in accordance with the Magnuson-Stevens Fishery Conservation and Management Act (MSA). Sustainable fisheries depend on healthy habitats and a healthy ecosystem. The Councils are directed by the MSA to identify Essential Fish Habitat (EFH) and reduce, to the maximum extent practicable, the impact of fishing on EFH and to identify and recommend actions to reduce impacts of non-fishing activities on EFH. Although NOAA Fisheries conducts EFH consultations, agencies and other regional habitat partners are encouraged to coordinate their actions that impact EFH designated by the Council.

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Christopher M. Moore, Ph.D.
Executive Director, Mid-Atlantic Fishery Management Council

Thomas A. Nies
Executive Director, New England Fishery Management Council

cc: D. Hansen, A. Kaller, J. Lewandowski, T. Nies, C. Kellogg, J. Quinn, E. Reid, C. Moore, M. Luisi, W. Townsend, M. Bachman, J. Coakley

New England Fishery Management Council

MID-ATLANTIC FISHERY MANAGEMENT COUNCIL

August 31, 2020

Joseph M. Tuite
Department of the Navy
Supervisor of Shipbuilding Conversion and Repair
574 Washington St.
Bath, ME 04530

Stephen T. Padhi, CDR, CED
United States Navy
4921 South Broad Street, Building 1
Philadelphia, PA 19112

Dear Northeast Fish Habitat and Ecosystem Partner,

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Thomas A. Nies

Executive Director, New England Fishery Management Council

cc: T. Nies, C. Kellogg, J. Quinn, E. Reid, C. Moore, M. Luisi, W. Townsend, M. Bachman, J. Coakley

New England Fishery Management Council

MID-ATLANTIC FISHERY MANAGEMENT COUNCIL

August 28, 2020

Mr. Craig Lapiejko, First Coast Guard District
Via email: craig.d.lapiejko@uscg.mil

Dear Mr. Lapiejko,

Please accept these comments from the Mid-Atlantic and New England Fishery Management Councils (the Councils) on the request for comments on the ongoing Port Access Route Study (PARS) for the Northern New York Bight.

The Mid-Atlantic Council manages more than 64 marine species[1] in federal waters and is composed of members from the coastal states of New York through North Carolina (including Pennsylvania). The New England Council manages 28 marine species and is composed of members from Maine to Connecticut. Fishing activity for all Mid-Atlantic and many New England Council-managed commercial and recreational fisheries occurs within the study area for this PARS. Marine fisheries are profoundly important to the social and economic well-being of Mid- Atlantic and New England communities and provide numerous benefits to the nation, including domestic food security.

Our primary concern in terms of potential routing measures for this region is their intersection with offshore wind development. The study area for this PARS encompasses two wind energy lease areas (OCS A 0-512, leased to Equinor Wind US LLC and a small section of OCS-A 0500, leased to Bay State Wind LLC) plus additional planning areas that may be considered by the Bureau of Ocean Energy Management for leasing in the future. Wind energy development off the U.S. east coast is advancing at a rapid pace. The Councils have concerns about the potential for the coexistence of fisheries and large-scale offshore wind projects but support policies for U.S. wind energy development that will sustain the health of marine ecosystems and fisheries resources. Risks to marine ecosystems and fisheries must be minimized.[2] Our main concerns regarding offshore wind energy development include: 1) the ability of commercial and recreational fishing vessels to continue to safely fish in and transit through the wind energy areas; 2) the continued operation of fisheries-independent surveys conducted by the National Marine Fisheries Service, states, and other entities; and 3) the safe and effective conduct of search and rescue operations.

[1] 14 species (summer flounder, scup, black sea bass, bluefish, Atlantic mackerel, *Illex* and longfin squids, butterfish, Atlantic surfclams, ocean quahogs, golden and blueline tilefish, spiny dogfish [joint with the New England Fishery Management Council], and monkfish [joint with the New England Fishery Management Council]) are managed in specific fishery management plans. More than 50 additional species are managed as ecosystem components across all fishery management plans.

[2] The Mid-Atlantic Council's policy on offshore wind energy development is available at https://www.mafmc.org/actions/offshore-energy. The New England Council's policy is nearly identical.

Specific to offshore wind, we urge the Coast Guard to issue clear and unambiguous guidance regarding wind farm layout restrictions that are necessary to allow for safe vessel transit, fishing activity, and search and rescue operations. These recommendations will be very important for the Bureau of Ocean Energy Management and wind developers to consider. Consideration should be given to concerns expressed by the New England Fishery Management Council regarding ambiguous statements about the minimum recommended spacing between wind turbines in the draft PARS for the areas offshore of Massachusetts and Rhode Island (MARIPARS). Those concerns are not repeated here but can be found in the letter linked below.[3] The conclusions made in the Northern New York Bight PARS should be less ambiguous. The Coast Guard's recommendations in the MARIPARS build off an agreement by developers to use a uniform, 1x1 nm east-west/north-south turbine spacing across multiple leases in that area. No such agreement currently exists for the leases in the region of this PARS, although Equinor has suggested a minimum 0.65 nm spacing for the Empire Wind project.[4] Clear Coast Guard advice on this matter will be important. We understand that developer/fisheries conversations around turbine orientation and spacing for the Empire Wind project have been productive, and it will be important to convey Coast Guard recommendations related to safety and transit in a way that preserves flexibility for mutually agreeable layout alternatives.

More generally, this PARS should consider all available data to understand patterns of commercial and recreational fishing vessel activity in the area. This includes not only automatic information system (AIS) data, but also vessel monitoring system (VMS), vessel trip report (VTR), and fisheries observer data. Each of these data sets have limitations, which must be explicitly considered and acknowledged in the PARS. For example, data on fishing and transiting locations derived from VMS, AIS, and VTRs do not account for all fishing activity in the area. Specifically, smaller vessels, vessels which only operate in state waters, and private recreational anglers are under-represented and/or completely missing from these data sets.

It is imperative that these data sets be supplemented with extensive input from commercial and recreational fishery stakeholders. Stakeholder input should be collected through a variety of channels, including in-person workshops and meetings, webinars, online comment forms, written communications, and phone calls. We are concerned that the ongoing COVID-19 pandemic will limit the Coast Guard's ability to collect stakeholder input through in-person meetings, which can be especially important for discussing and reviewing spatial data. In addition, some stakeholders feel most comfortable providing input in person. We urge the Coast Guard to hold in-person meetings with stakeholders if possible.

Input provided by fishermen through previous efforts should also be considered. For example, the Responsible Offshore Development Alliance (RODA) and the New York State Energy Research and Development Authority (NYSERDA) worked with many fishermen to summarize commercial fishing transit patterns in the New York Bight.[5] This effort showed that vessels transit through the area from New England, New York, and New Jersey ports, moving in various directions between ports and

[3] https://s3.amazonaws.com/nefmc.org/200316-NEFMC-to-USCG-re-MARIPARS.pdf
[4] https://files.constantcontact.com/45fa7eec701/1abf7270-1413-4ffe-b638-7cfdfe3c6970.pdf
[5] https://www.nyftwg.com/new-york-bight-transit-lane-workshop-2/

between ports and fishing grounds. The PARS should consider any transit lane proposals made for the region; fishery interests have called for 4 nm transit lanes through/between lease areas.

In the context of search and rescue, we recommend that the Coast Guard consider recent discussions about the effects of wind turbines on radar coverage, including high frequency radar used for search planning. The Department of Energy and Department of Defense's Wind Turbine Radar Interference Mitigation Working Group and their recent webinar series have provided an important forum for understanding these issues.

The Council looks forward to working with the Coast Guard to ensure that any future wind development activities minimize impacts to the marine environment and can be developed in a manner that ensures coexistence with our fisheries.

Sincerely,

Christopher M. Moore, PhD

Executive Director, Mid-Atlantic Fishery Management Council

Thomas A. Nies

Executive Director, New England Fishery Management Council

cc: M. Luisi, J. Beaty, J. Quinn, E. Reid, M. Bachman

New England Fishery Management Council

MID-ATLANTIC FISHERY MANAGEMENT COUNCIL

August 26, 2020

Mr. Gary Frazer
U.S. Fish and Wildlife Service
Department of Interior
Washington, DC 20240

Mr. Samuel D. Rauch III
National Marine Fisheries Service
Office of Protected Resources
1315 East-West Highway
Silver Spring, MD 20910

Dear Mr. Frazer and Mr. Rauch,

As you know, the Mid-Atlantic and New England Fishery Management Councils are two of the eight regional Councils responsible for managing fisheries in the federal Exclusive Economic Zone in accordance with the Magnuson-Stevens Fishery Conservation and Management Act (MSA). We are writing to comment on the regulatory definition of 'habitat' proposed by U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) to support the conservation of species under the Endangered Species Act (ESA). The New England Council has a management plan for Atlantic Salmon, which is listed as endangered under the ESA, and both councils routinely consider the potential impacts that changes to fishery management plans could have on listed species, including Atlantic salmon, Atlantic sturgeon, sea turtles, and marine mammals.

In the August 5 proposed rule, USFWS and NMFS propose a new definition of habitat, and also suggest an alternative version:

- Proposed: The physical places that individuals of a species depend upon to carry out one or more life processes. Habitat includes areas with existing attributes that have the capacity to support individuals of the species.
- Alternative: The physical places that individuals of a species use to carry out one or more life processes. Habitat includes areas where individuals of the species do not presently exist but have the capacity to support such individuals, only where the necessary attributes to support the species presently exist.

We agree with the first sentence of both the proposed and alternative definitions, which is similar to the definition of Essential Fish Habitat under the MSA. In terms of the second sentences, we agree with the intent to identify habitat as suitable areas where the species does not presently occur, but find the wording to be confusing, especially in the alternative definition. In addition,

we find the language ‘existing attributes’ or ‘necessary attributes’ that ‘presently exist’ to be vague in comparison to ‘physical or biological features’, the term used in the Critical Habitat regulations. We are uncertain what elements would constitute habitat that would not be encompassed in the term ‘physical and biological features’; if USFWS and NMFS are considering specific examples, it would help to include them in the final rule.

In terms of a revised definition, we suggest:

- The physical places that individuals of a species use to carry out one or more life processes. Habitat includes areas where individuals of the species do not currently occur but where necessary attributes, including physical and biological features, presently exist.

We also wonder specifically if connectivity would be considered an ‘attribute’ or physical habitat feature. In the context of migratory fishes that utilize both riverine and marine habitats for different life history processes, a particular riverine area might have attributes that would render it ‘habitat’ but not be occupied at present due to having no or limited connection with downstream areas. Conservation of such areas would be important, however, in anticipation of continued restoration of fish passage.

Thank you for your consideration of our comments. Please contact our habitat staff, Michelle Bachman (mbachman@nefmc.org) and Jessica Coakley (jcoakley@mafmc.org) if you have any questions.

Sincerely,

Thomas A. Nies
Executive Director, NEFMC

Dr. Christopher M. Moore
Executive Director, MAFMC

State of New Jersey
DEPARTMENT OF TRANSPORTATION
P.O. Box 600
Trenton, New Jersey 08625-0600

PHILIP D. MURPHY
Governor

SHEILA Y. OLIVER
Lt. Governor

DIANE GUTIERREZ-SCACCETTI
Commissioner

August 18, 2020

Louis A. Chiarella, Assistant Regional Administrator
for Habitat Conservation
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

RE: Response to Essential Fish Habitat Conservation Measures for
Bridge S-32 County Route 520 (Rumson Road) over Shrewsbury River
Bridge Replacement Project
Boroughs of Rumson and Sea Bright
Monmouth County, New Jersey

Dear Mr. Chiarella:

On behalf of the Federal Highway Administration (FHWA), NJ Department of Transportation (NJDOT) is taking this opportunity to respond to your letter dated July 27, 2020 regarding Essential Fish Habitat Conservation Measures for the above referenced bridge project. NJDOT and Monmouth County agree to adopt the following EFH conservation recommendations to minimize or offset adverse impacts on EFH:

In Water Work Timing Restriction:

Avoid in water work between March 1 and June 30 to minimize impacts to the upstream migration of river herring to their spawning habitat.

In water work will be avoided between March 1 and June 30 to minimize impacts to the upstream migration of river herring to their spawning habitat. It is our understanding that work conducted within or behind a cofferdam enclosure can be conducted during this restricted period if the cofferdams are in place prior to the March 1 restriction.

Frack Out Plan:

Develop a frack out plan outlining the measures to be taken if there is an accidental release of drilling muds during the HDD process.

A detailed Frack Out Plan will be developed and submitted to National Marine Fisheries Service (NMFS) prior to any directional drilling within the Shrewsbury River. This Frack Our Plan requirement is in Subsection 775.01.03, Paragraph B of the Bridge S-32 project Special Provisions (see 2nd page of attached). This provision calls for the contractor to prepare a detailed Fracture Mitigation (frac-out) Plan including measures to be taken if there is an accidental release of drilling muds during direction drilling operations.

Final Mitigation Plan:

Provide us with a copy of the final mitigation plan. This plan should include a monitoring and maintenance plan to document success, identify if corrective actions are needed, and to maintain the integrity and health of the wetland restoration project.

The process to conduct mitigation for the proposed project is already underway. Site searches have been conducted to find sites that are suitable for mitigation of aquatic resources. Negotiations have begun to acquire rights to the use of these sites to satisfy mitigation requirements. Once the site(s) has been determined, a detailed final mitigation plan will be prepared and submitted to NMFS. This mitigation plan will include a monitoring and maintenance plan to document success, identify if corrective actions are needed, and to maintain the integrity and health of the wetland restoration project.

If you have any questions or concerns, please contact me at 732-433-4200 (cell) or 609-963-2063 (office).

Stay Safe and Healthy,

Pamela Garrett

Pamela Garrett
Environmental Project Manager

Enclosures (1)
cc: New York District ACOE – S.
USGC – D. Leoce
NJDEP – K. Davis
FWS – S. Mars EPA Region II – M. Finocchiaro
FHWA – Hadi Pezeshki
NEFMC – T. Nies MAFMC – C. Moore
ASMFC – L. Havel
Monmouth County – J. Ettore

B. Submarine Cable Termination Cabinet

The ends of all conduits projecting into terminal cabinets and junction boxes will be provided with bronze insulated grounding bushings. The insulated portion will be of molded phenolic compound, and each fitting will have a screw type combination lug for bonding. Insulated bushings will be the O.Z./Gedney Type RBLG, or approved equal. All bushings in any box or enclosure will be bonded together with No. 8 AWG bare copper wire.

C. Warranty

The manufacturer's standard warranty will in no event be for a period of less than five (5) years after project acceptance, and will include repair parts, labor, reasonable travel expense necessary for repairs at the job site, and expendables used during repair. Submittals received without written warranties as specified will be rejected in their entirety.

774.04 MEASUREMENT AND PAYMENT

Payment will be made on a lump sum basis.

The lump sum price bid for "Submarine Cables and HDPE Ducts" will include the cost of all materials necessary for a complete installation, ready for operation, including but not limited to: HDPE ducts, submarine cable, and submarine cable termination cabinet.

The Contractor will submit to the Engineer a detailed breakdown of his costs under this item within 30 days of award of the contract. This breakdown will be evaluated by the Engineer and be utilized as the basis for monthly progress payments for work satisfactorily completed. A minimum of 10 percent of the bid will be retained by the Owner until final acceptance of the bridge electrical system.

The Department will make payment for the Items as follows:

Item	*Pay Unit*
SUBMARINE CABLE AND HDPE DUCTS	LUMP SUM

THE FOLLOWING SECTION IS ADDED:

SECTION 775 - SUBMARINE CABLE AND HDPE DUCTS INSTALLATION

775.01 DESCRIPTION

The work will include all labor, materials, tools and equipment required for a complete installation of, by directional drilling, High Density Polyethylene (HDPE) conduits under the channel up to but not including handholes and buildings.

The work will include installing submarine cables in the HDPE ducts after the ducts are in the river bottom as well as the on-site services of the cable manufacturer's representative and Construction Diver.

The work will also include the installation, testing, and terminating of the Submarine Cable Termination Cabinets.

775.01.01 Requirements

A. Comply with all applicable Federal, State, and local laws and regulations relating to material handling and disposal.

B. Drilling fluids will be disposed of in accordance with the New Jersey Department of Environmental Protection regulations.

C. The work will conform to all applicable Federal, State, and local laws and regulations of OSHA.

775.01.02 Site Conditions

A. Obtain geotechnical data necessary for the installation of conduits by the directional drilling method. Contractor must review all available geotechnical information available to the Monmouth county prior to bidding. If any additional exploratory geotechnical testing is required based on the review of the available geotechnical information so that the Contractor can perform the directional drilling operations with the site conditions at hand, the Contractor will include those tests in his bid.

775.01.03 Submittals

A. Submit to the Construction Manager the following for approval:

1. An Installation Plan that describes the anticipated rig capacity, the proposed equipment and the method for advancing the borehole through expected soil conditions, angles, depth and exact location of the exit ditch, the pilot hole diameter, the proposed reaming plan, including the number and diameter of pre-reams/back-reams and diameter of the final reamed borehole, and the contingency equipment and plans for dealing with soil conditions that a soil engineer could reasonably expect to be encountered at the proposed directional drilling installation site. The Installation Plan will also address the anticipated hours of operation during the directional drilling process, the minimum number of personnel, and their responsibilities on-duty and on-site during all directional drilling operations. The Installation Plan will include the following:

    a. Pre-bore survey grid line with angles and depths defined.

    b. Statement that once the bore begins on County of Monmouth property, the work will be continuous until the drilling is complete and the pipe is put in place

    c. Statement that the bore will be tracked constantly, with the location and depth marked every 10 feet.

    d. The maximum size of the bore hole will not exceed 1.5x outside diameter (O.D.) if O.D. is 10” or less. If O.D. is greater than 10”, the bore hole will not exceed 1.3x O.D.

    e. Statement of expected soil conditions, and statement of all drill heads on site for expected and unexpected soil conditions.

    f. Specifications and capacities of the bore machine, including

        i. Maximum capacities

        ii. Intended capacities

        iii. Maximum drilling RPM

        iv. Intended drilling RPM

        v. Maximum drilling PSI

        vi. Intended drilling PSI

        vii. Maximum GPM

        viii. Intended GPM

B. A detailed Fracture Mitigation (frac-out) Plan including method of monitoring and capturing the return of drilling fluids with attention to prevention of inadvertent escape of drilling fluids where they could undermine the approach roadway.

C. Upon completion of the directional drilling work, the contractor will provide an accurate as-built drawing of the installed directional drilling segment. As-built drawings will include both horizontal and profile plans.

D. A Site Specific Work Plan.

E. The Contractor will submit in detail the proposed procedures and methods for the installation of the submarine cables and direct bore installation. Working drawings will be included with the procedures and methods.

F. The Contractor will prepare and submit the following working drawings and catalog cuts:

1. Direct bore experience sheets.
2. Catalog cuts, certified dimensioned cross-sectional prints, and a complete material list for all submarine cables, supports, terminal blocks, splice kits, terminal cabinets, concrete boxes, clay, accessories, and other electrical equipment.
3. Field survey sounding drawings for before installation and after installation.
4. A complete layout drawing to scale showing all concrete pull boxes, duct paths, buried cable paths and accessories. Obstructions, utilities, and other problems areas will be identified on the drawings.
5. Complete, detailed installation methods and procedures. The procedures will include methods, materials and equipment used to survey the area, drill the pilot hole, direct bore, install the duct, clear the duct, remove spoils, install bentonite clay, install the concrete boxes, pull the submarine cables, and complete the installation. The pulling of the cables will include a complete pulling plan which includes load to pull the cables and will be compared to manufacturer recommended maximums.
6. A complete schematic conduit and cable diagram or diagrams showing the interconnection of all devices and equipment, including ducts and junction boxes, and showing all submarine cables. The size of each duct and submarine cable will be shown on the diagrams. Each duct and submarine cable percent fill will be shown.
7. The terminal lugs catalog cuts. The crimping tool catalog cuts and calibration reports for all tools used onsite.
8. Certification of calibration will be submitted for the all test equipment. Results of all initial tests and final tests after any unacceptable results are corrected will be submitted to the engineer for approval.
9. Factory test results, laboratory test results, and field test results of testing the conductors.

G. The Drawings and design calculations will be prepared by a licensed Professional Engineer registered in the State of New Jersey.

H. The Contractor will submit, in detail, his proposed method of installing the submarine cables in the ducts and will obtain approval of the Engineer before any work is started.

I. For the cables in the ducts, the load to pull the cables through the duct will be determined and checked with the cable manufacturer to make sure that the cable strength is sufficient to prevent damage to the cable during the pulling process.

J. The Contractor will submit a detailed pulling plan to the Engineer for approval. This plan will include equipment to be used, location of equipment during the pulling process, and the new cable to be installed.

K. Submit for approval the materials, designed as required, to provide the requirements of this Section.

L. The materials will include:

1. Casing pipe
2. HDPE conduits
3. Submarine Cables

M. The bentonite based slurry mix will be capable of supporting the drill hole. The design mix will be prepared by the Contractor.

775.02 CONSTRUCTION

A. The directional drilling operation will be performed after all the necessary information, permitting, and design work has been submitted to and approved by the Construction Manager. This will include design alignment, profiles, materials and installation procedure. The work will conform to the general minimum requirements shown on the Contract Drawings and in these Specifications.

B. The Contractor will include in his bid price any exploratory geotechnical testing required to develop the site specific survey.

C. The work will be performed without interruption to roadway traffic.

D. The directional drilling will be controlled by guidance equipment that gives continuous accurate monitoring of the drill bit position. Adequate control of elevation and direction will be maintained. The equipment will be capable of transmitting to recording instruments at the ground surface, the location of the cutting head.

E. The disposal of the slurry and cuttings will be done in accordance with the NJSDEP regulations.

F. Detailed as-built plans will be prepared showing the exact location, vertically and horizontally, of the pipe crossing.

G. The Contractor will provide proper equipment for pulling the submarine cables at the piers. He will exercise proper care so as not to over stress, score, or cut the conductors, insulation, outer jacket or armor, or otherwise damage the cable.

H. The Contractor will determine the proper type of pulling, lifting or lowering devices for the cables, subject to approval by the Engineer, and will include considerations for the quantity and size of conductors in the submarine cable and distances involved.

I. After the submarine cables have been installed in place and are awaiting termination, the ends of the conductors will be test-capped and the ends of the submarine cables sealed to prevent entry of moisture. The ends of the cables will not be under water at any time.

J. Establish a Survey Grid Line and provide a program of monitoring and documenting the actual location of the borehole during drilling operations.

K. Provide monitoring of the ground and approach roadway for movement during the drilling, reaming, and pullback processes. The installation process will be immediately stopped if movement is detected. The damaged area must be immediately reported to the Construction Manager and immediately repaired subject to The County of Monmouth review and approval.

L. Each end of the HDPE ducts where the submarine cables exit will be sealed and kept free from rain/water infiltration. Ducts will be sealed after submarine cable termination. The procedure would include first using a packing filler around the submarine cables within the duct such that the sealing agent does not drop into the duct and fill the duct vertically. Once the packing filler is in place around the submarine cables, the duct will be sealed by applying the expanding sealant on top of the packing filler and around the submarine cables. The expanding sealant will expand around the submarine cables and the excess will be formed on the top of the duct so that a neat plug cap is formed surrounding the cables. The sealant will be water and vapor resistance. The sealant will be capable of withstanding at a minimum of 20PSI of hydrostatic pressure for 7days. Sealant will be FST Foam Duct Sealant as manufactured by Polywater, or FiloSeal+HD duct seal as manufactured by FiloForm, or NoFirno as manufactured by CSD Sealing Systems.

M. The Contractor will provide a warranty for the installation and it will in no event be for a period of less than five (5) years after project acceptance, and will include repair parts, labor, reasonable travel expense necessary for repairs at the job site, and expendables used during repair.

775.02.01 Field Testing of the Submarine Cables

A. After the submarine cables have been delivered to the site, prior to installation, the Contractor will inspect and test the cables while on their reels in the presence of the Engineer. The Contractor will:

1. Inspect markings on cables for proper size, grade, type, and voltage rating.

2. Inspect cable for physical condition of all materials with respect to defects and damage.

3. Record quantity and measured size of each conductor, including quantity and size of its conductor strands, and the associated color code.

4. Test the insulation resistance of each wire.

5. Test each fiber in the cable for attenuation (or decibel loss) in dB/kM. Return loss of light reflected back through the fiber from the far end. This value will be less than -20dB. Measure and record the propagation delay. Measure and record the time domain reflectometry (TDR). Record any faults along the cable.

The field tests will be compared to the shop test results to determine the condition of the cables. If test results indicate conductor failure, this will reveal significant deviation from the factory tests and the Contractor will be required to replace the faulty cable.

B. After the submarine cables have been installed in the duct, clamped, secured, and terminal connectors attached, but prior to final connections, the Contractor, in the presence of the Engineer, will then test the Insulation Resistance of all conductors as listed below:

1. The test methods for measuring insulation resistance of cables in the field will be in accordance with the specified NEMA Publications.

2. Polarity for connecting the megohm meter to the cable under test and the duration of time for electrifying the cable before taking the resistance reading will be in accordance with the NEMA Publication.

3. The insulation resistance of each conductor in the installed wire-armored, multi-conductor submarine cables will be measured between the conductor and all wires in the armor, all of which will be bonded together and grounded.

4. The measured values of insulation resistance will for each conductor in the submarine cables will be recorded for comparison with the test values determined at the factory and will be submitted as part of the approved copy of certified test data. The failure of any conductor in an installed submarine cable to demonstrate satisfactory insulation resistance will be cause for the rejection of the submarine cable. If this should occur, the Contractor will labpromptly remove the rejected cable and replace it with a new cable, subject to all the listed tests and acceptances, all without additional cost to the Department.

C. The test results will be recorded and submitted for approval.

D. The Contractor will ensure that the Engineer receives at least 72 hours written notice before proceeding further with the work.

E. After approval of the tests of the unconnected submarine cables, the Contractor will connect the submarine cables and test the energized installation for continuity.

F. If a fault or defect is found to exist or a cable does not otherwise pass the tests, the Contractor will identify and tag the faulty cable and conductor in question.

G. If a fault or defect is in a cable, the Contractor will remove the defective cable and will furnish and install new cable, subject to the listed tests and acceptance requirements, all without additional cost to the Department.

H. If it is determined that the fault or defect is due to a termination of the cables, the decision to correct or repair the cable or replace the section in question will rest with the Engineer.

I. The Contractor will provide for sufficient additional length of cable on each reel so that two (2) 15 foot samples of cable may be removed from each reel for test and inspection purposes. The sample will be taken after installation of the cable from the leading portion of the cable that has been subject to the puling stresses and strains incurred during the installation.

In the presence of the Engineer, the Contractor will cut two (2) - 15 foot samples from each reel and cut into a 13.5 foot section and a 1.5 foot section. Each section of the sample cable will be individually tagged and marked by the Contractor with the date the sample was taken, manufacturer's reel number, size and type of cable, and Contract number. The 1.5 foot sections and the one 15 foot section from each cable will be given to the Engineer and will become the property of the County of Monmouth. The Contractor, in the presence of the Engineer, will cap, deliver (within 48 hours of installation), and submit the remaining 13.5 foot section per cable to a testing laboratory designated by the Engineer.

Contractor will verify with the testing laboratory that the length of sample being provided is sufficient to perform the tests required.

The testing laboratory need not be located locally within the project area.

The Contractor will ensure that the Engineer receive notice at least 72 hours in advance when samples are to be taken.

The following inspections, measurements, and tests will be performed, and the results recorded by the testing laboratory, on the section of cable sample taken from each reel, in accordance with the test methods described in the applicable ICEA/NEMA Standards, for compliance with the Contract Specifications:

1. Inspection of marking on cable for proper size, type, and voltage rating
2. Inspection of cable for physical condition of all materials with respect to defects and damage.
3. Quantity and measured size of each conductor, including quantity and size of its conductor strands, and the associated color code.
4. D.C. resistance and material of each conductor.
5. Measured wall thickness of insulation for each conductor, including minimum and average wall thickness per ICEA.
6. Measured wall thickness of overall non-metallic jacket.
7. Visual inspection of condition of filler materials and identification of type of materials used.
8. Measured thickness of tapes and binders and types of materials used.
9. Measured diameter and quantity of individual wires used in wire armor, type, and condition of protective finish.
10. Insulation resistance.

The laboratory will submit seven (7) copies of certified test data results on the cable samples to the Engineer for approval. The Contractor will pay the cost for testing the cable samples, including the costs of cable material, transportation of materials to the laboratory, and the submission of certified test data to the Engineer.

If, as a result of the laboratory tests, it is found that the cable does not comply with the approved certified factory test results or with the applicable ICEA/NEMA Standard, the Contractor will be ordered to remove all cable that came from reel containing the defective cable sample and to remove the reel of defective cable from the work site, and the Contractor will replace the defective cable with new cable, all without additional cost to the County of Monmouth. The Contractor will be held responsible for any delays in execution of the work caused by the defective cable.

J. Insulation Resistance Testing Procedures

The test methods for measuring insulation resistance of cables installed in the field will be in accordance with the specified NEMA Publications.

The test equipment will include a megohm meter capable of generating a constant 1,000-volt D.C. source, calibrated in a range legible from 0 to 1,000 megohms and up to infinity, with heavy-duty, rubber-insulated, alligator-clip leads, and a guard-circuit terminal available for use if required.

Polarity for connecting the megohm meter to the cable under test and the duration of time for electrifying the cable before taking the resistance reading will be in accordance with NEMA Publication.

The insulation resistance of each conductor in the installed wire-armored, multi-conductor submarine cables will be measured between the conductor and all the wires in the armor, all of which will be bonded together and grounded.

The measured values of insulation resistance for each conductor in the submarine cables will be recorded for comparison with the test values determined at the factory and will be submitted as part of the approved copy of the certified test data. The failure of any conductor in an installed submarine cable to demonstrate satisfactory insulation resistance will be cause for the rejection of the submarine cable. If this should occur, the Contractor will promptly remove the rejected cable and replace it with a new cable, subject to all the aforementioned tests and acceptances, all without additional cost to the County of Monmouth.

The Contractor will record the measured insulation resistance for each cable, the cable length installed, cable and reel identification, date of test, ambient temperature, and weather conditions. The test results and date will be submitted to the Engineer for approval and a copy will be included in the supplemental material for the maintenance manual. The Contractor will also submit a certificate identifying the test equipment used and stating it is accurate within limits as rated by the manufacturer.

775.02.02 Submarine Cable Termination Cabinets

Install Submarine Cable Termination Cabinets as shown on plans.

775.03 MEASUREMENT AND PAYMENT

Submarine Cable and HDPE Duct Installation will not be measured for payment. Submarine Cable and HDPE Duct Installation section will be on a lump sum basis.

Payment for Submarine Cable and HDPE Duct Installation will be made at the lump sum price bid for the item SUBMARINE CABLE AND HDPE DUCTS INSTALLATION, which price will include all costs for designing, providing, and installing all the work of this Section; all labor, materials, tools and equipment, and all else necessary therefor and incidental thereto.

The Department will make payment for the Items as follows:

Item	*Pay Unit*
SUBMARINE CABLE AND HDPE DUCTS INSTALLATION	LUMP SUM

THE FOLLOWING SECTION IS ADDED:

SECTION 776 - CONTROL SYSTEM VENDOR

776.01 DESCRIPTION

The work is providing, installing, and placing in satisfactory operating condition the complete electrical control system for the permanent operation of the movable span and its auxiliaries. Where not specifically covered on the plans, specifications, or special provisions, all equipment will be installed according to the manufacturer's published recommendations.

Included in this work is the providing and installing of span position instrumentation, relays, limit switches, control consoles, motors, flux vector drives, Motor Control Center, interlocking instrumentation and all other materials necessary

From: MONTE ROME [mailto:montesan04@yahoo.com]
Sent: Friday, August 14, 2020 7:44 AM
To: Crista Bank <cbank@vineyardwind.com>; Michael Orlando <morlando@intershell.biz>; Tom Dameron <capttomd@hotmail.com>; Tom Nies <tnies@nefmc.org>; Michael Pentony <michael.pentony@noaa.gov>
Subject: Re: Weekly Report: Active Offshore Wind Mariner Updates

Good Morning Christa,

We met when you visited several months ago and after I have had time to digest some of the eventual realities of the proposed ocean wind projects I cannot help but think that anything placed in the ocean on huge cement footings will disrupt all the currents and ocean bottom structures forever and I do think that anyone who promotes these projects are truly misguided people who are nothing more than pawns to the 'big energy' money board game. We have no idea what will happen to fishing in the areas adjacent to the the farms or even the fishing many miles from the farms. All the effort for approval of these types of farms are replete with fraud on the fishing industry and without the authors being able to have made cognisant observation of the permanent damage those farms will do to the harvesting groups and the productive areas that we fish the whole idea of wind farms must be stopped.

This fraud, if allowed to be completed, rips off all of America when this could be done upon the land without the devastating consequences you and your team are proposing for the ocean and the effective harvest of food for Americans. Shame on all of you for misrepresenting the needs of ocean platform energy when there is no need to place these systems in the ocean. Yes, there may be efficiency to the operations of wind farms in the ocean but there is no need when there is so much accessible area on the land and the mountains. I do believe that you will not be able to hide from your responsibility of proceeding with these projects even though you have so far avoided taking the responsibility for arguing to place them in the ocean where they are out of site and out of mind from those who think they are eye sores on the land - many of who will benefit from the monies generated from these systems.

It would be best if you argued to stop all of these projects which if moved forward could not in any way be understood by the fishermen until they would be completed. After completion, the fishermen then attempting to harvest from these areas would most probably find out that fishing would not be the same as before and the efficiencies of the wind in the ocean for the generation of power for those on land will have replaced the efficiencies of harvesting ocean based food for Americans, and fisheries will be delivered yet another 'hit' to our American fishing community.

Jobs for fishermen are a crucial part of our economy and if the wind farms eliminate even one 'job' from our economy based on harvesting the world's best natural protein, it would be wrong. In today's climate of loss of jobs from Covid 19, it is all to clear how precious every American job is to each and every one of us and to the success of the American culture as we want it to be.

We are a growing population with many hungry mouths and we are working hard to provide our food products for the growing population. This is more about food than anyone has mentioned so please take my comments to heart. If you have compelling reasons to move forward with your support other than a paycheck, please let me know the argument so I may better understand why you and so many others are continuing to promote what I feel are needless, misplaced, and socially damaging efforts to get energy out of the ocean while dismissing the needs of feeding Americans.

Monte Rome,

Intershell International Corp.
F/V Tom Slaughter
F/V Tom Slaughter II
F/V Tom slaughter III
F/V Bing Bing
F/V Hotate

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

July 31, 2020

Lt. Colonel David Park
District Engineer
Philadelphia District
U.S. Army Corps of Engineers
Wanamaker Building
100 Penn Square East
Philadelphia, PA 19107-3390

RE: Diamond State Port Corporation; CENAP-OP-R-2019-278

Dear Lt. Colonel Park:

Reference is made to Public Notice (PN) CENAP-OP-R-2019-278, dated July 30, 2020 (revised from original July 24, 2020 PN), which describes an application by Diamond State Port Corporation (DSPC), to develop a new, multi-use containerized cargo port facility ("Edgemoor Port Site") on the mainstem Delaware River in the New Castle County, Delaware. The facility will be associated with the Port of Wilmington and is located at the former Chemours manufacturing facility. The applicant is seeking your authorization for the following activities:

<u>Dredging and Dredged Material Disposal</u>

- To hydraulically dredge 3,325,000 cubic yards (cy) from 86.9 acres (3,785,364 square feet (ft.)) of the Delaware River to create a new access channel between the existing Delaware River Federal Navigation Channel and the proposed Edgemoor ship berth site.
    - The access channel would have a maintained depth of -45 feet (ft.) mean lower low water (MLLW). Current water depths range from intertidal to -35 ft. MLW including a 450 to 550 ft. wide subtidal flat with depths of -10 ft. MLW or less.
    - Following the initial dredging episode, it is anticipated that the access channel and berth site would require the maintenance removal of approximately 500,000 cy of accumulated sediment annually.

- To place approximately 10% of the initial dredged material into a single-use confined disposal facility (CDF) on the proposed port facility site for ultimate use as fill material on the site, including within the Delaware River.
    - This material, which, according to the applicant, is primarily sandy in texture and limited to sediments removed from Stratum B. The PN stated that Stratum B (fluvial sand) sediments contain PCBs, TEQ dioxin, arsenic, and thallium at concentrations above human health screening levels based on reported analytical testing results of samples.

- To dispose of the remainder of the dredged material from initial construction at one or all of several active Corps of Engineers-owned CDFs including: Wilmington Harbor North, Wilmington Harbor South, Reedy Point North and Reedy Point South, each of which is located in Delaware downstream of the dredging site.

Wharf and Bulkhead Construction

- Construction of an approximately 2600-foot long, pile-supported wharf and steel sheet pile retaining wall (bulkhead) along the landward side of the wharf structure. The bulkhead would be constructed largely within the river, below the elevation of HMW.
    - The bulkhead construction will result in the discharge of fill material into 5.5 acres (239,580 sf) of the Delaware River below the high tide line.
    - The 325,000 sf elevated wharf structure would be built water-ward of the new bulkhead, and would be constructed of poured concrete, supported by 4,500 twenty-inch diameter steel pipe pilings filled with concrete.

Sedimentation Fans

- Install 13 [anti] sedimentation fans along the riverfront face of the wharf spaced every 200 feet along the wharf face.
    - The sedimentation fans would operate four times per day during periods of tidal current (ebb and flood).
    - The effective sedimentation prevention distance covered by each unit is anticipated to be approximately 160 feet channel-ward from the breasting line of the berth.

Compensatory Mitigation

- The PN states that the applicant has determined that compensatory mitigation is not necessary.

Due to the complex nature of this proposed large, multifaceted infrastructure project, combined with the scope of the proposed impacts/activities and lack of site-specific data, National Environmental Policy Act (NEPA) documentation (e.g., Environmental Impact Statement or Environmental Assessment), EFH assessment, or other detailed analyses of the project impacts and alternatives, and the significant impacts to aquatic resources proposed, we request a 30-day extension to the comment period in accordance with the Section 404 Memorandum of Agreement between our agencies. We recommend the Philadelphia District provide the above-mentioned information as soon as practicable, so the required consultations and coordination on this project can be initiated.

As you are aware, this portion of the Delaware River is designated essential fish habitat (EFH) for a wide variety of federally managed species including Atlantic herring (*Clupea harengus*), bluefish (*Pomatomus saltatrix*), summer flounder (*Paralichthys dentatus*), Scup (*Stenotomus chrysops*), black sea bass (*Centropristis striata*), and windowpane flounder (*Scophthalmus aquosus*). Additionally, this portion of the Delaware River is important habitat for, and is used by, blueback herring (*Alosa aestivalis*), alewife (*Alosa pseudoharengus*), American shad (*Alosa sapidissima*), striped bass (*Morone saxatilis*), yellow perch (*Perca flavescens*), white perch (*Morone americana*), blue crab (*callinectes sapidus*), weakfish (*Cynoscion regalis*), hogchocker (*Trinectes maculatus*), black drum (*Pogonias cromis*), Atlantic croaker (*Micropogonias*

undulatus), Atlantic menhaden (*Brevoortia tyrannus)*, American eel (*Anguilla rostrata*), and others.

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) requires federal agencies to consult with one another on projects such as this that may adversely affect EFH and other aquatic resources. In turn, we must provide recommendations to conserve EFH. These recommendations may include measures to avoid, minimize, mitigate, or otherwise offset adverse effects on EFH resulting from actions or proposed actions authorized, funded, or undertaken by that agency. This process is guided by the requirements of our EFH regulation at 50 CFR 600.905, which mandates the preparation of EFH assessments and generally outlines each agency's obligations in this consultation procedure. We have not yet received an EFH assessment for the proposed action in order to initiate the required EFH consultation. Due to the nature and scope of this project, this consultation would be considered to be an expanded consultation pursuant to 50 CFR 600.920(i).

The Fish and Wildlife Coordination Act (FWCA), as amended in 1964, requires that all federal agencies consult with us when proposed actions might result in modifications to a natural stream or body of water. The FWCA also requires that federal agencies consider effects that these projects would have on fish and wildlife and must also provide for improvement of these resources. Under this authority, we work to protect, conserve and enhance species and habitats for a wide range of aquatic resources such as shellfish, diadromous species, and other commercially and recreationally important species. The information contained in the PN is not sufficient to initiate consultation with us under the FWCA.

The Endangered Species Act (ESA) requires federal agencies to ensure, in consultation with NMFS, that any action authorized, funded, or carried out by them is not likely to jeopardize species listed under the ESA or destroy or adversely modify critical habitat. ESA listed species under our jurisdiction that may be present within the action area are the Atlantic sturgeon (four endangered Distinct Population Segments (DPS) and one threatened DPS), endangered shortnose sturgeon, threatened Northwest Atlantic Ocean DPS of loggerhead, endangered Kemp's ridley, endangered leatherback sea turtles, endangered North Atlantic right whale, and the endangered fin whale. In addition, the project area includes designated critical habitat for the Atlantic sturgeon New York Bight DPS.

Based on the information previously provided to us as well as information in the Public Notice, proposed project activities may affect all listed species present within the action area. We highly recommend that you seek technical assistance and cooperation with our staff at an early stage of project development and before submitting a request for consultation. This will allow our agencies to effectively identify, and you to provide, all the information needed to initiate consultation as required by the ESA implementation regulations [50 CFR 402.14(c)].

At present, the PN and plans do not contain sufficient information to analyze the potential impacts and effects of the proposed project, including cumulative and synergistic effects. In addition, we are concerned that PN contains a number of unsupported and incorrect statements regarding the aquatic resources in the project area. In our February 28, 2019, letter we provided extensive comments on this project in response the NEPA scoping letter dated December 17, 2018, from the District's Planning Division. Our letter contained information on consultations,

resources under our purview, site-specific resources and habitat, and other information. A copy of this letter is attached. We have yet to see a response to these scoping comments or a draft NEPA document for the proposed project.

Additionally, on June 24, 2019, the project's consultant contacted us to request informal comments on their benthic and fisheries survey plan. We provided these comments which outlined a number of shortcomings and deficiencies in their survey plans on June 28, 2019. We have also not received any response to our comments on the proposed survey plans, nor have the results of these surveys been provided to us.

Because of the scope of the proposed project, the significant impacts to the Delaware River, and the lack of information addressing our comments on the NEPA scoping and aquatic resources surveys, we request that the current 30-day comment period which ends on September 1, 2020, be extended an additional 30 days to October 1, 2020 to allow your staff to provide the information necessary for us to evaluate the impacts of the proposed project on our resources. Included in this information should be a full and complete EFH assessment, a detailed analysis of project alternatives and minimization measures and a compensatory mitigation plan to offset all unavoidable impacts to the aquatic resources of the Delaware River, including the loss of the subtidal flats due to the proposed dredging and filling. Should you have any questions or wish to discuss this matter further, please contact Keith Hanson at (410) 573-4559 or keith.hanson@noaa.gov with our Habitat Conservation Division and/or Peter Johnsen at (978) 281-9416 or peter.b.johnsen@noaa.gov with our Protected Resources Division.

Sincerely,

Louis A. Chiarella
Assistant Regional Administrator
for Habitat Conservation

cc: USACE - T. Schaible
GARFO APSD - G. Power, J. O'Connor, J. Pellegrino
USFWS - C. Guy, J. Thompson
EPA Region III - J. Davis, A. Blair
MAFMC - C Moore
NEFMC -T. Nies
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UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
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FEB 28 2019

Peter Blum, Chief
Planning Division
Philadelphia District
U.S. Army Corps of Engineers
Wanamaker Building
100 Penn Square East
Philadelphia, PA 19107-3390

RE: NEPA Scoping – Edgemoor Shipping Container Port Facility along the Delaware River, New Castle County, Delaware

Dear Mr. Blum:

We have reviewed the information provided in your National Environmental Policy Act (NEPA) Scoping letter dated December 17, 2018, for the construction of Diamond State Port Corporation's (Applicant) proposed Edgemoor shipping container port facility along the Delaware River in New Castle County, Delaware (Edgemoor Site). Due to the lapse in appropriations for Fiscal Year 2019 and resulting closure of our office, we did not receive your letter until January 29, 2019. The Applicant intends to apply for a Clean Water Act Section 404 permit, and a Rivers and Harbors Act Section 10 permit for an alternative identified in the Applicant's Master Plan. The Applicant's preferred alternative includes deepening portions of the Delaware River adjacent to the federal navigation channel at the Edgemoor Site, formerly occupied by the Chemours (DuPont) Edgemoor Plant, to create a primary access channel that will serve the proposed berth construction at the site. The proposed new entrance channel and berth area would be constructed by excavating the riverbank between the existing shoreline and federal navigation channel in the Delaware River to depths between 38 and 45 feet below MLLW. A new wharf of unknown size will also be constructed along the shoreline and over the water to support large container cranes. The estimated area proposed to be dredged is 85.7 acres, while the estimated area of wetland impacts for a proposed terminal bulkhead is 5.3 acres; the area of wharf impact is currently unknown.

The U.S. Army Corps of Engineers, Philadelphia District, Planning Division (ACOE), is acting as a neutral party on this non-federal project proposal in order to gather information and assist with coordination on potential impacts in accordance with NEPA. Any alternatives analysis will be presented in the NEPA report and will use a tiered approach to evaluate: (1) physical location; (2) dredging depth; and (3) dredge material storage. This approach will be dependent on two scenarios: (a) expanding operations at the Port of Wilmington's current location, or (b) expansion and development of a new multiple-user marine terminal on the Delaware River. At present, six (6) alternatives have been outlined for the physical location, three (3) alternatives for dredged material disposal, and the Applicant is currently evaluating a range of proposed dredging depths between 38 and 45 feet below Mean Lower Low Water (MLLW).

The Applicant is requesting that you determine the federal interest for the Assumption of Maintenance of non-federal sponsor improvements for the primary harbor access channel (under Section 204(f) of the Water Resources Development Act of 1986 [WRDA]). Approval of the proposed project by the Assistant Secretary of the Army – Civil Works, in accordance with WRDA, would authorize future maintenance of the proposed entrance channel as a federal responsibility. Recurrent dredging is expected to maintain the new entrance channel and berth area for port operation.

The stated purpose of the proposed project is to modernize Delaware's international waterborne trade capabilities and meet the rising demand for modern containerized ports as a consequence of the completion of the Panama Canal Lock Expansion. According to the Applicant, the proposed project is anticipated to attract new containerized shipping commerce to the region rather than displace existing container operations, resulting in economic expansion. New Panamax vessels are approximately 1,200 feet in length, 161 feet in width, and draft approximately 50 feet. Initial plans for the proposed port facility include the capability to berth two New Panamax container ships simultaneously.

You are requesting our input on potential resource issues related to the proposed project. To assist you in the development of a NEPA document and to assess the impacts of the proposed project, we offer you the following comments pursuant to our authorities under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), Fish and Wildlife Coordination Act (FWCA), and Endangered Species Act (ESA).

MAGNUSON STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT (MSA)

The main stem Delaware River has been designated essential fish habitat (EFH) for a variety of fish managed by the New England Fishery Management Council (NEFMC) and Mid-Atlantic Fishery Management Council (MAFMC) because these areas provide feeding, resting, nursery, and staging habitat for a variety of commercially, recreationally, and ecologically important species. Various life stages of species for which EFH has been designated in the area of the proposed project include, but are not limited to, Atlantic butterfish (*Peprilus triacanthus*), bluefish (*Pomatomus saltatrix*), black sea bass (*Centropristis striata*), summer flounder (*Paralichthys dentatus*), windowpane flounder (*Scophthalmus aquosus*), and Atlantic herring (*Clupea harengus*).

The Delaware River is also important habitat for anadromous fish such as alewife *(Alosa pseudoharengus*), blueback herring (*Alosa aestivalis*), and American shad (*Alosa sapidissima*), which use the Delaware River including the areas in and around the proposed project site as migratory, nursery, resting, and foraging habitat. These *Alosa* species have complex lifecycles where individuals spend most of their lives at sea then migrate great distances to return to freshwater rivers to spawn. American shad (stocks north of Cape Hatteras, N.C.), alewife, and blueback herring are believed to be repeat spawners, generally returning to their natal rivers to spawn (Collette and Klein-MacPhee 2002). These fish are important forage for several federally managed species, providing trophic linkages between inshore and offshore systems. Buckel and Conover (1997) in Fahey et al. (1999) reports that diet items of juvenile bluefish include *Alosa*

species such as these. Additionally, juvenile *Alosa* species have all been identified as prey species for windowpane and summer flounder in Steimle et al. (2000). The specific area of the proposed project exhibits high relative abundance of diadromous fish species, including alewife and blueback herring (ENTRIX, Inc. 2002). This area is also important for fisheries and their prey as it demarcates the boundary between the mesohaline and oligohaline zones of the river.

In the Mid-Atlantic, landings of alewife and blueback herring, collectively known as river herring, have declined dramatically since the mid-1960s and have remained very low in recent years (ASFMC 2007). Because landing statistics and the number of fish observed on annual spawning runs indicate a drastic decline in alewife and blueback herring populations throughout much of their range since the mid-1960s, river herring have been designated as Species of Concern by NOAA. Species of Concern are those about which we have concerns regarding their status and threats, but for which insufficient information is available to indicate a need to list the species under the ESA. We wish to draw proactive attention and conservation action to these species.

The 2012 river herring benchmark stock assessment found that of the 52 stocks of alewife and blueback herring assessed, 23 were depleted relative to historic levels, one was increasing, and the status of 28 stocks could not be determined because the time-series of available data was too short. The "depleted" determination was used instead of "overfished" to indicate factors besides fishing have contributed to the decline, including habitat loss, habitat degradation and modification, and climate change. Increases in turbidity due to the resuspension of sediments into the water column during construction can degrade water quality, lower dissolved oxygen levels, and potentially release chemical contaminants bound to the fine- grained estuarine/marine sediments. Suspended sediment can also mask pheromones used by migratory fishes to reach their spawning grounds and impede their migration and can smother immobile benthic organisms and demersal newly-settle juvenile fish (Auld and Schubel 1978; Breitburg 1988; Newcombe and MacDonald 1991; Burton 1993; Nelson and Wheeler 1997). Noise from the construction activities, such as wharf construction, may also result in adverse effects. Our concerns about noise effects come from an increased awareness that high-intensity sounds have the potential to adversely impact aquatic vertebrates (Fletcher and Busnel 1978; Kryter 1984; Popper 2003; Popper et al. 2004). Effects may include (a) lethal and non-lethal damage to body tissues, (b) physiological effects including changes in stress hormones or hearing capabilities, or (c) changes in behavior (Popper et al. 2004).

Understanding how the riverine environment and the geomorphic features (e.g., shoreline, nearshore wetlands, and flats) associated with it function to provide habitat is the product of complex interactions between biological processes and physical factors. There is potential for significant short-term and long-term physical, biological, and chemical impacts from dredging, filling, and modifying habitat in the Delaware River. Potential impacts caused by dredging and filling include physical removal of benthic faunal communities and disturbance of foraging, nursery, and migratory habitat for fish and invertebrates. Dredging and filling can also affect benthic communities by altering sediment transport characteristics, sediment texture, depth and vertical relief, and overall community structure. Systematic disturbances such as repeated dredging and high-energy propeller wash may result in cumulative and chronic changes in habitat quantity and quality.

Consultation
The MSA requires federal agencies, such as the ACOE, to consult with us on any action or proposed action authorized, funded, or undertaken, by such agency that may adversely affect EFH identified under the MSA. This process is guided by the requirements of our EFH regulation at 50 CFR 600.905, which mandates the preparation of EFH assessments and generally outlines each agency's obligations in the consultation process. The level of detail in an EFH assessment should be commensurate with the complexity and magnitude of the potential adverse effects of the action.

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

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

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

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

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

Our EFH regulations also allow EFH consultations, including abbreviated and expanded consultations to be combined with existing procedures required by other statutes, such as NEPA if such processes meet, or are modified to meet, certain criteria. The existing process must provide us with timely notification of actions that may adversely affect EFH. Whenever possible, we should have at least 60 days' notice prior to a final decision on an action, or at least 90 days if the action would result in substantial adverse impacts.

If an EFH assessment is contained in another document, such as a draft NEPA document, it must be clearly identified as an EFH assessment and include all of the following mandatory elements

including: (i) a description of the action, (ii) and analysis of the potential adverse effects of the action on EFH and the managed species, (iii) the federal agency's conclusions regarding the effects of the action on EFH, and (iv) proposed mitigation, if applicable. If appropriate, the assessment should also contain additional information, including: (i) the results of an on-site inspection to evaluate the habitat and the site specific effects of the project, (ii) the views of recognized experts on the habitat or species that may be affected, (iii) a review of pertinent literature and related information, (iv) an analysis of alternatives to the action. Such analysis should include alternatives that could avoid or minimize adverse effects on EFH, and (v) other relevant information.

As part of the NEPA process, a comprehensive EFH assessment should be prepared to address the direct, indirect, individual, cumulative, and synergistic effects of the proposed project on EFH, federally managed species and their prey. To fully evaluate the proposed project, information regarding the location, type, quantity, frequency, magnitude, and duration of impacts will be necessary as well as biological information characterizing the distribution, abundance, biomass, production and diversity of fish and their prey (including benthic invertebrates).

Additionally, fishery-independent surveys that include a combination of active sampling (e.g., trawling) and passive sampling (e.g., acoustic technologies) should be used to fully characterize species use of the area. Sampling should occur throughout the year to evaluate temporal differences in biological communities. Fishery-dependent surveys may also be useful for evaluating project effects. Furthermore, thorough analyses of each alternative, as well as the individual components of each alternative should be undertaken to fully evaluate the potential impacts of the proposed project. Impacts to aquatic resources should be avoided to the maximum extent practicable and compensatory mitigation should be provided to offset unavoidable adverse effects. Avoidance and minimization measures and compensatory mitigation should be clearly described in the EFH assessment.

For a listing of EFH and further information, please see our website at: http://www.greateratlantic.fisheries.noaa.gov/habitat. The website also contains information on descriptions of EFH for each species, guidance on the EFH consultation process including EFH assessments, and information relevant to our other mandates.

FISH AND WILDLIFE COORDINATION ACT (FWCA)

The Fish and Wildlife Coordination Act, as amended in 1964, requires that all federal agencies consult with us when proposed actions might result in modifications to a natural stream or body of water. It also required that they consider effects that these projects would have on fish and wildlife and must also provide for improvement of these resources. Under this authority, we work to protect, conserve and enhance species and habitats for a wide range of aquatic resources such as shellfish, diadromous species, and other commercially and recreationally important species that are not managed by the federal fishery management councils and do not have designated EFH. The Delaware River serves as important habitat for many aquatic species and their forage including striped bass (*Morone saxatilis*), blue crab (*Callinectes sapidus*), Atlantic menhaden (*Brevoortia tyrannus*), American eel (*Anguilla rostrata*), bay anchovy (*Anchoa*

mitchilli), hickory shad (*Alosa mediocris*), Atlantic croaker *(Micropogonias undulatus)* and other assorted baitfishes and shrimps.

The section of the Delaware River where the project is proposed is used by a wide variety of resources of concern to us. The New Jersey Department of Environmental Protection (NJDEP) has conducted fish sampling in the Delaware River, including the portion of the river near the project area since 1980. This long-term survey documents the use of this section of the river by a wide variety of species including blueback herring, alewife, American shad, American eel, Atlantic herring, Atlantic menhaden, bay anchovy, gizzard shad (*Dorosoma cepedianum*), hogchoker (*Trinectes maculatus*), striped bass, yellow perch (*Perca flavescens*), white perch (*Morone americana*), Atlantic silverside (*Menidia menidia*), and many others (NJDEP 2010). Weisberg *et al.* (1996) captured more than 25 different species near the area of the proposed project in the Delaware River including yellow perch, hickory shad, hogchoker, banded killifish (*Fundulus diaphanus*) and mummichog (*Fundulus heteroclitus*). Studies done by VERSAR, Inc. (Weisberg *et al.* 1990) determined that striped bass eggs and larvae were most abundant near Wilmington, DE.

Impingement studies done at the Eddystone power plant located on the Pennsylvania side of the Delaware River near the project site identified 53 species of fish in this section of the river including alewife, American eel, American shad, Atlantic menhaden, bay anchovy, blueback herring, gizzard shad, hogchoker, spot, striped bass and white perch (Waterfield et al. 2008). Additionally, trawl, ichthyoplankton, and impingement/entrainment studies were conducted at the specific area of the proposed project from 1999 to 2001 for the Edgemoor Power Plant operated by Conectiv (ENTRIX, Inc. 2002). ENTRIX, Inc. (2002) identified over 40 species in this section of the river, with Atlantic croaker, bay anchovy, and hogchocker dominating trawl surveys, striped bass dominating all ichthyoplankton surveys, and river herring and striped bass dominating entrainment surveys. Striped bass and river herring appear to favor the shoreline and nearshore area near the Edgemoor Site (ENTRIX, Inc. 2002).

The area of the proposed project is regionally significant for striped bass because of its importance as spawning, nursery, foraging, and resting habitat. Striped bass are not only a commercially and recreationally important species, but are strongly tied to the cultural heritage of the eastern U.S. The spawning migration of resident and coastal contingents moving upriver to the freshwater reaches of the Delaware River occurs in the spring. Late larvae and early juveniles favor shallower water with slower currents, and likely reside in nearshore areas for increased feeding opportunities and reduced predation risk. Juveniles subsequently move downstream to overwinter in the lower Delaware River and Delaware Bay. Additionally, the proposed project is adjacent to the Cherry Island Flats, a geomorphic feature where gravid females aggregate and various other life stages of striped bass use as nursery, foraging, and resting habitat; the Flats are considered a hot spot for all life stages of striped bass (personal communication with Delaware DNREC fisheries biologists).

Flats (shoal) habitat is defined by such factors as exposure, sediment texture, depth, and rugosity. Flats are also generally characterized by high fish production, high benthic faunal density, and species diversity; dense aggregations of fish are supported by local primary production. Benthic invertebrate communities can be highly diverse and productive despite natural disturbance

regimes. Infaunal species provide important trophic linkages coupling benthic-pelagic ecosystems. Potential changes to the physical, biological, or chemical elements of the Cherry Island Flats from the proposed project may result in widespread and unanticipated adverse impacts to the habitat.

Catadromous American eels spawn in the Sargasso Sea and transit the Delaware River as elvers to migrate to freshwater tributaries within Delaware River watershed. They inhabit these freshwater areas until they return to the sea as adults. According to the 2012 benchmark stock assessment, the American eel population is depleted in U.S. waters. The stock is at or near historically low levels due to a combination of historical overfishing, habitat loss, food web alterations, predation, turbine mortality, environmental changes, exposure to toxins and contaminants, and disease (ASMFC 2012). Actions being considered as part of the proposed project may impede the movements of these species between important freshwater habitats and the Atlantic Ocean in a number of ways including altering hydrologic conditions such as velocity and flow patterns, as well as changing water quality.

Submerged Aquatic Vegetation

The area of the proposed project may also include submerged aquatic vegetation (SAV) habitat. 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). Several species have been observed throughout the tidal Delaware River since 1970, including: *Vallisneria americana, Myriophyllum spicatum, Elodea nuttallii, Najas flexillis, Potamogeton sp.* and others (Schuyler 1988). Since 2017, the U.S. Environmental Protection Agency (USEPA) has surveyed portions of the tidal Delaware River and found expansive SAV beds, with many of the same species documented by Schuyler (1988) [preliminary USEPA data]. Wild celery (*Vallisneria americana*) appears to be one of the most abundant SAV species in the Delaware River and its tributaries, as it is routinely encountered by researchers and the public (preliminary USEPA data and personal communication with USEPA). SAV provides valuable nursery, forage and refuge habitat for a variety of migratory and forage fish species including striped bass, American shad, alewife, and blueback herring. It is also an important food source for waterfowl. In addition, the USEPA has designated SAV as a special aquatic site under Section 404(b)(1) of the federal CWA, due to its important role in the marine ecosystem for nesting, spawning, nursery cover, and forage areas for fish and wildlife. Surveys for SAV should be conducted in and around the site of the proposed project between June 1 and October 15 of any year. Surveys should be conducted in any area proposed to be dredged, filled, or covered (with an over-water structure) and adjacent areas that may be affected by turbidity, sedimentation or other impacts extending beyond the primary project footprint.

Wetlands

While much of the wetland fill proposed may occur within a confined dredged material disposal facility (CDF), numerous acres of tidal wetlands could be filled as part of the proposed project. Tidal wetlands provide nursery and forage habitat for a variety of species including alewife, Atlantic croaker, Atlantic menhaden, spot (*Leiostomus xanthurus*), striped bass, as well as federally managed bluefish and summer flounder (Graff and Middleton undated). Important forage species such as mummichog, Atlantic silverside (*Menidia menidia*), inland silverside (*Menidia beryllina*), killifish (*Fundulus sp.*), and bay anchovy also use these areas. Mummichog, killifish, anchovies and other small fish and benthic organisms found in estuarine wetlands provide a valuable food source for many of the commercially and recreationally valuable species mentioned above including striped bass, summer flounder, weakfish, red hake (*Urophycis chuss*), scup (*Stenotomus chrysops*) and windowpane flounder (Steimle et al. 2000).

Wetlands also provide many other important ecological functions and services to society including fish and wildlife habitat, food chain support, surface water retention or detention, groundwater recharge, and nutrient transformation, sediment retention and atmospheric equilibrium. The primary production in wetlands forms the base of the food web that supports insects and forage fish that are then prey species for larger fish such as bluefish, summer flounder and other species that have been documented in the marsh creeks surrounding the project site. The water quality services provided by these wetlands retain nutrients, sediments and contaminants and improve water quality. Wetlands may also help to moderate global climate change through carbon storage within the plant communities and soil. The loss of wetlands as a result of this project can adversely affect federally managed species and other species of concern to us though the reduction in prey species and primary production, as well as water quality degradation from the reduction in sediment retention and pollution filtration.

ENDANGERED SPECIES ACT

The ESA requires federal agencies (in this case, the ACOE) to ensure, in consultation with NMFS, that any action authorized, funded, or carried out by them is not likely to jeopardize species listed under the ESA or destroy or adversely modify critical habitat. Depending on the final alternative selected and as project details become finalized, an interagency consultation, pursuant to section 7 of the ESA, may be necessary. If you determine that the proposed project is not likely to adversely affect listed species under our jurisdiction, then you need to request concurrence from us with your determination. If you determine that the proposed project is likely to adversely affect listed species under our jurisdiction, then a formal consultation will be required.

It is important to note that in the regulations implementing Section 7(a)(2) of the ESA (interagency consultation), "effects of the action" are the direct and indirect effects of the action, plus the effects of any interrelated or interdependent activities. Interrelated activities are activities that are part of the proposed action and depend on the proposed action for their justification. Interdependent activities are activities that have no independent utility apart from the action under consideration. Such activities would be those that would not occur "but for" the proposed action under consultation.

In recognition of this, a consultation needs to fully consider all effects of the action on listed species, which include effects on listed species from the construction of the terminal and the activities related to the future operation of the terminal, including associated vessel traffic. While all construction activities and future operation of the facilities such as long-term vessel use of the new facility may not be under your jurisdiction, they are effects of the action that need to be analyzed if they would not occur "but for" the action and are reasonably certain to occur.

Overall, to ensure ESA consultation is completed in a timely manner, we recommend that the lead federal action agency develop a biological assessment (BA) that includes: 1) a thorough analysis and deconstruction of the proposed project into its individual components that includes all activities related to the construction as well as long-term operation of the facility; 2) a description of the action area that encompasses direct and indirect effects from all stressors from the proposed project, including interrelated and interdependent actions; 3) a full description and status of all life stages of ESA-listed species that may be present in the action area; 4) a thorough consideration of the baseline that includes all current activities that affect ESA-listed species; and 5) an effects analysis that evaluates the impacts of all stressors, including those from interrelated and interdependent activities, on each species, their life stages, and critical habitat that are present in the action area. Further, a biological assessment should include any known, unrelated future non-federal activities (cumulative effects) reasonably certain to occur within the action area that are likely to affect ESA-listed species. Information about the ESA interagency consultation process, tools to evaluate effects, and suggested avoidance and minimization measures can be found on our GARFO website[1].

Project Activities and Action Area

During an interagency consultation under section 7(a)(2) of the Act, the lead federal agency in coordination with us will evaluate the effects of a proposed project within the action area. The action area is defined in 50 CFR § 402.02 as "all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action." It also includes the areas to be affected by interrelated and interdependent activities. Here we discuss the activities and their associated stressors that should be considered in determining the action area for the proposed project. Since the project is in the early stages of planning, the activities addressed below may not include all proposed activities. Therefore, effects to listed species from other activities than those addressed here may have to be consider when determining the action area. Based on the information provided, the construction of the terminal includes demolition of existing structures, riverbank excavation, deepening of the berth area and entrance channel, transport and deposition of dredged materials, construction of structures, and grading of upland areas. In-water construction activities are expected to include the use of a dredge to remove sediment, driving of piles, and the movement and transit of project vessels. The proposed project also includes development of facilities for the handling, storage, logistics, and landward transport of cargo. While the construction of landward components of the terminal are not under your jurisdiction, the landward components of the terminal construction should be considered for potential pathways of stressors that would affect ESA-listed species under our jurisdiction. Potential activities include, but are not limited to, excavation and grading of the terminal site, waste and stormwater discharge, the construction and subsequent presence of a cut-off wall, removal of riparian vegetation, and any loss of tidal wetlands. Effects of these activities needs to

[1]NOAA Fisheries: https://www.greateratlantic.fisheries.noaa.gov/protected/section7/index.html

be considered when determining the effects and the action area. Thus, the area that will be dredged, the extent of turbidity plumes, the distance that sound travels during pile driving, the route of project vessels to and from disposal sites, and the route of project vessels to and from their point of origin will all determine the size and shape of the action area.

In addition to construction activities, the proposed project includes port operations for containerized shipping commerce. Activities related to the operation of the facility include but may not be limited to the management and discharge of stormwater, dredging to maintain river depth at the berth and entrance channel, vessel maneuvers and movements in the entrance channel and berth, and transit of container vessels to and from the port. Effects of these activities needs to be considered in determining the action area.

The applicant states that the new terminal is expected to attract new container commerce rather than displacing existing commerce. The terminal is intended to accommodate two New Panamax container ships simultaneously. Thus, the transit and movement of the vessels in the Delaware River, Delaware Bay, and offshore may be vessel activities that would not occur but for the proposed project. Vessel traffic is known to interact with ESA-listed sturgeon, sea turtles, and whales (Barco et al. 2016, Brown and Murphy 2010, Damon-Randall et al. 2017, Singel et al. 2003). Further, vessel traffic and navigation can negatively affect habitat (Gabel et al. 2017, PIANC 2008). Therefore, a consultation will need to analyze effects of container vessel activity to ESA-listed species under our jurisdiction and to Atlantic sturgeon critical habitat. To the extent effects are reasonably certain to occur, the transit routes and movements of the vessels that are expected to call at the proposed terminal should be used in determining the action area.

We look forward to assisting you with the development of the project description and defining the action area as well as collaborating with you to determine how best to appropriately analyze effects for this action.

ESA-Listed Species Presence in the Action Area

Currently the project is in the early stage of planning and, as part of the NEPA process, you and the applicant are evaluating several alternatives. Consequently, the action area has not been defined. Below, we provide information on presence of species within an action area based on the preferred alternative.

In your request for comments on the proposed project you incorrectly stated that "the entire Delaware River has been declared critical habitat for Atlantic sturgeon and shortnose sturgeon." However, critical habitat has not been designated for shortnose sturgeon. Critical habitat was designated for Atlantic sturgeon in 2017 (82 FR 39160), including for the Atlantic sturgeon New York Bight (NYB) Distinct Population Segment (DPS), which includes Atlantic sturgeon originating from the Delaware River. While a large portion of the Delaware River was designated as critical habitat for the NYB DPS, it is not correct that the entire Delaware River is designated as critical habitat (see below). Further, your assessment failed to include several other listed species that the proposed project may affect. Please note that we have developed an online web application (ESA Section 7 Mapper) where you can access data layers that represent our best estimate of the spatial and temporal range of listed species' life stages and critical habitat

in our region. The Section 7 Mapper can be accessed from our website[2] and is a convenient tool that can be used to generate a report for the presence of species and life stages within an area.

Below we provide a list of species and their various life stages that are present in the lower Delaware River, within the Delaware Bay, and in coastal areas offshore of New Jersey and Delaware. We also provide information about presence of critical habitat for Atlantic sturgeon. Please, note that our comments are limited to the presence of species and do not include the detailed information about biology, behavior, and habitat use that may be needed to properly analyze effects on each species and their life stages.

The following protected species and critical habitat may be affected by the proposed project:

Fish

- Shortnose Sturgeon (*Acipenser brevirostrum*) (32 FR 4001; Recovery plan: NMFS 1998)
- Atlantic Sturgeon (*Acipenser oxyrinchus oxyrinchus*) (77 FR 5880 and 77 FR 5914)

Sea Turtles

- Kemp's Ridley Turtle (*Lepidochelys kempii*) (35 FR 18319; Recovery plan: NMFS et al. 2011)
- Leatherback Turtle (*Dermochelys coriacea*) (35 FR 849; Recovery plan: NMFS & USFWS 1992)
- Loggerhead Turtle (*Caretta caretta*) (76 FR 58868; Recovery plan: NMFS & USFWS 2008)
- Green Turtle (*Chelonia mydas*) (81 FR 20057; Recovery plan: NMFS & USFWS 1991)

Whales

- North Atlantic Right Whale (*Eubalaena glacialis*) (73 FR 12024; Recovery plan: NMFS 2005)
- Fin Whale (*Balaenoptera physalus*) (35 FR 18319; Recovery plan: NMFS 2010)

Critical Habitat

- Critical habitat of Atlantic Sturgeon (82 FR 39160)

Shortnose sturgeon

The federally endangered shortnose sturgeon occurs in the Delaware River from the lower Delaware Bay upstream to at least Lambertville, New Jersey (RKM 238, RM 148). The shortnose sturgeon are benthic invertivores. Young-of-year (YOY) feed on amphipods and dipteran larvae found in drift and mud substrate. Juveniles and adults feed on benthic insects, crustaceans, mollusks, and polychaetes (SSSRT 2010). Adult shortnose sturgeon may also forage on small benthic fishes.

In the Delaware River, movement to the spawning grounds occurs in early spring, typically, in late March, with spawning occurring through early May. Larvae have been collected and spawning is believed to occur in the area between Scudders Falls and the Trenton rapids (RKM

[2] https://www.greateratlantic.fisheries.noaa.gov/protected/section7/listing/index.html

214-224; RM 133-139) (ERC 2007). Hatchlings may seek cover in the gravel at the spawning site and larvae are expected to remain in the spawning area (Kynard and Horgan 2002). Young-of-year may move downstream to areas above the salt front and can therefore occur in the lower Delaware River including the areas in and around the proposed project site.

Juveniles migrate downstream where they move back and forth in the low salinity portion of the salt wedge during summer. In the Delaware River, the oligohaline/freshwater interface can range from as far south as Artificial Island (RKM 87, RM 54) north to the Schuylkill River (RKM 142, RM 92). Juvenile shortnose sturgeon are known to occur year round at and downstream of the site of the proposed project (Brundage and O'Herron 2009, ERC 2016, 2017, 2018).

After spawning, adult shortnose sturgeon migrate rapidly downstream to the lower Delaware River. By the time water temperatures have reached 10°C, typically by mid-November, most adult sturgeon have returned to the overwintering grounds in the Roebling (RKM 200, RM 124), Bordentown (RKM 208, RM 129), or Trenton reaches (RKM 214, RM 133), but may overwinter as far downstream as Wilmington (RKM 116, RM 72) (Environmental Research and Consulting 2016, O'Herron et al. 1993).

Thus, both juvenile and adult shortnose sturgeon occur year round at the site or the proposed project and in the downstream reaches. The lower Delaware River provides important foraging and overwintering habitat. Based on spawning occurring over 100 RKM upstream of the project site and the behavior of larvae, shortnose sturgeon eggs and larvae do not occur at the site of the proposed project.

Atlantic Sturgeon

The Atlantic sturgeon originating from the New York Bight, Chesapeake Bay, South Atlantic and Carolina Distinct Population Segments (DPS) are listed as endangered, while the Gulf of Maine DPS is listed as threatened. The marine range of all five DPSs extends along the Atlantic coast from Canada to Cape Canaveral, Florida; therefore, the Atlantic sturgeon originating from any of the five DPSs may be present in the Delaware River.

The Atlantic sturgeon are omnivorous benthic feeders that draw food into a ventrally located protrusible mouth. The diet of adult and subadult Atlantic sturgeon includes benthic invertebrates such as worms (Oligo- and Polychaeta), mollusks, crustaceans (incl. amphipods, decapods and isopods), gastropods and occasionally fish (ASSRT 2007, Guilbard et al. 2007, Savoy 2007). Juveniles also feed on aquatic insects and aquatic life stages of terrestrial insects, such as chironomidae larvae (ASSRT 2007).

In the Delaware River, Atlantic sturgeon occur from the mouth of the Delaware Bay to the fall line near Trenton, NJ (ASSRT 2007, Simpson 2008). Spawning migrations are believed to occur from April and into July and spawning to occur over hard bottom substrate. Atlantic sturgeon spawning could occur where spawning habitat features are present from Marcus Hook Bar (~RKM 125) to the fall line at Trenton, NJ (~RKM 213.5) (Breece et al. 2013, Simpson 2008).

Sturgeon eggs are highly adhesive and are deposited on the bottom substrate, usually on hard surfaces (e.g., cobble) (Gilbert 1989, Smith and Clugston 1997). Hatchlings (yolk sac larvae) seek refuge among coarse bottom substrate. Once the yolk is exhausted, the post yolk sac larvae

are believed to move downstream to rearing grounds in freshwater areas upstream of the salt front (Kynard and Horgan 2002). The larvae do not tolerate saline water.

Rearing of YOY and juveniles occur upstream of the salt water front and in increasingly saline waters as they grow. In the Delaware River, juvenile rearing concentration areas exist from the New Castle Range to upstream of Philadelphia, PA (Calvo et al. 2010, ERC 2018, Fisher 2011).

Young remain within their natal river/estuary for periods of approximately one to six years before emigrating to the open ocean as subadults (ASSRT 2007, Smith 1985). After emigration from the natal river/estuary, subadults and adult Atlantic sturgeon travel within the marine environment, using coastal bays, sounds, and ocean waters and may enter estuaries and rivers other than their natal rives (Collins and Smith 1997, Dunton et al. 2010, Erickson et al. 2011, Laney et al. 2007, Murawski and Pacheco 1977).

Atlantic sturgeon are commonly found off the coast of New Jersey where they are generally found at depths of less than 40 meters with most captures at depths of 20 meters or less (Dunton et al. 2015, Dunton et al. 2010, Erickson et al. 2011). Aggregations and large presence of sturgeon from Long Island to Virginia during winter months indicates that the New York Bight is an important overwintering area (Dunton et al. 2010). Two concentration areas have been identified along the New Jersey coast; one of these is located at the Delaware Bay mouth (Breece et al. 2018, Dunton et al. 2010, Erickson et al. 2011, Stein et al. 2004).

Based on the above information, all life stages of Atlantic sturgeon are found at the project area. The project site and extending down the Delaware River to its mouth with the bay is an important area for juvenile foraging and physiological development and is used for foraging by subadults. It is also a migration corridor for adults during spawning. Adult and subadult individuals are present year round in the Delaware Bay and the Bay mouth; high concentrations are present from fall through spring just within and oceanward of the Bay mouth.

Critical Habitat for Atlantic Sturgeon

On August 17, 2017, we issued a final rule to designate critical habitat for the threatened Gulf of Maine DPS of Atlantic sturgeon, the endangered New York Bight DPS of Atlantic sturgeon, the endangered Chesapeake Bay DPS of Atlantic sturgeon, the endangered Carolina DPS of Atlantic sturgeon, and the endangered South Atlantic DPS of Atlantic sturgeon (82 FR 39160). The rule was effective on September 18, 2017.

Critical habitat in Delaware River for the New York Bight Atlantic sturgeon DPS includes the river main stem from the Trenton-Morrisville Route 1 Toll Bridge (RKM 214.6, RM 133) to where the main stem of the river discharge into Delaware Bay (RKM 77.6, RM 48). Thus, the project area overlaps with the Delaware River critical habitat unit designated for the New York Bight DPS.

As identified in the final rule, the biological and physical features (PBF) that are essential to the conservation of the species and that may require special management considerations or protection are:

1) Hard bottom substrate (e.g., rock, cobble, gravel, limestone, boulder, etc.) in low salinity waters (i.e., 0.0 to 0.5 parts per thousand (ppt) range) for settlement of fertilized eggs, refuge, growth, and development of early life stages;
2) Aquatic habitat with a gradual downstream salinity gradient of 0.5 up to as high as 30 ppt and soft substrate (e.g., sand, mud) between the river mouth and spawning sites for juvenile foraging and physiological development; 3)
3) Water of appropriate depth and absent physical barriers to passage (e.g., locks, dams, thermal plumes, turbidity, sound, reservoirs, gear, etc.) between the river mouth and spawning sites necessary to support:
    i) Unimpeded movement of adults to and from spawning sites;
    ii) Seasonal and physiologically dependent movement of juvenile Atlantic sturgeon to appropriate salinity zones within the river estuary; and
    iii) Staging, resting, or holding of subadults or spawning condition adults. Water depths in main river channels must also be deep enough (e.g., at least 1.2 m) to ensure continuous flow in the main channel at all times when any sturgeon life stage would be in the river.
4) Water, between the river mouth and spawning sites, especially in the bottom meter of the water column, with the temperature, salinity, and oxygen values that, combined, support:
    i) Spawning;
    ii) Annual and interannual adult, subadult, larval, and juvenile survival; and
    iii) Larval, juvenile, and subadult growth, development, and recruitment (e.g.,13 °C to 26 °C for spawning habitat and no more than 30 °C for juvenile rearing habitat, and 6 milligrams per liter (mg/L) dissolved oxygen (DO) or greater for juvenile rearing habitat).

The Delaware River Basin Commission (DRBC) identifies RKM 107.8 (approximately RM 67) as the lower part of the median range for the salt front (defined as 0.25 ppt). It is reasonable to use the furthest downstream extent of the median range of the location of the salt front (0.25 ppt) as a proxy for the downstream border of PBF 1 in the Delaware River. This because the salinity near the salt front is dynamic and the area where there would be a difference in salinity between 0.25 and 0.5 ppt is very small. Consequently, we consider the area upstream of RKM 107.8 to have salinity levels consistent with the requirements of PBF 1. The river channel adjacent to the proposed Edgemoor site may consist of hard bottom substrate [3]. Based on the physical and biological features of the river, PBF 1,3, and 4 are present adjacent to and upstream of the project site and PBF 2, 3, and 4 in the river downstream from the project site to the mouth of the Delaware River.

Sea Turtles

There are four listed turtle species that may occur within New Jersey state coastal waterways and the Delaware Bay from late spring to mid-fall. The four listed species include the federally threatened Northwest Atlantic Ocean DPS of loggerhead, endangered Kemp's ridley, endangered leatherback, and threatened North Atlantic DPS green sea turtle.

[3] https://erma.noaa.gov/atlantic/erma.html#/layers=1+814+17307+1073+1252&x=-75.50481&y=39.74258&z=14&panel=layer

The functional ecology of sea turtles in the marine and/or estuarine ecosystem is varied. The loggerhead is primarily carnivorous and has jaws well-adapted to crushing mollusks and crustaceans, and grazing on encrusted organisms attached to reefs, pilings and wrecks. The Kemp's ridley is omnivorous and feeds on swimming crabs and crustaceans. Juvenile green sea turtles are primarily carnivorous, and more mature specimens eat marine animals, particularly, cnidarians, mollusks, crustaceans, sponges and jellyfish, along with vascular sea grass. An adult green turtle is an herbivore and grazes on marine grasses and algae, while the leatherback is a specialized feeder preying primarily upon jellyfish.

The recognized life stages for these turtles are egg, hatchling, juvenile/subadult, and adult (Hirth 1971). Reproductive adults of all species return to their natal beach to lay eggs that incubate in the sand. A female sea turtle leaves the beach to enter the coastal waters immediately after laying and covering her eggs.

Hatchlings dig their way out of the sand to emerge from the nest. They find their way across the beach and, once in the surf, swim offshore for many hours. Hatchlings may become associated with floating sargassum rafts offshore (Bjorndal 1995).

Along the U.S. Atlantic coast, known sea turtle nesting beaches occur from Virginia south through Florida. No beaches north of Virginia support regular nesting by any sea turtle species. A few green and loggerhead sea turtle nesting attempts have occurred on Delaware and New Jersey beaches, but these have been unsuccessful and are believed to have been abnormalities. Thus, hatchlings would not be present along the Delaware and New Jersey coast.

In general, listed juvenile and adult sea turtles are seasonally distributed in coastal U.S. Atlantic waters, migrating to and from habitats extending from Florida to New England, with overwintering concentrations in southern waters. As water temperatures rise in the spring, these turtles begin to migrate northward. As temperatures decline rapidly in the fall, turtles in northern waters begin their southward migration. Sea turtles are expected to be in coastal water from Massachusetts to New Jersey and in the Delaware Bay in warmer months, typically when water temperatures are at least 15°C. This generally coincides with the months of May through November, with the highest concentration of sea turtles present from June through October (Morreale et al. 2007, Shoop and Kenney 1992).

Right and Fin Whales

Federally endangered North Atlantic right whales are found in waters from New Jersey to Massachusetts. This species may be present on the continental shelf off the coast of New Jersey.

Two Seasonal Management Areas (SMA) for right whales with 10 knots maximum speed restrictions for vessels 65 feet or larger exist in New Jersey state waters (50 CFR 224.105)[4]. One SMA is located at the on the oceanward side of the entrance to Delaware Bay.

It is believed that there are approximately 450 right whales comprising the western North Atlantic population. The North Atlantic right whale remains critically endangered, the rarest of all large whale species and among the rarest of all marine mammal species. Recent analysis of

[4] https://www.fisheries.noaa.gov/national/endangered-species-conservation/reducing-ship-strikes-north-atlantic-right-whales

sightings data suggests a decrease in population size (Pace et al. 2017). The North Atlantic right whales migrate along the New Jersey coast to calving and nursery grounds and they have been documented year round along the New Jersey coast, including at the mouth of the Delaware Bay (see NMFS: http://www.nefsc.noaa.gov/psb/surveys/).

Fin whales are listed as endangered. The species is found off the eastern United States and are centered along the 100 meter (328 foot) isobaths. However, sightings are spread out over shallower and deeper water, with their summer feeding range occurring mainly between 41°N and 51°N, from shore seaward to the 1,000-fathom (6,000 feet) contour (Hain et al. 1992, NMFS 2010).

Information concerning the individual life history, distribution and biological requirements for each of the individual species of whales can be found on the NOAA Fisheries webpage at https://www.fisheries.noaa.gov/species-directory.

Effects

The Delaware River from the New Castle Range to the Little Tinicum Island Range are important nursery reaches that supports high densities of both juvenile Atlantic sturgeon and shortnose sturgeon (ERC 2016, 2017, 2018, Hale et al. 2016). Subadult and adult Atlantic sturgeon are present from spring to fall. The adjacent Cherry Island Flats is an area that sturgeon are known to utilize (Hale et al. 2016). Its importance for sturgeon is not clear but the feature is known to provide habitat for multiple fish species and likely provides important forage and potential staging for migrating adult Atlantic sturgeon. This part of the river is also a migration corridor during spawning. Therefore, there are no time period when sturgeon exposure to stressors can be avoided. However, in developing the proposed project, you should consider avoiding in-water construction activities when Atlantic sturgeon spawning migration occurs (April through early July) and when Atlantic sturgeon larval life stages are present (May through September).

As part of the NEPA process, it is important that impacts to protected resources are not analyzed in a vacuum but rather assessed in light of the cumulative impacts from existing and planned commercial developments and navigation activities in the Delaware River and Bay. Similarly, as part of the ESA consultation process, the risk to listed species is based on the effects of proposed activities when added to the existing environmental baseline within the action area.

Below we provide information on stressors and concerns with regard to development of the proposed project. Please note that the comments below are not meant to be extensive or address all potential stressors and effects related to the proposed project. The extent and intensity of effects will also depend on the alternative.

Habitat Modification

The Shortnose Sturgeon Status Review Team (SSSRT 2010) and the Atlantic Sturgeon Status Review Team (ASSRT 2007) have identified loss of habitat as a threat to sturgeon in the Delaware River. Further, Atlantic sturgeon critical habitat PBF 1 (Hard bottom substrate in low salinity waters for settlement of fertilized eggs, refuge, growth, and development of early life stages) is present upstream of Wilmington and PBF 2 (soft substrate for juvenile foraging and physiological development) is present in the Delaware River from the project site to its mouth with the Delaware Bay.

Proposed Project Site

The riverbed adjacent to Edgemoor seems to consist of hard bottom substrate[5]. Based on current information, Atlantic sturgeon spawn upstream (i.e., RKM 125-212, RM 77.7-131.7) of the proposed Edgemoor project site. However, the hard substrate may support refuge, growth, and development of early life stages. Therefore, as part of the NEPA process, you should survey presence of hard bottom substrate and assess its type (i.e. bedrock, cobble, etc.) within the project site and in the adjacent river channel above RKM 107.8 for each of the alternatives.

Both shortnose sturgeon and Atlantic sturgeon forage on benthic invertebrates and substrate type strongly affects the composition of benthic prey. Both species are associated with the availability of prey, and, as a result, soft substrates, such as sand and mud, constitute ideal forage conditions for the sturgeon. Mollusks are also important prey for shortnose sturgeon and they may forage off the plant surface of submerged aquatic vegetation. Therefore, as part of the NEPA process, you should document the presence of soft bottom substrate and provide information characterizing baseline distribution, abundance, biomass, production, and diversity of invertebrate prey.

The construction of the berth and approach channel as well as future maintenance dredging will result in the total removal of the substrate and thereby benthic invertebrates that sturgeon forage on. Active dredging results in suspension of sediment and re-deposition, elevated turbidity, and reduced water quality that can negatively affect benthic invertebrates and Atlantic sturgeon spawning habitat. Besides the proposed deepening, the stopping-starting and maneuvering of vessels approaching and docking at the terminal are expected to continue to disturb bottom sediment and decrease available forage within the approach channel and berth. The strong swirling jet flow induced by a rotating ship propeller causes shear stress and can scour the riverbed as the vessels maneuver within the approach channel and berth (Hong et al. 2013, Hong et al. 2016, Karaki and van Hoften 1975). Because the propeller-induced bed shear stress is a main stirring force, sediment erosion, resuspension and deposition are all expected to be closely related to vessels maneuvering while docking (Karaki and van Hoften 1975, Nybakk 2015). Thus, bottom scour and shear stress from vessel operations and propellers should be calculated and quantified. In your letter you note that the new river bottom after deepening may consist of sediments that has concentration of certain substances that exceed ecological screening criteria. As such, the resuspension of sediment can contribute to transport of contaminants from a polluted area to a non-polluted area and expose sturgeon to suspended pollutants. Studies have also shown that scouring and resuspension of sediment caused by vessel traffic negatively affect submerged aquatic vegetation (Asplund and Cook 1997, PIANC 2008). Consequently, a calculation of the concentration, duration, and extent of suspended sediment should be prepared as part of the NEPA process. Further, vessel activity and propeller motion when vessels are arriving and leaving the berth are likely to disturb sturgeon that are present within or adjacent to the berth area. Based on these considerations, we believe the development of the access channel and berth will result in the permanent loss and degradation of sturgeon habitat in a reach of the Delaware River that provides important habitat for sturgeon.

[5] https://erma.noaa.gov/atlantic/erma.html#/layers=1+814+17307+1073+1252&x=-75.53756&y=39.74388&z=12&panel=layer

Based on the calculations and findings above, you should evaluate the effects that the proposed project will have on both sturgeon species and the Atlantic sturgeon critical habitat. Continuous impacts to substrate and turbidity plumes are expected to decrease the value that habitat within the berth, approach channel, and the adjacent river channel have for conservation. The extent to which habitat value will decrease depends on the value for conservation that the habitat within the proposed berth, access area, and adjacent river currently provide.

Delaware River Navigation Channel

New Panamax sized vessels will have little clearance between the hull and the river bed. The propeller of these vessels are several meter in diameter. Propeller wash from large vessels with minimal clearance and hydrodynamic forces around the hull of a moving vessel can cause shear stress on the riverbed and re-suspend sediment (Chen and Wang 2014, PIANC 2008). Starting and maneuvering of vessels such as occur at anchorages can cause large scour holes and significant suspension of sediment (Hong et al. 2013, PIANC 2008). Waves and hydraulic forces around the hull also affect the river bed and causes erosion of the riverbed and banks (Gabel et al. 2017, Gutreuter et al. 2006, Miller and Payne 1991, PIANC 2008, Wilcox 1991). These impacts can detach invertebrates or expose and displace Atlantic sturgeon early life stages seeking cover within interstitial spaces amongst coarse habitat. However, we have little information on clearance between the vessel hulls and the river bottom within the Navigation Channel or the level of shear stress that vessel traffic has on bottom substrate and its impact on sturgeon and their habitat in the Delaware River. As part of the NEPA process, you should calculate the shear stress that New Panamax sized vessels cause on the riverbed as they move through the Navigation Channel, calculate the sizes of sediment that would be impacted, calculate sediment suspension from the vessels' movements, and the quantity of hard and soft substrate that would be exposed to the vessels. This information should be used to evaluate risks to sturgeon from habitat impacts and to Atlantic sturgeon designated critical habitat.

Effects of Construction and Channel Deepening

Pile Driving

We expect that the proposed project includes driving steel piles, though, at this stage in the planning, the number and type of piles are not known. The driving and removal of piles generate sound waves that travels through the water body. Exposure to human generated sounds may potentially affect stress levels and the immune system, cause temporary or permanent loss of hearing, damage body tissues, result in mortality, and kill or damage larvae.

Besides injurious effects, pile driving may elicit behavioral modification and avoidance. Depending on the size and type of the pile as well as the type of hammer, this may temporarily limit use of important foraging areas, affect the value of critical habitat, and restrict migration and movements within the river. Avoidance may also restrict sturgeon up and downstream movements to the navigation channel and, thereby, increase the risk of interaction with vessels. Pile driving may adversely affect listed sturgeon given the importance that this reach of the river has for sturgeon, the density of sturgeon in river reaches adjacent to the project site, and the potential presence of Atlantic sturgeon early life stages with poor swimming abilities.

Dredging

You manage and maintain the Delaware River federal navigation channel (the Federal Navigation Project, FNP) and the deepening of the federal navigation channel in reach B from 40 to 45 feet. The deepening of the channel includes dredging and blasting of bedrock and rock outcrops as well as relocation trawling of sturgeon to minimize effects from blasting. These activities are currently ongoing and expected to be completed in 2019 or 2020. In addition, maintenance dredging of the navigation channel is ongoing and will continue in the foreseeable future. Entrainment in dredges, exposure to sound from blasting, and relocation trawling have injured and killed both Atlantic sturgeon and shortnose sturgeon. An interagency consultation on the deepening and maintenance of the FNP was reinitatied in 2018 and a biological opinion and incidental take statement issued on December 10, 2018.

The applicant has requested that you determine the federal interest for the Assumption of Maintenance of the approach channel under the Water Resources Development Act of 1986. It is unclear how, if approved by the Assistant Secretary of the Army, this will relate to the FNP and determine any future ESA consultation with us.

The proposed project includes the deepening of the berth area and the approach channel connecting the berth to the navigation channel. While project plans are not finalized, we assume the deepening include use of dredges. In addition, rock outcrops seem to be present within the proposed approach channel. Thus it is a possibility that blasting may be needed. In addition, maintenance of the depth at the berth and approach channel will require ongoing dredging. This lower reach of the Delaware River is an important rearing area for juveniles and the relocation trawling for the deepening project has shown that this stretch of river reach supports high densities of young of the year and juvenile sturgeon. Further, sub-adult Atlantic sturgeon are commonly found on the Cherry Island Flats reach of the river. Therefore, risk of mortality from construction and maintenance activities is a concern. Especially, the effects from constructing and maintaining the berth and approach channel needs to be assessed by how those activities affect the species when added to other existing and ongoing federal and private dredging and deepening activities.

Vessel Traffic

In your letter, you note that the proposed project "is anticipated to attract new containerized shipping commerce to the region rather than displacing existing container operations." An increase in the activity of large vessels is a major concern with regard to rebuilding the Atlantic sturgeon population in the Delaware River and has been identified as an issue for the recovery of sturgeon species (ASSRT 2007, Brown and Murphy 2010, SSSRT 2010). Vessels are known to strike sturgeon species as well as marine mammals and sea turtles.

The ACOE Waterborne Commerce Statistics Center reports a large number of vessel trips (in the tens of thousands) in the Delaware River and Bay each year[6]. However, these vessel trips include short movements by tug boats, shallow draft vessels, and non-motorized vessels while studies have identified large, deep draft vessels as the major cause of sturgeon vessel strikes

[6] ACOE Waterborne Commerce Statistics Center: https://www.iwr.usace.army.mil/About/Technical-Centers/WCSC-Waterborne-Commerce-Statistics-Center/

(Balazik et al. 2012, Brown and Murphy 2010). The number of registered large commercial vessel trips between Philadelphia, PA, and the mouth of the Delaware Bay each year is considerably lower than the total vessel trips reported. For instance, for 2016, the ACOE Waterborne Commerce Statistics Center reported 1,403 trips of tanker sized vessels.

Over a ten-year period, from 2007 to 2017, a median of 13 sturgeon mortalities per year was reported to the Delaware Department of Natural Resources and Environmental Control through their sturgeon carcass public reporting program[7]. Of these, a median of five sturgeon carcasses per year was attributed to vessel strike mortalities. The cause of death could not be determined for a median of seven carcasses and these likely included vessel mortalities. It is unlikely that these mortalities represent the total number of mortalities, as most carcasses are likely to go undetected. Vessel strike mortality of subadult and adult Atlantic sturgeon is of particular concern as the mortality of a small portion of a population's females will significantly affect population growth (ASMFC 2007, Brown and Murphy 2010) and migrating subadults and adults may be especially exposed to vessels (Fisher 2011, Hondorp et al. 2017). The geomorphic structure of the river such as narrow areas and presence of sturgeon concentration areas influence the probability of a vessel striking a sturgeon (Balazik et al. 2012). Further, Atlantic sturgeon larvae exposed to vessel traffic and entrained through a propeller will likely be injured or killed (Killgore et al. 2001).

Large whales are also injured and killed by ocean going vessels. Five North Atlantic right whale confirmed or probable vessel strike mortalities occurred during 2017 and 2018[8]. The cause of death could not be determined for another eight whales and these may have included vessel strikes. North Atlantic right whale occurs in New Jersey coastal areas and in waters off the mouth of the Delaware Bay. Thus, this species will be exposed to vessels transiting to and from the proposed terminal. A Seasonal Management Area seaward of the Delaware Bay COLREG line restricts vessels speeds to protect right whales during migration to and from calving and nursery grounds[9].

Four species of sea turtles are known to be seasonally present in the Delaware Bay and in the waters off the coast. Small and fast moving vessels are known to strike sea turtles. However, little information exists about the risk of injury and death from interaction with large oceangoing vessels. It is possible that the bow wave of large vessels pushes sea turtles away, thereby reducing the risk of blunt impact from the hull or entrainment through the vessel's propeller, though this has not been confirmed.

Supporting documentation and analysis is needed for both short-term vessel traffic associated with the project's construction, as well as long-term vessel use of the proposed Edgemoor multiuser containerized cargo port for each of the proposed alternatives. In addition to the number of vessel trips, information should clearly demonstrate whether all anticipated vessel traffic to the site is from new vessels or whether it includes vessels displaced from other ports should be considered. Any seasonal trends should also be provided. Overall the analysis needs

[7] DNREC: http://apps.dnrec.state.de.us/sturgeon

[8] NOAA Fisheries: https://www.fisheries.noaa.gov/national/marine-life-distress/2017-2018-north-atlantic-right-whale-unusual-mortality-event

[9] NOAA Fisheries: https://www.fisheries.noaa.gov/national/endangered-species-conservation/reducing-ship-strikes-north-atlantic-right-whales

to show the number of new vessels that will be added to the existing vessel traffic and which would not occur but for the proposed action. The analysis should include if certain vessels are expected to be diverted from visiting ports further upstream of the Delaware River and thus, now taking shorter trips over less distance. As part of the NEPA process, for each alternative, the vessel information together with best available data on vessel strikes should be used to analyze and document the risk to protected resources.

There is an expectation of expanded shipping commerce in the region. Therefore, it is important to consider the risk to listed species from the proposed vessel activities within the context of how this adds to the overall commercial vessel activity of the Delaware port complex. Several other ports are expanding and new terminals are being built. These include, but are not limited to, the construction of the Southport Terminal in Philadelphia, the Delaware River Partners' Gibbstown terminals within the Little Tinicum Island range, the expansion of the Paulsboro port in New Jersey upstream of Little Tinicum Island, and activities to increase cargo capacity at several other existing ports and terminals.

CONCLUSION

We look forward to continued coordination with your office to address the issues we have outlined in this letter as you prepare the NEPA document for this project and evaluate project alternatives. The Applicant's preferred project site is located in an area that is highly sensitive for NOAA trust resources including federally protected species under our jurisdiction such as ESA-listed sturgeon as well as aquatic resources of national importance including alewife, blueback herring, and striped bass. Construction activities and terminal operations could result in significant impacts to these resources. Regular maintenance of the approach channel in an area where trust resources, species of concern, and sturgeon are known to congregate can result in significant impacts to these species. Vessel traffic is known to kill sturgeon, including Atlantic sturgeon during spawning migrations, and we are very concerned about planned increases in vessel activity on the Delaware River and in the Delaware Bay. Impacts to sea turtles and whales are also of concern and should be considered. Therefore, the cumulative impacts of construction, maintenance, and operation of the terminal should be analyzed in context of the operation of the overall navigation infrastructure and marine commerce on the Delaware River and Bay.

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 or (410) 573-4559 regarding EFH/MSA issues and Peter Johnsen at peter.b.johnsen@noaa.gov or (978) 282-8416 regarding ESA issues.

Sincerely,

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Assistant Regional Administrator
for Habitat Conservation

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New England Fishery Management Council

MID-ATLANTIC FISHERY MANAGEMENT COUNCIL

July 27, 2020

Program Manager, Bureau of Ocean Energy Management
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Dear Sir/Madam,

Please accept these comments from the New England Fishery Management Council (New England Council) and Mid-Atlantic Fishery Management Council (Mid-Atlantic Council) on the Supplemental Environmental Impact Statement for the Vineyard Wind I project proposed offshore of Massachusetts. Please note that we have not considered the revised NEPA regulations published on July 16 (85 FR 43304) in the development of these comments.

The New England Council has primary management jurisdiction over 28 marine fishery species in federal waters and is composed of members from Connecticut to Maine. The Mid-Atlantic Council manages more than 64 marine species[1] in federal waters and is composed of members from the coastal states of New York to North Carolina (including Pennsylvania). In addition to managing these fisheries, both Councils have enacted measures to identify and conserve essential fish habitats, protect deep sea corals, and manage forage fisheries sustainably. The Councils support policies for U.S. wind energy development and operations that will sustain the health of marine ecosystems and fisheries resources. While the Councils recognize the importance of domestic energy development to U.S. economic security, we note that the marine fisheries throughout New England and the Mid-Atlantic, including within the project area of Vineyard Wind 1 and in surrounding areas, are profoundly important to the social and economic well-being of communities in the Northeast U.S. and provide numerous benefits to the nation, including domestic food security.

General comments

Relative to the cumulative effects analysis, we appreciate BOEM's expanded assessment of how many wind farm projects constitute reasonably foreseeable future actions, and find that this revised scope combined with more robust evaluation of potential impacts provides a better foundation for understanding the overall effects of the project. While acknowledging these improvements, we are concerned about the integration of the DEIS and SEIS into a comprehensive FEIS. We know BOEM is working under Secretarial Order regarding maximum document length and worry that page limits will relegate too much content to appendices, making the document hard to follow. BOEM should carefully consider whether some information from the appendices can be included in the body of the FEIS. For example, the written descriptions and maps of resource geographic analysis areas (Appendix A.1 and

[1] Fourteen species are managed with specific Fishery Management Plans, and over 50 forage species are managed as "ecosystem components" within the Mid-Atlantic Council's FMPs.

A.7, respectively) are fundamental to understanding the assessment and would be helpful to include in the body of the document. In addition, Tables 3-1 and 3-2 in Appendix B which provide impact definitions (negligible, minor, moderate, major) are important, and should be pulled forward. To the extent that information must be placed in an appendix, it is essential that BOEM hyperlink to relevant sections of the document so that related information can be easily identified. It would also be useful to include hyperlinks to figures, tables, and section headings throughout the body of the EIS itself. To the extent that the EIS references the COP, BOEM should provide very specific references to the relevant volumes and sections (with page numbers, if possible), as the COP itself is a complex document. Ideally the FEIS document would stand alone and not incorporate DEIS and SEIS sections by reference. Given revisions to the project over time, referencing entire sections of the DEIS and SEIS would be very confusing.

During preparation of the FEIS, BOEM should ensure that an assessment of magnitude (minor, moderate, major) is made for all alternatives and VECs. Also, we recognize that it is an editorial decision to specify magnitude but not direction for adverse impacts (vs. magnitude and direction for beneficial impacts), but it might improve clarity to identify the direction of adverse impacts, or, at the very least, reiterate this caveat at intervals throughout the text. In addition, BOEM should be careful when summarizing the effects of an alternative on a VEC when a range of positive and negative outcomes are expected, over different time frames, due to a range of impact producing factors (IPFs; for example, the diverse range of IPFs and effects associated with fish, invertebrates, and EFH). This is not a significant issue when reading the text, where differences across IPFs are clearly laid out, but should be noted as a caveat where impacts are summarized, for example in Table ES-2 on page ES-5. Some readers may not read much more than these summary tables. Further, depending on the VEC and IPFs in question, an assessment of net effects might not be appropriate, and instead a range of effects should be specified.

Management alternatives

It would be helpful for the FEIS to identify BOEM's preferred action, as indicated by NEPA regulations (EIS documents shall "identify the agency's preferred alternatives, if one or more exists…in the final statement" (CFR § 1502.14 (e)). It would also be informative to clearly outline which actions are feasible and preferred on the part of Vineyard Wind. Specifically, Vineyard Wind and other developers have agreed to a 1x1 nautical mile east-west oriented layout (Alternative D2), which differs from the original layout outlined in the COP, and is not part of the 'proposed action' alternative (Alternative A). Also, Vineyard Wind has negotiated with the local community around the Covell's Beach cable landfall (Alternative B), vs. the New Hampshire Ave. landfall (included in Alternative A). The June 3, 2020 COP[2] does not provide any additional clarity as to which options might be likely or preferred. While many readers may be aware of these developments, the FEIS should convey which are the most likely outcomes, and the proposed action as defined in the FEIS should reflect these plans released by the developers.

We appreciate BOEM's analysis of the transit lane alternative (Alternative F), as recommended by fishery stakeholders. However, as described on pages 2-4 and 2-5 of the SEIS, the transit lane

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[2] https://www.boem.gov/sites/default/files/documents/renewable-energy/Vineyard-Wind-COP-Volume-I-Appendix-I-Complete.pdf

Alternative F does not seem feasible. For example, a discussion of issues associated with the cables indicates a need for technically impossible factory joints should the transit lanes be incorporated into the design, which seems to render Alternative F impossible to execute. Is this a function of having a 2 or 4 nm distance between wind turbine generators (WTGs) that would need to be covered by longer sections of inter-array cable? With respect to tradeoffs around power loss under Alternative F, is this related to the footprint of the project and turbine spacing? Or to increasing distance from shore as additional areas of the lease are built out? Finally, in the context of regional demand, it would be helpful to understand how the placement of 2 or 4 nm transit lanes throughout the MA and MA-RI WEAs intersects with the use of larger 14 MW WTGs, vs. the 10 MW originally considered. As compared to the original project design, it seems that loss of turbine placements due to transit lanes might be balanced out by generating more electricity per turbine, thereby still meeting regional demand. Perhaps an in-depth analysis of number of WTGs vs. WTG capacity would show that this is not the case, but a discussion of these tradeoffs would help to demonstrate this.

Also related to the alternatives, the FEIS should be clear that in the context of both direct and cumulative impacts, no action (Alternative G) means that the Vineyard Wind I project would not be built, but that other nearby wind farms are still presumed likely. Readers may assume that no action means no offshore wind construction in the region, especially because this is the first large-scale wind farm to reach this stage of development.

Finfish, Invertebrates, and Essential Fish Habitat

Multiple aspects of wind farm construction and operations involve noise production. Noise can negatively affect biological processes for many species of fishes and invertebrates. The SEIS indicates that pile driving will generate the most impacts. We ask that BOEM carefully evaluate the information on pile size and hammer energy provided in the Vineyard Wind I COP, as well as information available for other reasonably foreseeable future projects, to ensure that the radial estimates of impacted area are accurate (e.g. the difference in effects between 2,500 kJ vs. 4,000 kJ hammers). It would be useful to monitor noise during construction activities to ground truth these estimates at as many locations as possible. Time of year restrictions related to pile driving should be considered as a mitigation measure, since some species, including longfin squid, could be disproportionately affected if most pile driving occurs in summer during their spawning season.

Recreational fishing

It is our understanding that the geographic scope for private recreational fishing will be expanded for the FEIS. This is necessary as the geographic scope for private recreational fishing as defined in the SEIS excludes impacts to communities based in Rhode Island, Connecticut, and New York. Precise information on the location of private fishing trips is lacking; however, private recreational fishing effort based out of states other than Massachusetts does occur within the wind energy lease areas included in the geographic area of the analysis. The grouping of private recreational fishing with "recreation and tourism," rather than with commercial and for-hire fisheries, is not intuitive to us and makes it challenging for readers to understand the full picture of potential impacts on all fishery sectors.

Navigation and Vessel Traffic, Other Uses

We continue to hear concerns from commercial fishing partners about navigation safety, including the potential for impacts due to use of radar. The continued ability of the Coast Guard to effectively conduct search and rescue, or SAR operations, described in the Other Uses analysis, is also of concern. The ability of fishing vessels to operate within the Vineyard Wind I and adjacent wind farms will influence the magnitude of negative effects of the projects on commercial fisheries.

Mitigation and monitoring

With a project of this scope, there are many opportunities for mitigation of negative effects, via changes in project design or construction methods, and through compensation funds. A clear description of mitigation measures (which are summarized in the DEIS, but not described in the SEIS) will be important to understanding the impacts of the proposed action and should be included in the FEIS. The document should indicate which mitigation measures are assumed in the EIS analyses and which measures might be required as conditions on the construction permit. It is challenging to piece these mitigation elements together, absent a consolidated summary. This should include a summary of fisheries mitigation funds for fishermen from Massachusetts and Rhode Island, as well as a description of how fishermen from other states can be compensated appropriately for any losses.

Related to this, a robust monitoring program, while not mitigation per se, is important to understanding project effects and adaptively managing wind farm construction in the region going forward. In terms of process, it would be helpful to understand how Vineyard Wind and other regional developers will be held accountable to monitoring plans, as well as the mechanism for modifying these plans over time. Given that large scale offshore wind development is new for our region, and that the spatial scale of reasonably foreseeable projects is unprecedented world-wide, there are certain to be effects that we cannot fully anticipate at present. We appreciate developer commitments to the work of the Responsible Offshore Science Alliance and the coordination around monitoring that will result, but these are voluntary agreements, vs. permit conditions.

There are many opportunities for learning and adaptive management going forward. For example, the SEIS discusses that there may be positive effects associated with the creation of artificial hard bottom habitats. A range of materials could be used for scour protection and for cable armoring where burial is not possible. These materials will likely have different ecological benefits, depending on the species. Materials can be selected for their expected benefits, and/or the effects of different types of materials might be compared. Time of year restrictions on construction and maintenance, e.g. to protect fish spawning activity, also provide an opportunity for data gathering and adaptive approaches. These windows may shift over time as the region continues to experience the effects of climate change. Such shifts could have implications for best practices related to operations and maintenance of the Vineyard Wind I project, as well as other projects in the region.

Relationship to other projects

Vineyard Wind I does not exist in a vacuum, and the relationship between this project and others is important. Consistency of layout across this and future projects is critical to mitigating certain types of adverse impacts, including on fishing operations. Learning from the construction process and from monitoring should lead to adaptive management, for this and other projects. BOEM should articulate how it will ensure that regional development occurs in a coordinated manner across projects. For example, once the Vineyard Wind I turbine layout is established, will extension of this layout to

adjacent projects in the MA and MA-RI WEAs be assumed in future COPs, and be the starting point for future EIS analyses? Should a single planning and environmental evaluation process be conducted when multiple projects wish to use similar routes for their export cables? If the effects of installation or operation are found to be unacceptable despite best efforts to mitigate them, will this information be used to alter future projects?

Conclusion

We appreciate the opportunity to provide comments to ensure this EIS provides a comprehensive and effective evaluation of expected impacts from the Vineyard Wind I project. The Councils look forward to working with Bureau of Ocean Energy Management to ensure that any wind development in our region minimizes impacts on the marine environment and can be developed in a manner that ensures coexistence of our fisheries with future wind development activities.

Please contact us if you have any questions.

Sincerely,

Thomas A. Nies
Executive Director, New England Fishery Management Council

Dr. Christopher M. Moore
Executive Director, Mid-Atlantic Fishery Management Council

cc: James. Bennett, BOEM Renewable Energy Program
Walter Cruickshank, Acting Director, BOEM
Michael Pentony, Reg. Admin, GARFO

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

July 27, 2020

Michelle Morin
Chief, Environmental Branch
Office of Renewable Energy Programs
Bureau of Ocean Energy Management
45600 Woodland Road
Sterling, Virginia 20166

Re: Vineyard Wind EFH Addendum

Dear Ms. Morin,

We have reviewed your Essential Fish Habitat (EFH) Addendum received on June 26, 2020 for the proposed Vineyard Wind offshore wind energy project. As you are aware this Project includes the construction, operation, maintenance, and decommissioning of a commercial scale (approximately 800 megawatts) offshore wind energy facility by Vineyard Wind within Lease Area OCS-A-0501, located approximately 14 miles southeast of Martha's Vineyard, Massachusetts. We provided EFH Conservation Recommendations to you on June 27, 2019. Vineyard Wind provided you with Construction and Operation Plan (COP) revisions and updates earlier this year (Jan 31, Mar 9, Mar 16, and April 13), which included the potential for using higher generating capacity wind turbine generators (WTG). In consideration of the new information and project clarifications included in the COP revisions and updates, you prepared the EFH addendum to provide the clarifications and new information, as well as address how the Project changes may result in different or additional impacts to EFH. As part of your analysis, you are also considering an alternative WTG configuration that would accommodate an up to 4 nautical mile (nm) transit lane through the Vineyard Wind Development Area (WDA), which would exceed the limits of the Project Design Envelope (PDE) requested in the COP. The EFH addendum also addresses how this alternative could result in different or additional impacts to EFH.

EFH Addendum Comments

It is your determination that using WTGs of a higher generating capacity would not result in additional impacts to EFH, and that the inclusion of an, up to, 4 nm transit lane could result in additional permanent impacts to EFH. We agree with your determination and rationale. The

increase in WTG generating capacity would result in larger turbines, however there is no proposed increase in size of the turbine scour protection footprint. The new transit lane alternative could result in permanent impacts to 139 acres of EFH within the WDA, versus 117 acres originally considered, as a result of cable protection if the target burial depth is not achieved. However, such impacts should not be substantially different than those previously considered as the WDA is dominated by homogeneous sediments.

While we agree with your determination on the proposed project changes, the habitat data provided in the EFH Assessment remains deficient. The EFH Addendum states that Vineyard Wind has not provided additional information on the seafloor habitats beyond what was previously provided. As discussed in our June 27, 2019 letter, the benthic habitat delineations provided by Vineyard Wind are not adequate and we recommended the existing data be re-analyzed to adequately delineate complex habitat known to occur in the project area, particularly through the Muskeget Channel cable corridor. In the absence of accurately delineated habitat information, the mitigation measures outlined in the EFH Addendum, such as avoiding disposal of dredge material in hard habitats or micro-siting along the cable corridor, cannot be completed. Vineyard Wind will be unable to avoid or minimize impacts to hard habitats when the location of these habitats is not known.

The lack of adequate habitat information also has implications for the benthic monitoring plan included as an attachment to the EFH Addendum. The entire benthic monitoring plan is predicated on sampling of specific habitat zones as defined by Vineyard Wind. Based on our analysis of the existing data, these habitat zones identified in both the monitoring plan and the COP are not based on accurate habitat delineations and do not illustrate the true locations and distribution of habitat types that occur within the zones. While more detailed information is needed for us to provide additional feedback on this monitoring plan, we consider it paramount that any monitoring plan is formulated from accurate baseline information.

EFH Consultation Coordination

In addition to affecting the accuracy of the information in the EFH Addendum, the lack of accurate habitat delineations will directly affect your ability to fully incorporate the EFH conservation recommendations we provided you in our letter dated June 27, 2019. In order to address any of the EFH conservation recommendations we provided related to avoiding, minimizing, and offsetting adverse impacts to hard, complex habitats you must first understand where these habitats are located. Specifically, absent this information, you will not have the information necessary to address or incorporate conservation recommendation numbers: 1, 2, 3, 4, 6, or 11, which are aimed at avoiding and minimizing impacts to complex habitats that are more vulnerable to construction impacts.

If the applicant does not provide accurate habitat delineations, additional EFH conservation recommendations will be necessary, as this changes the basis for our prior EFH conservation recommendations. While the previously provided video transect data illustrated that areas of less complex, soft sediments do occur within the Channel, accurate delineations of hard, complex habitats are necessary to determine how much of the proposed work will, or will not impact such

habitats. In providing additional recommendations, we will need to assume that the entire area of impact within Muskeget Channel (including all dredge disposal areas, vessel anchoring areas, etc.), is hard, complex habitat consistent with the juvenile cod habitat area of particular concern (HAPC). Impacts to this habitat would be long-term and permanent. Moving forward under this assumption will also potentially lead to unnecessary and feasibly avoidable impacts of the project on juvenile cod HAPC that we believe can be minimized with accurate habitat information.

In order to accurately document how impacts to habitat would be avoided and minimized, our EFH conservation recommendations should be incorporated into the Final Environmental Impact Statement (FEIS). As we stated in our most recent comments on the Supplemental Draft Environmental Impact Statement, it is our expectation that our EFH conservation recommendations be incorporated into the FEIS, though a response cannot be provided any later than 10 days prior to your final decision. Given the fact that we have not yet received the accurate habitat information, we recommend you provide us with information on how BOEM intends to address this issue as well as a response to our other June 27, 2019 conservation recommendations as soon as possible. As noted above, absent this outstanding habitat information, additional conservation recommendations will be necessary and this issue should be resolved prior to the date of the Record of Decision. We request that you make a determination on whether this information will be forthcoming, and if not, we will provide additional EFH conservation recommendations to you within 30 days of your response to our recommendations.

We appreciate you working with us to address this important issue, as this will set the precedent for future wind projects. Our EFH conservation recommendation did not require any additional sampling or survey work, only reinterpretation of existing data that Vineyard Wind had already collected. It has been over a year since you received our EFH conservation recommendations, which should have provided ample time for reinterpretation of the data. The absence of this reinterpreted data, that would provide accurate habitat information, will result in otherwise avoidable long-term adverse impacts.

Muskeget Channel Cable Corridor

As you are aware, Vineyard Wind is proposing to utilize the selected cable corridor through Muskeget Channel for the second, and likely third, phase of their project. At least one other developer is also proposing to route their cable through the Channel. Impacts from cable installation within complex, hard habitats could result in permanent impacts or decades long recovery timelines. We have significant concerns with the lack of consideration for such permanent and long-term impacts that are occurring in the selection of preferred cable corridors through the Channel.

As multiple projects and proponents are looking to Muskeget Channel as a preferred route for cable installation, it would be prudent to be proactive and identify a suitable corridor through the Channel that can be used by multiple projects. Identifying the most appropriate location through the Channel will ensure that the most structurally complex habitats, including juvenile cod HAPC, are adequately identified and impacts can be appropriately avoided and minimized in the

identification process. This will allow for current and future projects to consider these important habitats, and measures that can be employed to avoid and minimize impacts to these sensitive habitats, as projects are developed. We request that you work to fully map and identify candidate cable corridors through Muskeget Channel that would result in the least environmentally damaging location for projects going forward.

Conclusion

In conclusion, we agree with your determination that the proposed project changes will not result in substantially different effects to EFH, but we have significant concerns regarding the existing habitat delineations and the implications such inadequate delineations have in our EFH consultation with you. We request that you provide a response to our EFH conservation recommendations and confirm the path forward with the project and the FEIS absent this information. If you will not be requiring accurate habitat delineations, we will provide additional EFH conservation recommendations within 30 days of your notice to us. Should you have any questions about this matter, please contact Alison Verkade at 978-281-9266, or by email at alison.verkade@noaa.gov.

Sincerely,

Louis A Chiarella
Assistant Regional Administrator
for Habitat Conservation

cc: Brian Hooker, BOEM
Peter Burns, NMFS HESD
Thomas Nies, NEFMC
Christopher Moore, MAFMC
Lisa Havel, ASMFC

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

July 27, 2020

Pamela Garrett
New Jersey Department of Transportation
Bureau of Environmental Program Resources
P.O. Box 600
Trenton, NJ 08625-0600

RE: EFH Consultation for the Replacement of Monmouth County Bridge S-32
County Route 520 (Rumson Road) over the Shrewsbury River,
Borough of Rumson and Borough of Sea Bright, Monmouth County, New Jersey

Dear Ms. Garrett:

We have reviewed revised essential fish habitat (EFH) assessment and additional supplemental information provided to us in response to our May 4, 2020, technical assistance letter on the proposed replacement of Monmouth County Bridge S-32 that carries County Route 520 (Rumson Road) over the Shrewsbury River between Rumson and Sea Bright, Monmouth County, New Jersey. The project involves the replacement of the existing Bridge S-32, which was determined to be structurally deficient and functionally obsolete. The Federal Highway Administration (FHWA), the lead federal agency on this project, has designated the New Jersey Department of Transportation (NJDOT) as its non-federal representative for consultations with us under the Magnuson Stevens Fishery Conservation and Management Act (MSA) and the Fish and Wildlife Coordination Act (FWCA).

The proposed project includes the construction of a new bridge to the south of the existing bridge, the removal of the existing bridge, the replacement of one outfall and associated pipe, installation of a submarine cable, construction of a new pedestrian path below the new bridge, and the construction of a bulkhead along the eastern shoreline of the Shrewsbury River. The project may temporarily disturb 0.006 acres and permanently disturb 0.027 acres of wetlands, temporarily disturb 0.254 acres and permanently disturb 0.183 acres of tidal open waters, and temporarily disturb 0.109 acres and permanently disturb 0.087 acres of intertidal and subtidal shallows. Approximately 0.092 acres of tidal open water and 0.105 acres of intertidal and subtidal shallows will be restored due to the removal of the existing bridge abutments and piers. As a result, there will be a net gain of 0.091 acres of tidal open water and an additional net gain of 0.018 acres of intertidal and subtidal habitats due to the removal of the existing bridge abutments and piers. According to the EFH assessment, all temporary impacts to wetlands, intertidal and subtidal shallows and tidal open water will be restored. Additionally, compensatory mitigation for the permanent loss of intertidal and subtidal shallows and tidal open water will be made in the form of a monetary deposit to the NJDEP Bureau of Shellfisheries fund on behalf of

Monmouth County for the preservation, enhancement, and creation of shellfish habitat.

Magnuson Stevens Fishery Conservation and Management Act

As discussed in our previous letter, the MSA requires federal agencies to consult with us on projects such as this which may adversely affect EFH and other aquatic resources. In turn, we must provide recommendations to conserve EFH. These recommendations may include measures to avoid, minimize, mitigate, or otherwise offset adverse effects on EFH resulting from actions or proposed actions authorized, funded, or undertaken by that agency. This process is guided by the requirements of our EFH regulation at 50 CFR 600.905, which mandates the preparation of EFH assessments and generally outlines each agency's obligations in this consultation procedure. While our regulations also allow a federal agency to designate a non-federal representative to conduct the EFH consultation, it is important to note that the FHWA remains ultimately responsible for compliance with sections 305(b)(2) and 305(b)(4)(B) of the MSA

The FWCA also requires consultation with us on projects such as this that may result in the modification of a natural stream or body of water. The FWCA also requires the consideration of the effects that these projects would have on fish and wildlife, and must also provide for improvement of these resources. Under this authority, we work to protect, conserve and enhance species and habitats for a wide range of aquatic resources such as diadromous species, shellfish, and other commercially and recreationally important species that are not managed by the federal fishery management councils and therefore do not have designated EFH.

As discussed in our previous letter, the project area has been designated as EFH under the MSA for a number of federally managed species including winter flounder (*Pseudopleuronectes americanus*), windowpane (*Scopthalmus aquosus*), bluefish (*Pomatomus saltatrix*), summer flounder (*Paralicthys dentatus*), and others. The Shrewsbury River is also a migratory corridor for anadromous fish such as alewife (*Alosa pseudoharengus*), and blueback herring (*Alosa aestivalis*). The waterway also contains commercially and recreationally harvestable densities of both hard clams (*Mercenaria mercenaria*) and soft clams (*Mya arenaria*).

The EFH assessment prepared by the consultant for the NJDOT, states that all temporary impacts will be restored to equal or greater functional value upon completion of the project. The proposed wetland disturbance is dominated by a monoculture of common reed (*Phragmites australis*), which will be restored with native vegetation. Additionally, gabion baskets currently present above the high tide line and below the existing bridge will be excavated to below the high tide line to create intertidal and subtidal shallows. The removal of the existing bridge abutments and piers will restore intertidal and subtidal shallows, as well as tidal open water areas. Compensatory mitigation for permanent disturbances, which is in draft development, will include a minimum ratio of one acre of mitigation per acre of disturbance. Draft mitigation plans include the restoration of wetlands and wetland buffers with native vegetation and will include a monetary deposit to the NJDEP Bureau of Shellfisheries fund for preservation, enhancement, and creation of shellfish habitat. Although we support the proposed mitigation, a copy of the compensatory mitigation plan should be provided to us for review. The plan should include success criteria, performance measures, a monitoring and maintenance plan, as well as an adaptive management plan to help ensure long-term success of the proposed mitigation.

As indicated in the EFH assessment, the project has been designed to avoid and minimize impacts to NOAA trust resources. Such designs include a phased construction approach to limit disturbances, the removal of nine existing in-water piers and replacement with five in-water piers to support the new bridge, installation of cofferdam structures at existing and proposed pier locations to reduce water quality impacts and attenuate noise and vibration, vibratory hammer use for sheet pile and temporary trestle pile installation, cushioned impact hammer and soft start techniques for temporary trestle pile installation, and horizontal directional drilling (HDD) for the installation of submarine cables.

The proposed project may adversely affect EFH for species such as winter flounder whose eggs are demersal and adhesive. However, sufficient justification has been provided to demonstrate that a seasonal work restriction between January 1 and May 31 to minimize impacts to winter flounder eggs and larvae is not necessary due to high river velocities in the project area, which are not optimal for winter flounder spawning or egg development. Additionally, we agree that the installation of the coffer dams around proposed and existing piers will reduce the impacts on migrating anadromous fish, such as alewife and blueback herring. However, we recommend that these barriers and other proposed in-water work such as trestle pile driving and bulkhead removal and installation, be constructed prior to the onset of migration, generally around March 1, and not be removed until after June 30 of any given work year.

Essential Fish Habitat Conservation Recommendations

Pursuant to Section 305(b)(4)(A) of the MSA we request that you adopt the following EFH conservation recommendations to minimize or offset adverse impacts on EFH:

- Avoid in water work between March 1 and June 30 to minimize impacts to the upstream migration of river herring to their spawning habitat.
- Develop a frack out plan outlining the measures to be taken if there is an accidental release of drilling muds during the HDD process.
- Provide us with a copy of the final mitigation plan. This plan should include a monitoring and maintenance plan to document success, identify if corrective actions are needed, and to maintain the integrity and health of the wetland restoration project.

Please note that Section 305(b)(4)(B) of the MSA requires you to provide us with a detailed written response to these EFH conservation recommendations, including a description of measures adopted by you for avoiding, mitigating, or offsetting the impact of the project on EFH. In the case of a response that is inconsistent with our recommendations, Section 305(b)(4)(B) of the MSA also indicates that you must explain your reasons for not following the recommendations. Included in such reasoning would be the scientific justification for any disagreements with us over the anticipated effects of the proposed action and the measures needed to avoid, minimize, mitigate, or offset such effects pursuant to 50 CFR 600.920(k). This response must be provided within 30 days after receiving our EFH conservation recommendations and at least 10 days prior to final approval of this action. 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.

Conclusion

We look forward to your response to our EFH recommendations on this project. As always, please do not hesitate to contact Jessie Murray (Jessie.Murray@noaa.gov, 732-872-3116) in our Sandy Hook field office if you have any questions or need assistance.

Sincerely,

Louis A. Chiarella
Assistant Regional Administrator
for Habitat Conservation

cc: New York District ACOE – S. Ryba
USGC – D. Leonce
NJDEP – K. Davis
FWS – S. Mars
EPA Region II – M. Finocchiaro
FHWA – Hadi Pezeshki
NEFMC – T. Nies
MAFMC – C. Moore
ASMFC – L. Havel

New England Fishery Management Council
50 WATER STREET | NEWBURYPORT, MASSACHUSETTS 01950 | PHONE 978 465 0492 | FAX 978 465 3116
John F. Quinn, J.D., Ph.D., Chairman | Thomas A. Nies, *Executive Director*

July 22, 2020

Dr. Lyndie Hice-Dunton
Executive Director
Responsible Offshore Science Association
via email

Dear Dr. Hice-Dunton:

Thank-you for your recent letter asking us to appoint a representative to the Advisory Council for the Responsible Offshore Science Association. We are pleased to inform you that Dr. Michael Sissenwine (m.sissenwine@gmail.com) will be our representative. We are still determining who will serve as his alternate and will advise you once that decision is made.

We look forward to working with ROSA. Please let me know if you have questions

Sincerely,

Thomas A. Nies

Thomas A. Nies
Executive Director

cc: Dr, Sissewine