

CORRESPONDENCE

From: Sebastian VELEZ <sebastian.velez@totalenergies.com>

Sent: Wednesday, August 31, 2022 10:54 AM

Subject: Introducing the new Attentive Energy Website and Fishing Community & Mariner Offshore Wind Survey

Good morning,

My name is Sebastian Velez, and I am the Fisheries Liaison for Attentive Energy, a subsidiary of TotalEnergies. Attentive Energy is an offshore wind developer, engaging with NY/NJ communities on and off the coast for the last three years, and is a recent Federal lease auction winner located in the New York Bight (see attached images). I am happy to announce the launch of the [Attentive Energy website](#), and would like to draw your attention to the [Fishermen overview tab](#) which provides insight into our engagement approach and portal to a newly updated [Fishing Community & Mariner Offshore Wind Survey](#). Please also note the Fishermen tab includes links to “News + Updates” and “Documents + Resources” to gain up-to-date information on the operations taking place within the Lease Area.

Attentive Energy is committed to working with the recreational and commercial fishing communities to develop our Project in a collaborative and people-first manner. It is to this end that Attentive is, once again, seeking mass participation to help foster a transparent, two-way dialogue with these two priority communities to better understand the current use of the Lease Area, seek input on offshore wind related development, provide the fishing community with clear and timely information on development activities, and create an open-dialogue for fishermen to share insights on safety, best practices, and ways to develop with our project.

Thank you for taking the time to review the new website and for taking the Fishing Community & Mariner Offshore Wind Survey. We look forward to future conversations to ensure the responsible develop of the offshore wind industry.

Kind regards,

Sebastian Velez

Fisheries Liaison

Offshore Wind – Attentive Energy



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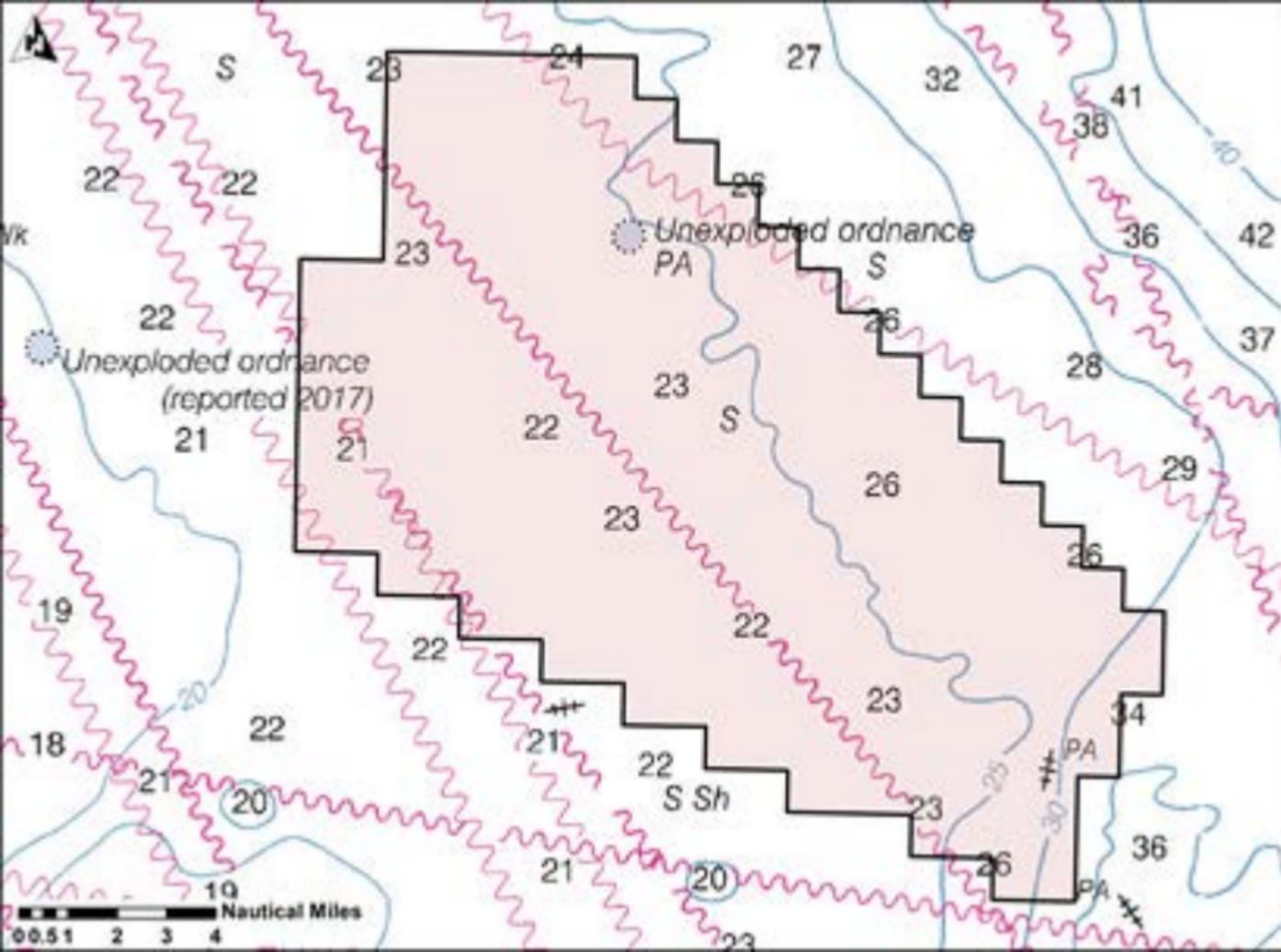
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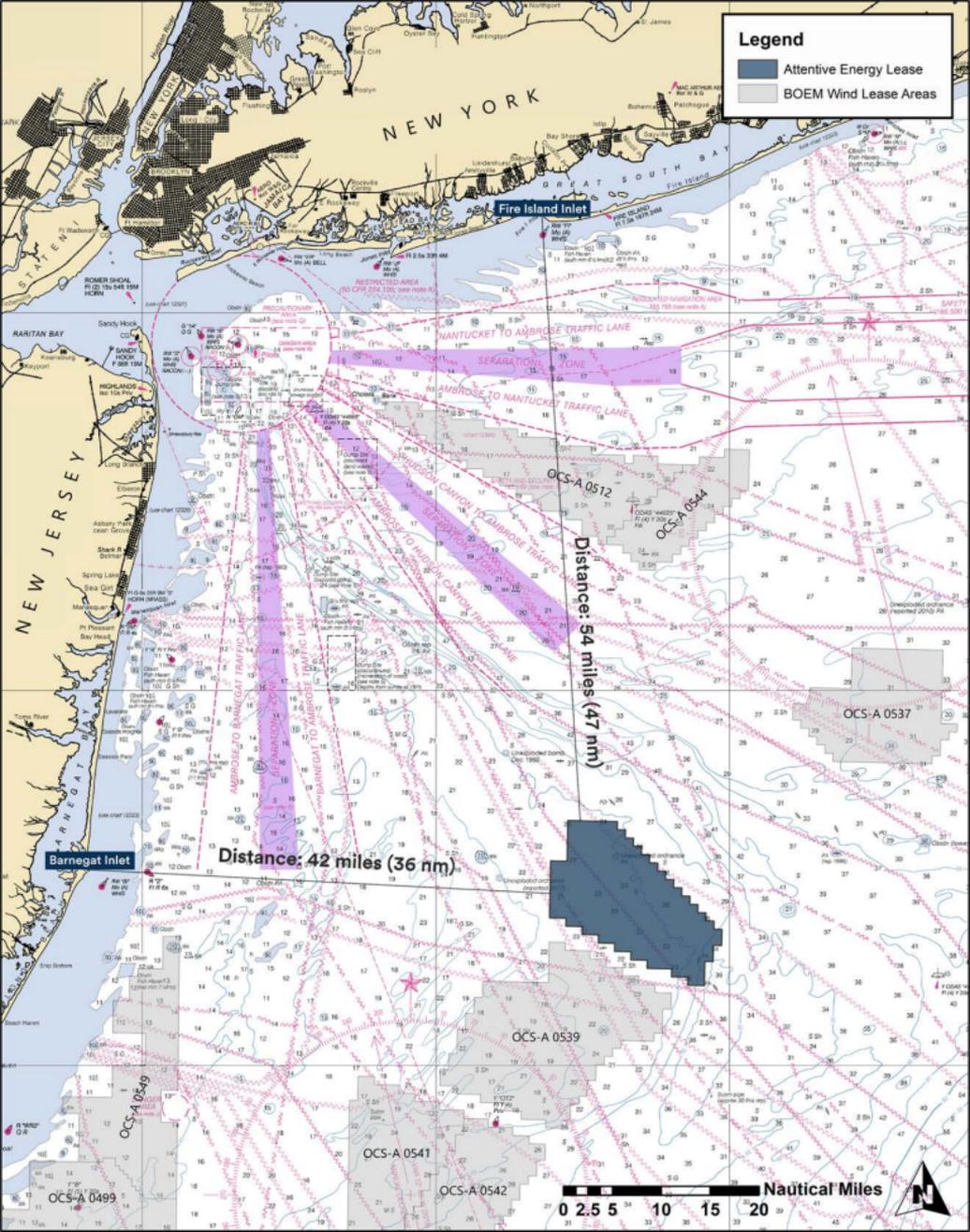
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Legend

- Attentive Energy Lease
- BOEM Wind Lease Areas





UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
GREATER ATLANTIC REGIONAL FISHERIES OFFICE
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August 30, 2022

Ms. Karen Baker
Chief, Office of Renewable Energy Programs
Office of Environmental Programs
Bureau of Ocean Energy Management
45600 Woodland Road VAM-OEP
Sterling, Virginia 20166

RE: Scoping comments on the Notice of Intent to Prepare a Programmatic Environmental Impact Statement (PEIS) for Future Wind Energy Development in the New York Bight

Dear Ms. Baker:

We have reviewed the July 15, 2022, *Federal Register* Notice of Intent (NOI) to prepare a Programmatic Environmental Impact Statement (PEIS) for future wind energy development in the New York Bight (NY Bight). As we interpret the NOI, BOEM intends to prepare a PEIS to analyze the potential impacts of wind energy development across a scope of six proposed projects in the NY Bight and how those impacts could change as a result of adopting avoidance, minimization, mitigation, and monitoring measures (AMMMs). We understand that the geographic scope is limited to the six NY Bight leases issued in 2022. In addition to the broad comments that follow, we are attaching important detailed comments and recommendations for your consideration.

As the agency responsible for the stewardship of our nation's ocean environment, NOAA has special expertise regarding, and legal jurisdiction over, a variety of marine resources impacted by offshore wind activities; in this capacity, we are a cooperating agency under the National Environmental Policy Act (NEPA) for a number of offshore wind projects. Our experience and expertise in marine trust resources gives us a clear understanding of the many issues at stake in developing this PEIS. Moreover, NOAA may consider adopting BOEM's NY Bight PEIS if we determine that it is adequate and sufficient to satisfy NEPA obligations for any eventual issuance of an authorization under the Marine Mammal Protection Act (MMPA). We commend BOEM for its proactive proposal to prepare a PEIS for the NY Bight and appreciate the opportunity to provide input and information for your consideration as you begin developing the PEIS. We offer the comments in this letter, and the additional information and comments in the attached Appendix A, to help inform BOEM's development of the PEIS. We consider these scoping comments to be a first step in our coordination and would appreciate the opportunity for continued dialogue between our agencies to better understand BOEM's approach to the PDEIS, further refine the AMMMs and alternatives, and ensure that the PDEIS is beneficial to both BOEM and NOAA.

Programmatic Opportunities

We are encouraged by BOEM's plans to use a programmatic approach to analyze potential offshore wind development in the NY Bight, and we support the development of a thoughtful



and meaningful assessment of the impacts. A programmatic NEPA analysis provides an opportunity to make use of the best available information to predict the direct, indirect, and cumulative impacts of anticipated wind development from full build out of the NY Bight lease areas, and to look at trade-offs between different alternatives to accomplish offshore wind energy goals while minimizing impacts to NOAA trust resources. The PEIS process provides an important opportunity to fully develop and evaluate the cumulative impacts anticipated from full build out including Construction and Operations Plan (COP) approval and resulting construction, operation, maintenance, decommissioning, and associated activities (e.g., post-construction biological surveys) for the six lease areas in the NY Bight. In addition to a cumulative evaluation of impacts across all lease areas, this programmatic analysis allows BOEM to take a broader look at potential export cable connection points in the NY Bight and identify opportunities for shared cable corridors and other measures to avoid and minimize impacts to marine resources, including commercially important fisheries, fishing communities, protected species, and the sensitive habitats that support them. The identification of robust AMMMs upfront in the process should create efficiencies for future project-specific regulatory processes and provide predictability to developers, the public, and affected stakeholders. NMFS supports BOEM's proposal to use the PEIS to establish a framework to tier analyses of project-specific COP submittals, though we have questions about the proposed approach to parsing and addressing negligible, minor, moderate and major impacts in the two levels of NEPA review. We would appreciate engaging with you regarding how you foresee COP-specific NEPA reviews and required Endangered Species Act (ESA) and Essential Fish Habitat (EFH) consultations and MMPA authorization(s) proceeding under this framework.

Developing and analyzing standard AMMMs will not only meaningfully reduce potential project impacts, but will allow developers to anticipate and incorporate required standards into their COPs, any additional surveys, and monitoring programs for each lease area. The development of standardized, required AMMMs for the region will also help ensure that all projects incorporate meaningful measures to avoid and minimize effects to marine resources; this, in turn, will increase the potential for the coexistence of offshore wind development with commercial and recreational fisheries, protected species, and EFH. We anticipate that future NEPA reviews could be streamlined if the PEIS allows for COP-specific analyses to be built on a robust baseline impact analysis and meaningful AMMMs.

We recommend BOEM approach this PEIS with consideration of the following goals: (1) to understand the combined environmental effects of a full build out of all six lease areas in the New York Bight and (2) to understand the value and effectiveness of developing up front avoidance and minimization project design alternatives as well as AMMMs to reduce impacts and allow for consideration of a more deliberative build out of the NY Bight.

Programmatic Approach

Programmatic Scope: In order to achieve the advantages stated above, the scope and approach to the NEPA analysis must be sufficiently broad. In the NOI, you state BOEM's "intent to prepare a PEIS to analyze the potential impacts of wind energy development activities in the New York Bight (NY Bight), as well as the change in those impacts that could result from adopting programmatic avoidance, minimization, mitigation, and monitoring measures (AMMMs) for the NY Bight." We agree with this fundamental approach and believe it can be best achieved by proposing alternative options for a full build out associated with such

development, evaluating the impacts of the proposed action and alternatives, as well as the effectiveness of requiring a suite of AMMMs as conditions of COP approval (i.e., as opposed to recommended or purely voluntary AMMMs).

To understand the anticipated direct, indirect, and cumulative impacts and to inform the development of AMMMs, the PEIS should analyze the full suite of actions associated with a full build out of all six lease areas within the NY Bight. However, the NOI describes an Action Alternative that would analyze the impacts of “a representative project in the NY Bight,” which would facilitate a comparison of the potential impacts of a project completed without adhering to the proposed AMMM measures. Rather than considering one project within the six lease areas, the PEIS would be most effective if it evaluates a full build out across all six lease areas, consistent with representative project parameters. We understand the need to rely on a representative project in the absence of COPs submitted for each lease area, but recommend that each lease area have a representative project appropriate to that location, reflecting that lease areas' spatial footprint, which would be appropriate for a basic review of protected species, habitat, fisheries overlaps, and navigational conflicts. This would reflect a full build out of all six lease areas to establish an effective programmatic scope of analysis and to develop appropriate AMMMs. Without taking a comprehensive look at the potential full buildout of the six leases together with the affected resources and communities, it is not possible to fully understand and address the impacts of implementing the AMMMs or ensure that the AMMMs fully address the range of potential effects. Furthermore, without an analysis of the anticipated effects of the full build out, at least at a planning-level scale, it will be difficult to know how effective the AMMMs will be when implemented.

Proposed Action and Alternatives: Consistent with the proposed programmatic approach discussed above, the proposed action should be described as the *full build out* of all six lease areas while incorporating AMMMs. This would correspond to the No Action Alternative described in the NOI as “no development of the lease areas in the NY Bight.” Action alternatives should consider build out across all of the lease areas and focus on avoidance, minimization, and/or compensation of impacts, reflecting a range of commitments to AMMMs.

Action alternatives under consideration should first address different options for full build out, which incorporate up front avoidance and minimization approaches (e.g., high value habitat that should be avoided). Information on affected NOAA trust resources and fishery operations should be considered at the initial stages of the PEIS to help inform alternatives for the development of all six lease areas in a holistic manner. For example, some lease areas may be less appropriate for full scale development than others due to the presence of important habitats, existing fishery operations, or seasonal use by protected species. Thorough evaluations of available data on existing resources could help facilitate optimal project design that avoids and minimizes impacts to trust resources throughout the NY Bight while also achieving energy generation goals. This will necessitate considering project design upfront in the alternatives development process.

The range of alternatives should address a range of commitments to AMMMs. It will be critical for alternatives to build in up-front avoidance and minimization design measures prior to considering additional AMMMs, and allow for an analysis that considers layering of mitigation measures to address unavoidable impacts. Mitigation measures should be analyzed and

considered for all alternatives to assess the effectiveness of these measures under a range of alternatives. More detailed information related to recommended alternatives for consideration are included in Appendix A.

Avoidance, Minimization, Mitigation and Monitoring Measures

While we support plans to identify and analyze AMMMs in the PEIS, the process would further benefit from identifying AMMMs that would be requirements for future projects. The NOI indicates that BOEM will exercise broad discretion in determining whether to apply AMMMs at the COP review stage. A more effective and meaningful approach would be for BOEM to require a commitment to implement such measures as a condition of COP approval, with potential exceptions considered on a project-by-project basis. Without this predictability, it will be a challenge to meaningfully analyze the effectiveness of such measures on a programmatic basis.

Appendix A outlines AMMMs we recommend that you consider in the development of the PEIS. These measures are focused on the resources under our jurisdiction and include measures to reduce impacts to our trust resources, fishing operations and fishing communities, and NOAA scientific surveys. Additionally, we recommend monitoring measures aimed at ensuring there is adequate information to understand effects to the ecosystem at large from full build out in the NY Bight. NOAA's 2022 Administrative Order on Mitigation Policy¹ provides a framework for avoiding, minimizing, and compensating for impacts to species and habitats through application of the mitigation sequence. We encourage you to adopt a similar stepwise approach for mitigation here. Such an approach would first focus on avoiding adverse impacts to high value habitats. High value habitats include irreplaceable and difficult to replace habitats; habitats that are crucial to achieving conservation objectives for NOAA trust resources; and habitats that provide important ecosystem functions or contribute to ecosystem resiliency. Following avoidance, this approach would then call for minimizing the impact of activities by limiting the degree or magnitude of the impact, action, or its implementation. Finally, any remaining adverse impacts that cannot be avoided or minimized should be offset or compensated for by replacement/replication or providing equivalent substitute resources or environments. We look forward to working with you to develop AMMMs in more detail and to determine how best to align this effort with parallel efforts to develop standard project design criteria or mitigation measures for ESA and EFH consultations.

NMFS Consultation and Authorizations

It is our understanding that the PEIS will establish a framework to facilitate future COP-specific environmental reviews under NEPA. The PEIS provides an opportunity to enhance collaboration, increase predictability, and streamline opportunities for future ESA and EFH consultations.

We have been working with you to identify opportunities to streamline consultations for offshore wind. We are engaged with BOEM on efforts to develop a framework programmatic ESA consultation for COP-approval in existing lease areas in New England and the Mid-Atlantic, including the six NY Bight leases. We are also working toward a programmatic approach for

¹ Available at: <https://www.noaa.gov/organization/administration/noaa-administrative-orders-chapter-216-program-management/nao-216-123-noaa-mitigation-policy-for-trust-resources>

future EFH consultations in New England and the Mid-Atlantic. It is important that the PEIS and the framework programmatic ESA and EFH consultations are complementary. One of the foundations of the programmatic consultations will be the development of standard project design criteria; these criteria will not only frame a “typical” project and its associated activity (e.g., location, timeframe), but will also establish standard measures to avoid, minimize, and monitor effects of the action on ESA-listed species and designated critical habitat, and EFH. Ensuring consistency between the scope of activities and AMMMs addressed in the PEIS, and the project design criteria associated with the ESA and EFH programmatic consultations, is necessary for the benefits of this approach to be realized. We look forward to continuing to work with you on these streamlining opportunities and encourage further coordination to ensure the PEIS content and timing appropriately align with those of the ESA and EFH programmatic consultations.

Upon request, NMFS may issue an incidental take authorization (ITA) pursuant to the MMPA allowing the take of marine mammals incidental to construction, operation, and decommissioning (as appropriate) of a wind project or multiple wind projects. We hope to continue discussions between our agencies related to how the PEIS may facilitate or streamline NMFS’ Office of Protected Resources NEPA compliance needs when considering issuance of ITAs for the NY Bight lease areas. Based on our current understanding of the PEIS, we anticipate that additional NEPA documents would need to be prepared for future ITA applications. We encourage further dialogue on how the development of a PEIS could facilitate the process for issuing a single Letter of Authorization (LOA) covering all the NY Bight COPs and look forward to future conversations on this topic.

Conclusion

We look forward to working with you on the scope of the PEIS and accompanying AMMMs. A well-executed PEIS would be beneficial to better define the anticipated project-scale and cumulative impacts associated with the development of the six lease areas and also provide greater predictability and efficiencies to the regulatory process. Should you have any questions regarding these comments, please contact Sue Tuxbury in our Habitat and Ecosystem Services Division at (978) 281-9176 or susan.tuxbury@noaa.gov.

Sincerely,



Michael Pentony
Regional Administrator

Enclosed: Appendix A

Cc: Jill Lewandowski, BOEM
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Appendix A

NMFS New York Bight Programmatic Scoping Comments

This Attachment provides comments on the resources under NMFS jurisdiction; analysis of those resources; recommended avoidance, minimization, mitigation and monitoring measures (AMMMs); and alternatives for consideration to reduce impacts to trust resources, fishery operations and communities, and scientific surveys. These comments are intended to help inform BOEM's development of a programmatic EIS (PEIS) for the New York Bight (NY Bight) lease areas. These recommendations represent our initial input in response to publication of the NOI. We look forward to continuing to engage with you in this process to explore the most effective ways to develop and analyze AMMMs for the PEIS, as well as project-specific construction and operations plans (COPs) and subsequent NEPA documents for the NY Bight.

NOAA Trust Resources in the New York Bight

The NY Bight, a central portion of the Mid-Atlantic Bight, is a critically important habitat area due to its geographic location, associated inshore and estuarine connections, bathymetric features and complex array of habitats, as well as its position relative to various currents, including those that form and maintain the Mid-Atlantic Cold Pool, all of which contribute to high biological productivity. Areas of the NY Bight are designated essential fish habitat (EFH) for nearly every life-stage of every species managed by the New England and Mid-Atlantic Fishery Management Councils and NMFS; areas of the NY Bight are also designated EFH for species managed by the South Atlantic Fishery Management Council. The NY Bight is one of the most important regions for both commercial and recreational fisheries on the East Coast of the United States. Fishing activity in this area contributes significantly to our nation's economy and food supply and many communities in the region rely on fishing as a vital part of their economic viability. In addition to supporting important fisheries resources, the NY Bight is used by a number of species listed under the Endangered Species Act (ESA), including listed fish, sea turtles, and marine mammals. Other marine mammals, protected by the Marine Mammal Protection Act (MMPA), also use this area.

In previous correspondence, we provided detailed comments describing NOAA trust resources and fishing activities that occur in the NY Bight. Rather than repeat that information, please consider the letters noted below, which are incorporated here by reference. Relevant resource information was provided by us in the following letters:

- June 7, 2018 letter, in response to your Call for Information (CFI) for the identification of wind energy areas (WEAs) in the New York Bight, as well as supplemental fisheries information we provided on July 30, 2018;
- April 21, 2021 scoping comments, for the preparation of an Environmental Assessment for site characterization activities in the New York Bight;
- August 12, 2021 letter, in response to BOEM's Proposed Sale Notice on August 12, 2021; and,
- September 9, 2021 EFH Letter, in response to Draft Environmental Assessment and Essential Fish Habitat Assessment; Commercial and Research Wind Lease and Grant Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf of the New York Bight.

Additional relevant information related to resources in the area may also be found in our July 20, 2021, Empire Wind scoping comments, a project that is located in the NY Bight and adjacent to the lease areas considered in the PEIS. Additional information related to NMFS consultations and information needs for offshore wind projects can be found on NMFS offshore wind technical guidance webpage¹. Information on the stock status of various fisheries can be found on our website, under Population Assessments²; this information should be included in any analyses. Furthermore, summaries of historic fishery landings, revenue, and effort within each originally proposed NY Bight lease area are available on our Atlantic Offshore Wind website³. Soon, we will also add cumulative fisheries operations summaries for all of the lease areas combined for assessment in the PEIS.

Through the PEIS, we recognize BOEM is taking a proactive and comprehensive approach to consider impacts of development of the NY Bight lease areas as well as AMMMs to reduce those impacts. To be most effective, the PEIS should consider impacts to NOAA trust resources from full build out of the six lease areas and take a holistic, ecosystem approach to considering AMMMs to reduce those impacts. This includes fully evaluating interactions among all impact producing factors (IPFs) and associated responses by marine trust resources, oceanographic and atmospheric processes, and fishing activities across all lease areas within the NY Bight. For example, the PEIS should consider how project structures may affect local, regional, and coast-wide ocean circulation, which could affect species distribution and impact fishery operations. More specifically, potential impacts to the unique circulation patterns of the Hudson Shelf and Hudson Shelf Valley, the Labrador Current, as well as other currents and interacting forces that create and maintain the Mid-Atlantic Cold Pool should be comprehensively evaluated. This ecosystem approach is consistent with similar DOI guidance⁴.

Information on affected resources and fishery operations should be considered at the initial stages of the PEIS to help inform the development of all six lease areas in a holistic manner. For example, some lease areas may be less appropriate for development than others due to the presence of important habitats, existing fishery operations, or seasonal use by protected species. Thorough evaluations of available data on existing resources could help facilitate optimal project design (i.e., where, when, how, and how many structures should be built) that avoids and minimizes impacts to trust resources throughout the NY Bight while also achieving energy generation goals. This will necessitate the development of various alternatives to the full build out of the six lease areas. Baseline data collection will likely be needed to address known information gaps before finalizing project design for individual projects, particularly for fisheries NY Bight resources and benthic habitats (see below). Such data collection should be informed

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<https://www.fisheries.noaa.gov/new-england-mid-atlantic/science-data/technical-guidance-offshore-wind-energy-projects-greater-atlantic-region>

² <https://www.fisheries.noaa.gov/topic/population-assessments>

³ Available at:

https://www.fisheries.noaa.gov/resource/data/socioeconomic-impacts-atlantic-offshore-wind-development?utm_medium=email&utm_source=govdelivery

⁴ Department of the Interior (DOI). 2015. Departmental manual 600 DM 6: Implementing mitigation at the landscape-scale. Washington (D.C.): US DOI. [accessed 2022 July 1] and Clement, J.P. et al. 2014. A strategy for improving the mitigation policies and practices of the Department of the Interior. A report to the Secretary of the Interior from the Energy and Climate Change Task Force, Washington, D.C., 25 p

by input received through this NOI and additional engagement with cooperating state/federal agencies and affected constituents. A proactive and coordinated approach upfront can lead to greater efficiency and reduce timelines in the permitting process and ultimately lead to more responsible project design and development that reduces impacts to marine trust resources, including protected species, and the fishing communities that rely on them.

Avoidance, Minimization, Mitigation, and Monitoring Measures

As described in the NOAA Mitigation Policy for Trust Resources (NAO 216-123, Section 3.06)⁵ impact avoidance and minimization must be considered and fully and fairly evaluated through the alternative development process before compensatory mitigation is considered; this is known as the mitigation sequence. This step-wise approach first focuses on the avoidance of adverse impacts, followed by the incorporation of minimization measures, limiting the degree and magnitude of adverse impacts. The mitigation sequence is clear in that compensating for unavoidable adverse impacts should be viewed as mitigation of last resort. When compensatory mitigation is necessary to offset or compensate for unavoidable impacts, we recommend all compensatory mitigation measures be developed and implemented on a regional scale and across all NY Bight leases consistent with the NOAA Mitigation Policy. This approach allows for the consideration of a wide range of compensatory mitigation options, with a preference for on-site and in-kind for difficult to replace resources, but including off-site and out-of-kind compensation, selecting the option that is most suitable for NOAA's trust resources. Similar impacts to trust resources and fishing communities should be addressed in similar ways across all projects. This approach increases consistency and effectiveness of mitigation measures for affected resources, reduces uncertainty for developers, and minimizes the burden on cooperating agencies and affected entities during project review and any compensation processes. Further, as described in the NOAA Mitigation Policy, the level and type of uncertainty associated with compensatory mitigation may warrant increased amounts of compensation to assure that impacts are sufficiently offset.

The PEIS should use the best scientific information available to assess the efficacy of AMMMs, and require the collection of additional scientific information to do so, as necessary. The collection of scientific information should include comprehensive surveys to establish baseline resource conditions for trust resources, and long-term monitoring to assess changes to resource conditions and oceanographic processes attributable to project activities and adaptations of fishing operations to the presence of project structures. Monitoring these elements helps maximize the effectiveness of AMMMs for potential impacts on trust resources and fishing communities.

Below, we provide initial recommendations for AMMMs to be considered in the PEIS. We are providing these in response to your request in the NOI and to assist in your development of the PEIS. Please note, given the limited scoping period to compile these AMMMs, we consider this list to be preliminary and do not consider these recommended measures to be an exhaustive list of AMMMs. As we continue to coordinate with you in the development of the PEIS, we expect additional or modified measures may be identified and submitted to BOEM. We appreciate the

⁵ Available at:

<https://www.noaa.gov/organization/administration/noaa-administrative-orders-chapter-216-program-management/nao-216-123-noaa-mitigation-policy-for-trust-resources>

opportunity to continue to work with you in the development of the PEIS and the identification of appropriate AMMMs.

Avoidance and Minimization Measures

The following preliminary measures should be considered for avoiding and minimizing adverse impacts to NOAA trust resources at the early project planning and siting stages as well as during project construction. Additional and/or modified measures may be identified during PEIS development. Please see the NOAA Mitigation Policy for definitions of relevant terms.

Project Planning and Siting

- Use the NMFS Recommendations for Mapping Fish Habitat⁶ to collect project-specific data to accurately and comprehensively delineate and characterize habitats in the project areas. Targeted sampling should be used to characterize habitats. Accurately mapping habitat is essential to the process of avoidance, minimization, and mitigation. Baseline data collected for monitoring studies should be used to identify site-specific sensitive and vulnerable habitats and life history stages that may require additional targeted sampling.
- Avoid sensitive habitats and difficult-to-replace resources⁷, and Prime Fishing Grounds/Areas (N.J. Admin. Code § 7:7-9.4) in lease areas (i.e., avoid placement of wind turbine generators (WTGs), offshore substations, AC/DC converter stations, scour protection, and inter-array cables) and cable routes/corridors.
 - Specific example: the entire Mid-Shelf Scarp and Prime Fishing Ground/Area known as “Triple Wrecks,” which also contains “The Wall,” should be avoided (this applies to the southeastern edge of OCS-A 0538).
- Avoid routing export cables through estuaries and embayments. Estuaries and embayments contain numerous sensitive habitats and difficult-to-replace resources as well as many sensitive life stages of various species.
- Evaluate available fishery resource and fishing vessel operational data⁸ to help inform the location, spacing, and orientation of project structures within projects and across adjacent projects. Avoid placing project structures within or near areas of high fishery resource or fishing activity concentration. Consistent layouts between adjacent projects minimize navigational hazards and provide a more uniform grid to facilitate fishing, transit, and search and rescue operations.
- Consider future resource/fishery distribution throughout the operation life of projects to minimize evolving long-term impacts. Because the distribution and behavior of some marine resources is changing due to climate change, historic data may not reflect future distribution of marine resources and fishing operations. However, trends in available and updated data should be considered. For example, the Fishing Communities at Sea dredge

⁶ Available at this site:

https://media.fisheries.noaa.gov/2021-03/March292021_NMFS_Habitat_Mapping_Recommendations.pdf?null

⁷For the purposes of this appendix, sensitive habitats and difficult-to-replace resources include, but are not limited to, spawning areas, submerged aquatic vegetation (SAV), natural hard bottom substrates (particularly those with macroalgae and/or epifauna), dense faunal beds (e.g., cerianthid beds), biogenic reefs (including shellfish), shellfish habitat, tidal wetlands/marshes, subtidal and intertidal flats (e.g., mudflats), artificial reefs and shipwrecks, and benthic features (e.g., ridge and trough complexes, shoals, ledges, dropoffs).

⁸ Please consult the Northeast and Mid-Atlantic Ocean Data Portal (<https://www.northeastoceandata.org> and <https://portal.midatlanticocean.org/>, respectively) and our socioeconomic impact reports (https://www.fisheries.noaa.gov/resource/data/socioeconomic-impacts-atlantic-offshore-wind-development?utm_medium=email&utm_source=govdelivery) and fishing footprint data (<https://apps-nefsc.fisheries.noaa.gov/read/socialsci/fishing-footprints.php>), among other sources.

gear data available on the MARCO data portal shows a shift over time with more fishing activity shifting north into the NY Bight and further inland from the shelf. The data shows increasing fishing activity just south of OCS-A 0544 and OCS-A 0542, as well as shifts in the northwest corner of OCS-A 0538. This information should be considered when making decisions about the location of wind project structures. NOAA staff are available to discuss relevant data, analysis, and issues. Ongoing research awarded by the National Science Foundation⁹ and other entities, including NMFS- and fishing industry-funded research, will also be available and provide data and tools for forecasting future environmental and social conditions to inform decision makers and support ocean planning.

- Avoid siting WTGs in areas that overlap with or are adjacent to oceanographic fronts. This will minimize disruptions to oceanographic processes that aggregate prey for protected species, facilitate species migration, and distribute larvae and juvenile fish species.
- Avoid or minimize placement of WTGs and offshore substations in high use areas for protected species, with particular attention to North Atlantic right whales.
- Identify and require the use of common/shared cable export corridors that avoid sensitive habitats and difficult-to-replace resources, Prime Fishing Areas/Grounds, and areas of high fishery resource or fishing activity concentration. Or, use a ‘backbone’ export cable to reduce impacts to habitat and fishing obstructions.
- Identify and require the use of bottom areas that would allow for full cable burial (and avoid need for scour protection) for inter-array and export cables.
- Require compliance with the project design criteria and best management practices outlined in NMFS June 2021 ESA programmatic consultation (or any updated versions of this document) for all geophysical and geotechnical surveys carried out over the life of the leases.
- Evaluate cumulative port infrastructure required for survey vessels, manufacturing, marshaling, O&M, etc. to meet regional energy goals, in order to avoid and minimize adverse space-use conflicts to fishing ports and infrastructure.
- Consider multiple project design options such as the type, number, size (physical dimensions and power output), location, and orientation of WTGs, offshore substations, cables, and scour protection, with a focus on identifying design options that avoid and minimize impacts to trust resources within and across projects. Examples are provided below.
 - Foundation types: Impacts to marine resources may vary depending on the size and design of different foundation types, including required construction methods for foundation installation..
 - WTG sizes: Higher energy production WTGs should be considered for lease areas that support sensitive benthic habitats or existing and likely future fishery uses to reduce the total number of foundations; this can facilitate avoiding and minimizing impacts to resources while allowing for power production requirements to be met. The foundation type and size should also be considered for minimizing adverse impacts (i.e. maximizing energy output with the least impactful foundation size), as larger diameter turbines may create more significant acoustic impacts, particularly during construction.

⁹ https://www.nsf.gov/awardsearch/showAward?AWD_ID=2137701

- Scour protection (for WTGs and cables): Scour protection should be designed to mimic the existing, natural habitat. Where existing habitat substrates do not include sediment types suitable for scour or cable protection, engineered protection should incorporate a suitable top-dress of natural materials, including natural, rounded cobbles or boulders as appropriate.

Project Construction and Operation

- Implement measures to reduce the risk of vessel strike to marine mammals, sea turtles, and Atlantic sturgeon, including limiting speeds of all vessels to 10 knots (kts) or less when North Atlantic right whales are expected to occur in lease areas and along vessel transit routes. Other measures include, but are not limited to, the use of observers and monitoring technologies, other speed restriction triggers, seasonal restrictions for certain activities, etc. Measures should include standards for vessel operations at night and in other low visibility conditions. Alternative means for crew transport to minimize daily vessel traffic (e.g., helicopters, Service Operation Vessels) should also be evaluated.
- Develop standards for determining where it would be appropriate to use foundation designs that do not rely on pile driving (e.g., gravity-based foundations). Factors for consideration should include engineering feasibility that allow for such designs, impacts on benthic resources and environmental conditions from the foundation type, and impacts of noise during construction. Require developers to use foundations that minimize impacts to protected species and habitat if engineering considerations are met.
- Where pile driving cannot be avoided, require the most effective methodologies available to reduce pile driving noise to the maximum extent practicable, including, but not limited to, use of noise abatement systems (e.g., big double bubble curtains), and a hammer schedule that results in the lowest sound exposure level possible.
- Develop and implement standard protocols for addressing unexploded ordnances, including implementation of best available technology to avoid or minimize exposure of protected species and sensitive habitats to low order (e.g., deflagration) or high order detonations or chemical release.
- Adopt standards for protected species monitoring (e.g., minimum visibility, protected species observer protocols, etc.). Require minimization measures (e.g., criteria for clearance and shutdown zones) during construction activities with the goal of avoiding exposure to noise or other conditions that could result in the mortality or serious injury of individuals, and that reduce the potential for disturbance. This should include standards for operations at night or in other low visibility conditions. Protocols should involve visual observations, Passive Acoustic Monitoring (PAM), and other technologies, as appropriate.
- Develop and require standards for vessel and construction activities at night and in low visibility conditions that would restrict activities that may affect protected species (particularly right whales) when they cannot be reliably and effectively detected.
- Develop and require protocols for coordinating project activities within and across lease areas with the goal of avoiding the generation of sound fields and other construction and operational impacts (within and across projects) that may result in cumulative or additive impacts on protected species, with particular focus on avoiding population level impacts.
- Avoid construction activities during periods when protected species are in high abundance and during sensitive times of year for fish species to avoid disrupting key

life-history stages and behavior, such as spawning assemblages and egg laying, larval disbursement, settlement and recruitment, and important growing periods for trust resources. Such measures may include time of year restrictions, sequencing of activities, or other appropriate measures.

- Use cable installation methods, such as horizontal directional drilling, that avoid and minimize adverse impacts to sensitive habitats and difficult-to-replace resources.
- Develop project schedules that avoid pile driving and high-vessel use activities during the time of year when North Atlantic right whales are most likely to occur in the lease areas and vessel routes.
- Identify, chart, and communicate the location of all project structures to maritime users, including the placement of monitoring equipment and the relocation of any boulders or other obstructions during cable laying procedures. This will reduce the potential for allisions and gear damage.
- Communicate and engage with fishing industry members regarding the timing and duration of survey and construction activities in advance of initiating any such activities.
- Require adherence to best management practices to limit capture, entanglement, injury, and mortality of protected species in biological surveys.
- Implement seasonal restrictions for dredging activities and select dredge types with the goal of minimizing potential impingement and entrainment of protected species and reducing impacts to EFH sensitive life stages. Develop and implement standard protocols for protected species observers on relevant dredge types (e.g., hopper dredges).
- Require routine clean ups of ghost gear and/or other debris around foundations within the lease areas.
- Develop an adaptive management framework to quickly resolve unanticipated issues so that impacts to trust resources are minimized quickly and efficiently.
- Ensure that protected species do not interact with any gear in the water that is related to wind farm construction or operations, including but not limited to anchor and buoy lines.
- Require the use of trained, third-party protected species observers with no other duties to effectively implement mitigation and monitoring measures during construction and operations.

Mitigation/Compensation Measures

Mitigation measures can take many forms, including preservation, restoration, offset, enhancement, and compensation¹⁰. We encourage BOEM to explore these options for adverse impacts that cannot be avoided and recommend the appropriate types of mitigation measures to address potential impacts to trust resources and fishing communities. We are available to assist you in identifying the appropriate mitigation type for each impact.

- Compensatory mitigation should be required for all unavoidable impacts to EFH, federally-managed species, and their prey with a preference for on-site and in-kind for difficult to replace resources, but including off-site and out-of-kind compensation, selecting the option that is most suitable for NOAA's trust resources.
- Mitigation measures to address unavoidable impacts to fishing operations and communities should address both economic and social/cultural impacts and incorporate

¹⁰ For definitions of these terms, see the NOAA Mitigation Policy for Trust Resources available at: https://www.noaa.gov/organization/administration/noaa-administrative-orders-chapter-216-program-management/nao-216-123-noaa-mitigation-policy-for-trust-resources#_ftn3.

the cumulative effects of regional wind projects, including those adjacent to the NY Bight lease areas. Such measures should be consistent with BOEM’s mitigation guidance, including relevant comments/issues identified by NMFS, the public, and BOEM’s Fisheries Mitigation Technical Working Group. We encourage BOEM to be inclusive rather than exclusive when considering allowable mitigation measures beyond payments for revenue exposure loss and to consider landscape/seascape level impacts. Such measures could include community development funds, community benefit agreements, gear research, fuel subsidies, infrastructure enhancements, and shellfish aquaculture/resettlement efforts, among others.

- Lessees should be required to contribute to and implement the findings of the NMFS/BOEM collaborative survey mitigation strategy to help offset disruptions to regional scientific surveys.

Monitoring Measures

We encourage scientifically rigorous long-term monitoring of biological resources, their benthic and pelagic habitats, and the social, economic, and cultural impacts on fishing communities using methodologies that are standardized across wind projects within the region. Cumulative impact analysis should be used to assess the spatial and temporal accumulation of IPFs on physical, biological, economic, and cultural resources. We encourage the application of ecosystem-based approaches to management (EBM). This includes integrated ecosystem assessment, an operational approach to EBM that can assess cross-sector trade-offs, integrate offshore wind impacts into broader marine resource management decisions, and ensure all impacts, including cumulative impacts, are evaluated, including in the context of climate change.

- Baseline data should be collected for a minimum of three years in order to assess inter-annual variation. All raw data and data summaries should be provided to NMFS annually as it is collected. Baseline data should be used to inform site-specific survey needs and avoidance, minimization and mitigation measures.
- Monitoring to address new and emerging issues such as the impacts of operational noise and substrate vibrations should be undertaken in a scientifically rigorous and systematic way.
- Monitoring of biological resources should have clearly stated goals and objectives, use regionally standardized field and analytical methodologies, and have the statistical power to detect impacts from offshore wind development.
- While allowing for project-specific monitoring needs, fisheries surveys should be conducted in a manner that is regional in scope and consistent to the extent possible with the NMFS/BOEM Survey Mitigation Plan, as it is developed. Also refer to information detailed in the Responsible Offshore Science Alliance’s Offshore Wind Monitoring Framework and Guidelines¹¹.
- The forthcoming habitat monitoring recommendations, currently under development, should be used to inform the design of habitat monitoring plans. These recommendations are purposefully prescriptive regarding monitoring needs and methodologies.
- Monitor to assess changes to the seafloor (e.g., bathymetry, substrate characteristics) within and adjacent to leases through the regular collection of multibeam echosounder, side-scan sonar, and backscatter data.

¹¹ Available at: https://www.rosascience.org/files/ugd/99421e_b8932042e6e140ee84c5f8531c2530ab.pdf

- Monitor to assess the impacts of the physical presence and operation of the turbines. Monitoring should assess changes in the atmospheric and oceanographic environment including pelagic habitat, seasonal stratification, and the Mid-Atlantic Cold Pool. Some relevant methodologies were described in a 2021 workshop held by Rutgers University and a related workshop held in 2019 on offshore wind and the Cold Pool (Kohut and Brodie, 2019).
- Monitor social, cultural and economic impacts, including changes to fishing operations and the displacement of fishing effort into other areas, should be conducted. Standard, science-based monitoring methodology for fishery performance and fishing communities should be developed and baseline data collected, building on research presented at the October 2020 Synthesis of the Science Workshop and the May 2022 Offshore Wind and Fishing Operations Workshop.
- Monitor changes in commercial fishing activity to detect changes in bycatch or entanglement rates of protected species, particularly the North Atlantic right whale, and support the adoption of ropeless fishing practices where necessary.
- Develop robust reporting standards and standardized databases. A centralized, publicly accessible database will allow for data to be integrated across projects and queried to answer a range of scientific questions necessary to inform management decisions. All monitoring data should be stored in standard format in an openly accessible repository to facilitate transparency and sharing of information.
- Work with regional experts to develop a robust monitoring and study design with adequate sample sizes, appropriate spatial and temporal coverage, and proper design allowing the detection of potential impacts of offshore wind projects on a wide range of environmental conditions including protected species distribution, prey distribution, and habitat usage.
- Continuous archival Passive Acoustic Monitoring (PAM) and acoustic telemetry should be conducted in the lease areas to collect baseline information on the presence, distribution, and seasonality of North Atlantic right whales, other marine mammals and acoustically tagged species (e.g., sturgeon, sea turtles, highly migratory species such as tuna and sharks). Additionally, both archival and real-time PAM should be used to collect baseline information on the presence, distribution, and seasonality of marine mammals in transit routes and to minimize risk of vessel strike of transiting vessels on marine mammals. Archival PAM should also be used to establish baseline noise levels and habitat conditions in the proposed lease areas and surrounding waters. A coordinated regional PAM approach should be taken which follows the recommendations in Van Parijs et al. (2021)¹², which suggests a minimum of three to five years of monitoring using continuous PAM archival recorders immediately prior to construction.
- Support the development of a regional PAM network across the lease areas to monitor long term changes in baleen whale distribution and habitat use. A regional PAM network should consider adequate array/hydrophone design, equipment, and data evaluation to understand changes over the spatial scales that are relevant to these species for the duration of these projects, as well as the storage and dissemination of these data.
- Develop an acoustic telemetry array in the lease areas and potential cable routes and

¹²Van Parijs, S.M., Baker, K., Carduner, J., Daly, J., Davis, G.E., Esch, C., Guan, S., Scholik-Schlomer, A., Sisson, N.B. and Staaterman, E., 2021. NOAA and BOEM Minimum Recommendations for Use of Passive Acoustic Listening Systems in Offshore Wind Energy Development Monitoring and Mitigation Programs. *Frontiers in Marine Science*, 8, p.760840

support research for the tracking of sturgeon, Atlantic cod, and other economically important fish species, and deployment of acoustic tags on sea turtles as well as other acoustically tagged species.

- Conduct research regarding the abundance and distribution of listed sea turtles and fish, including Atlantic sturgeon, in the lease areas and surrounding region in order to understand distribution and habitat use and aid in density modeling efforts, including the use of acoustic telemetry networks to monitor for tagged fish.
- Monitor noise levels during construction (e.g. sound field verification monitoring for pile installation) and operation. Record ambient noise in the lease areas for three years prior to construction and three years post construction to understand how WTG, including sound sources associated with turbine maintenance (e.g., service vessels) and turbine operations, may influence the acoustic soundscape.
- Aerial surveys should be conducted for a minimum of three to five years prior to construction in the lease areas and surrounding waters to collect baseline data on the presence, abundance, distribution, and seasonality of marine megafauna. Surveys should follow a similar protocol to the aerial surveys conducted in the Massachusetts/Rhode Island Wind Energy Areas¹³ and should be flown on a regular basis. Surveys should continue throughout construction and operational phases of wind energy development and be used beyond monitoring purposes with the goal of assessing effects of offshore wind energy development on marine megafauna species.
- Regular physical and biological oceanographic sampling should be conducted a minimum of three to five years prior to construction in the lease areas and surrounding waters to collect baseline data on the pelagic environment. Surveys should be designed to assess seasonal characteristics of the water column, including the formation and breakdown of the Cold Pool and prey resources (i.e., plankton, forage fish). Sampling should occur such that results can be used to assess effects of the physical structure of wind turbines on the oceanographic and atmospheric environment. Research design should consider recent efforts to assess ecological metrics and sampling strategies, such as a 2021 workshop held by Rutgers University and a related workshop held in 2019 on offshore wind and the Cold Pool¹⁴.
- Long-term monitoring of NOAA trust resources, including protected species and federally managed fish species, should occur throughout construction and operations to determine if management actions are necessary to minimize unanticipated impacts after the permitting process is complete.
- Research and monitoring efforts should be coordinated through the Regional Wildlife Science Collaborative for Offshore Wind (RWSC) to increase effectiveness, utility, and data sharing.

Recommend Alternatives for Consideration

As discussed in our letter, the PEIS should evaluate a range of alternatives that consider full build out of all six lease areas with incorporation of a range of up-front minimization approaches and AMMMs. To support a sharp comparative analysis we suggest that the range cover a spectrum of avoidance and minimization approaches and measures that range from little or none

¹³ <https://www.masscec.com/resources/marine-mammal-and-sea-turtle-surveys>

¹⁴ 2021 Partners in Science Workshop: Identifying Ecological Metrics and Sampling Strategies for Baseline Monitoring During Offshore Wind Development, 2019 Partners in Science Workshop: Offshore Wind and the Mid-Atlantic Cold Pool (https://rucool.marine.rutgers.edu/wp-content/uploads/2020/10/PartnersWorkshop_WhitePaper_Final.pdf)

to maximum feasible protection. Below we offer suggested alternatives for consideration consistent with the approaches and AMMMs identified above. These alternatives consider development across all six lease areas, but incorporate avoidance and minimization to reduce impacts to NOAA trust resources and fishing communities by building in up-front a range of avoidance and minimization options. These alternatives can also be combined to create one or more comprehensive impact avoidance/minimization alternatives. It is assumed that all alternatives described below would be designed to ensure at least minimal feasibility of each project from an economic and technical perspective. Additional mitigation measures described above should be analyzed and considered for all alternatives to assess the effectiveness of these measures under a range of alternatives. We welcome the opportunity to further discuss and refine the alternatives described below.

Benthic Habitat Impact Minimization - Development of an alternative that would remove high value habitat areas from consideration of development such as the Mid-Shelf Scarp, sand ridge and trough complexes, hard bottoms, submerged aquatic vegetation, and other sensitive habitats, irreplaceable and difficult to replace resources, and Prime Fishing Grounds/Areas. Avoidance of these vulnerable habitats should also be considered for the cable routes, either as part of this alternative or as a sub-alternative. Some of these vulnerable habitat areas and their locations are known (such as the Mid-Shelf Scarp), but others should be identified through site-specific surveys and benthic habitat mapping efforts.

Pelagic Habitat Impact Minimization - Development of an alternative that considers effects of development within the six lease areas and in combination with other proposed offshore wind development in the region on pelagic habitats in the NY Bight, including the Mid-Atlantic Cold Pool. This alternative would consider the size and scale of development in the six lease areas and in combination with other proposed wind developments to understand the range of interactions between wind development and the Mid-Atlantic Cold Pool. This alternative may require analysis and modeling to evaluate the effects of project structures on the formation and maintenance of the Mid-Atlantic Cold Pool. Modeling can examine varying options of lease development to assess how the size and scale of different development approaches may vary in their effects on the Cold Pool. This would allow for the evaluation of options for considering different project scales and design to minimize impacts to the Cold Pool.

Fisheries Impact Minimization - Development of an alternative that considers the Proposed Action (full build out) of the six leases areas implemented with sufficient and consistent WTG spacing across lease areas to increase the likelihood that fishing can still occur. This alternative should consider a range of WTG spacing options identified in coordination with the fishing industries operating in these areas. This alternative should also consider removal of key fishing areas from development and identify these areas with consideration of anticipated shifts in fishing grounds in prioritizing WTG locations.

Cable Route Coordination - Development of an alternative that considers potential cable landing locations for the six lease areas and identifies and evaluates options for coordinated and consolidated routes for the export cables. This alternative would

evaluate routes that would reduce impacts to marine resources and consider how export cable routes from each of the six individual leases areas could be consolidated into fewer, common corridors to further avoid and minimize impacts to resources.

Land Based Cable Alternative (avoid estuaries and embayments) - Development of an alternative that ensures all export cable routes for interconnections with the grid avoid crossing through estuaries and embayments. Rather than impacting these sensitive coastal ecosystems, this alternative would only consider use of land-based cable routes that avoid estuaries and embayments and associated adverse impacts to marine resources.

Full Avoidance/minimization Alternative - The Full Avoidance/minimization scenario would incorporate a combination of identified avoidance/minimization alternatives as well as all applicable AMMMs. This alternative would consider development of the six lease areas with consideration of all feasible avoidance and minimization measures in the project design and incorporate all available AMMMs as mandatory conditions of COP approval.

Low/No Avoidance/Minimization Alternative - The Low/no Avoidance/Minimization Scenario would incorporate no avoidance and minimization alternatives or AMMMs. While NMFS is not advocating selection of this alternative, we do believe carrying it forward for detailed evaluation is critical to inform a comparative analysis to more fully assess the value of AMMMs under consideration.



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

August 31, 2021

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

Re: EFH Addendum for South Fork Offshore Wind Energy Project, Lease Area OCS-A-517, offshore Rhode Island

Dear Ms. Morin:

We have reviewed the revised Essential Fish Habitat (EFH) Addendum received on August 2, 2021, for the proposed South Fork Wind Farm offshore wind energy project. This project includes the construction, operation, maintenance, and decommissioning of a commercial scale offshore wind energy facility by South Fork Wind Farm (SFWF), within Lease Area OCS-A 0517, located approximately 19 miles southeast of Block Island, Rhode Island, and 35 miles east of Montauk Point, New York. You provided an EFH assessment for this project to us on April 7, 2021. In our June 7, 2021, letter, we provided a number of EFH conservation recommendations including a recommendation that the EFH assessment be revised to address several noted inconsistencies, as well as missing and new information that could affect the basis of our EFH conservation recommendations for the project. Specifically, we requested you address inconsistencies in your impact calculations and project elements, and clarify the type of turbine scour protection to be used as well as the extent of boulder relocation required for each turbine location. We also recommended that you address new project information included in a May 7, 2021, update to the Construction and Operations Plan (COP) and any proposed monitoring plans for the project. In response to our letter, you provided us with the revised EFH Addendum to address our recommendation on August 2, 2021. Based upon the information provided in the EFH Addendum, we have determined additional EFH conservation recommendations are necessary.

EFH Addendum Comments

New project components, including unexploded ordinances

Your EFH Addendum includes some of the information we requested in our June 7, 2021, letter as part of our EFH conservation recommendations (CR #1). According to the information in the Addendum, changes to the project design and additional impacts that were not considered in the EFH assessment could occur if unexploded ordinances (UXOs) are identified in the project



footprint. Specifically, additional micrositing of turbine locations and cable routes to avoid UXOs, and/or the removal and relocation of UXOs to other locations on the seabed, may be necessary. Such changes could result in additional impacts to complex habitats that were not previously considered and additional EFH conservation recommendations may be necessary. For example, the location of an UXO may deem the incorporation of an EFH conservation recommendation provided in our June 7, 2021, letter infeasible, but additional measures may be possible to avoid, minimize, or offset adverse impacts to EFH. We note that the EFH Addendum states that a reconnaissance survey is being conducted to further evaluate six potential UXOs and the results of the survey will be incorporated into the micrositing plan for the project that will be provided to us. If upon review of the micrositing plan we determine that additional EFH conservation recommendations are necessary, we will provide such recommendations within 30 days of receiving the additional information. To facilitate efficient coordination and minimize the potential for project delays, your micrositing plan should also address any UXOs that may be relocated, the materials and methods that will be used, and identify all potential relocation sites. Information on the proposed mitigation measure for each UXO should also be provided with the micrositing plan.

The Addendum also provides new information regarding the sea-2-shore transition. We have determined that the proposed project change for the in-water sea-2-shore transition does not affect the basis of our recommendations for the project construction of this component. However, we do note that we incorrectly included a time of year restriction to protect sensitive life history stages of winter flounder EFH for this portion of the project. The EFH conservation recommendation (#12) to protect and conserve winter flounder sensitive life history EFH should only apply to nearshore dredging and silt-producing activities associated with the proposed O&M facility improvements. Specifically, conservation recommendation #12 is revised as follows:

12. BOEM should restrict nearshore dredging and silt-producing activities associated with the proposed O&M facility improvements that occur at or adjacent to water depths of 5 meters or less, from January 1 through May 31, of any calendar year, to protect sensitive life history stage winter flounder EFH.

Clarification and correction of project impacts, including boulder relocation

We appreciate the revised and corrected project impact assessment calculations provided in the Addendum for each project component. The clarification and correction of the spatial extent of proposed boulder relocation activities for turbine and cable installation indicates that boulder relocation will occur within discrete spatial areas to support turbine installation and along each inter-array cable installation path. The potential long-term to permanent effects of boulder relocation are described in the provided Addendum to be similar to the long-term to permanent adverse effects associated with vessel anchoring and expected to result in the conversion of complex habitats to soft bottom habitats. Further, the relocation of boulders into complex habitats may also result in long-term to permanent adverse impacts to the existing habitats through the loss of benthic assemblages as the boulders are placed and the alteration of the existing three-dimensional complexity.

In our June 7, 2021, letter, we recommended (CR #3) that multiple turbine locations (WTG 2, WTG 4, WTG 6, WTG 8, WTG 9, WTG 10, WTG 12, WTG 13, WTG 14, OSS), and the associated inter-array cables be microsited into low multibeam backscatter return areas and that restrictions on seafloor disturbance (e.g. anchoring) during construction be required to avoid impacts to higher multibeam backscatter return areas in order to minimize long term to permanent impacts to complex habitats. As boulder relocation will occur within discrete and defined spatial extents to support turbine and inter-array cable installation, the spatial extent of boulder relocation should be considered in the micrositing of each turbine location and inter-array cable path. Where feasible, the boulder relocation area for each of the turbine locations and inter-array paths should be microsited into areas of low multibeam backscatter return to minimize long-term to permanent impacts to complex habitats. The turbine and inter-array cable micrositing plan should clearly identify the proposed extent of boulder relocation, and the locations boulders will be relocated to, for each turbine installation and along each inter-array cable route.

Project Monitoring Plans

We have reviewed the provided information regarding the effects of the proposed project monitoring plans to EFH and do not have additional EFH conservation recommendations to minimize adverse impacts to fishery managed species EFH. However, as noted in our June 7, 2021, letter, we have previously reviewed the proposed Benthic Monitoring Plan referenced in the EFH Addendum and have substantial concerns with the proposed methods and scope of the monitoring. Specifically, it is not clear that the proposed benthic monitoring will be able to detect benthic effects at a meaningful scale or scope. We will provide your staff a spreadsheet with our specific comments on the referenced benthic monitoring plan. Consistent with the EFH conservation recommendation (CR #9) provided in our June 7, 2021, letter, we recommend that our comments are addressed and incorporated into the plan, with further coordination to occur as needed in the revision and refinement of the proposed plan. Once your staff have reviewed our comments, we recommend setting up a meeting to discuss our concerns to help ensure they are effectively addressed prior to commencement of the study.

EFH Consultation Coordination

We appreciate that you provided the revised EFH Addendum in response to our EFH conservation recommendation #1 in our June 7, 2021 letter. As we have previously discussed, 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). It was our expectation that we would have received a response to all of our EFH conservation recommendations prior to the publication of the FEIS. Although the FEIS has been published without a full response to our EFH conservation recommendations, we continue to welcome your continued coordination with us and look forward to your response to all of our EFH conservation recommendations.

EFH Conservation Recommendations

The project area, covering both the WDA and the OECC, is designated as EFH under the MSA for multiple federally managed species, including Atlantic cod, summer flounder, winter

flounder, windowpane flounder, scup, black sea bass, longfin inshore squid, Atlantic scallop, surfclam and ocean quahog. We previously provided thirteen (13) EFH conservation recommendations on June 7, 2021. Based upon the new and revised project information in the revised EFH Addendum, and pursuant to Section 305(b)(4)(A) of the MSA, we recommend that you adopt the following additional EFH conservation recommendations.

14. The location of identified and potential UXOs within the project area should be clearly depicted on the micrositing plan (see EFH conservation recommendation #3 of our June 7, 2021, letter). Should any UXOs be proposed to be relocated, the micrositing plan should clearly depict the initial location and all potential relocation sites. Information on the proposed mitigation measure for each UXO should also be provided with the micrositing plan. Upon receipt and review of the new information, we may determine additional EFH conservation recommendations are necessary if the location of any UXO, or a proposed UXO relocation affects the basis of our EFH conservation recommendations, or we determine that additional measures are necessary to avoid, minimize, or offset adverse impacts to EFH.
15. The spatial extent of boulder relocation should be considered in the evaluation of micrositing turbine and inter-array cable paths (see EFH conservation recommendation #3 of our June 7, 2021 letter). As feasible, the spatial extent of boulder relocation activities should be located fully within low multibeam backscatter areas. Boulder relocation activities associated with the installation of project turbines and inter-array cables should be clearly depicted on the micrositing plan for each turbine installation and inter-array cable route.

Conclusion

We appreciate the clarifications, corrections, and new project information provided in the EFH Addendum. We look forward to continued coordination on this project. 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
Brian Krevor, BOEM

Tim Timmerman, USEPA
Tom Chapman, USFWS
Christine Jacek, USACE
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From: Deirdre.Boelke@rwe.com <Deirdre.Boelke@rwe.com>

Sent: Wednesday, August 31, 2022 6:02 PM

To: Tom Nies <tnies@nefmc.org>

Cc: mbachmann@nefmc.org; Janice Plante <jplante@nefmc.org>; Michelle.Duval.extern@rwe.com; Rick.Robins@rwe.com

Subject: Community Offshore Wind - Fisheries Communication Plan

Dear Tom –

I wanted to let you know that Community Offshore Wind has recently completed one of the early milestones in the BOEM lease process – submission of our fisheries communication plan. This is a new lease requirement for offshore wind lease areas in the NY Bight.

Our fisheries team, Rick Robins, Michelle Duval, and myself, have been busy over the last few months developing this communication plan and other strategies for stakeholder engagement. We have a bunch of innovative ideas I would love to run by you when you have time.

For now, please find the attached Community Offshore Wind Fisheries Communications Plan (OCS-A 0539), which will guide the Project's outreach and engagement efforts with fishermen, fisheries stakeholders, and other ocean users.

A map of the lease area is also included as a quick geographic reference. Please feel free to share these with the Council's interested party lists.

The Plan is intended to be comprehensive, integrative, and adaptive in response to fisheries participant and stakeholder feedback. Our team is committed to open and honest dialogue, and recognizes the importance of working closely with the fishing industry to get input early in the development process. The goal is to collaboratively develop detailed local knowledge to proactively avoid and minimize fisheries impacts, and to incorporate this knowledge into mitigation planning and monitoring.

We are also acutely aware of the stakeholder engagement burden on commercial and recreational fishermen, management entities, state and federal agencies, and researchers, and we are focused on coordinating outreach with other leaseholders whenever possible.

Please do not hesitate to reach out with any questions and we look forward to working with the Council and staff as the project moves forward.

You can view the Fisheries Communication Plan from our website - <https://communityoffshorewind.com/fisheries>

Best regards,
Rick, Deirdre, Michelle

COMMUNITY OFFSHORE WIND

Fisheries Communications Plan

Document Number: 004500694-01



Document Number: 004500694-01

Revision Summary				
Rev	Date	Prepared By	Checked By	Approved By
01	08/22/2022	Deirdre Boelke, Michelle Duval	Rick Robins	Daniel Sieger

Description of Revisions				
Rev	Date	Section	Pages	Description
01	08/22/2022	All	All	Original document

Abbreviations

ASMFC	Atlantic States Marine Fisheries Commission
BOEM	Bureau of Ocean Energy Management
EA	Environmental Assessment
CFF	Coonamessett Farm Foundation
FL	Fisheries Liaison
FR	Fisheries Representative
FTR	Fisheries Technical Representative
F-TWG	Fisheries Technical Working Group (NYSERDA)
GARFO	Greater Atlantic Regional Fisheries Office
HMS	Highly Migratory Species
MAFMC	Mid-Atlantic Fishery Management Council
MARCO	Mid-Atlantic Regional Council on the Ocean
NEAMAP	NorthEast Area Monitoring and Assessment Program
NEFMC	New England Fishery Management Council
NEFSC	Northeast Fisheries Science Center
NEPA	National Environmental Policy Act
NJDEP	New Jersey Department of Environmental Protection
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NROC	Northeast Regional Ocean Council
NYSDEC	New York State Department of Environmental Conservation
NYSERDA	New York State Environmental Research and Development Authority
OCLSA	Outer Continental Shelf Lands Act
RODA	Responsible Offshore Development Alliance
ROSA	Responsible Offshore Science Alliance
RWSC	Regional Wildlife Science Collaborative for Offshore Wind
SMAST	School for Marine Science & Technology (UMass Dartmouth)
USCG	U.S. Coast Guard
VIMS	Virginia Institute of Marine Sciences
WEA	Wind Energy Area

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1 Introduction

Community Offshore Wind, a joint venture of RWE Renewables and National Grid Ventures, proposes to develop the Community Offshore Wind Project (the Project), under Commercial Lease of Submerged Lands for Renewable Energy Development on the Outer Continental Shelf (Lease Area OCS-A 0539; Lease Area). Lease Area OCS-A 0539 encompasses approximately 125,964 acres and is located approximately 50 nautical miles (NM) or 92 kilometers (km) south of New York and 29NM (53 km) east of New Jersey (see Figure 1). Water depths range from 30 to 52 meters (16 to 28 fathoms).

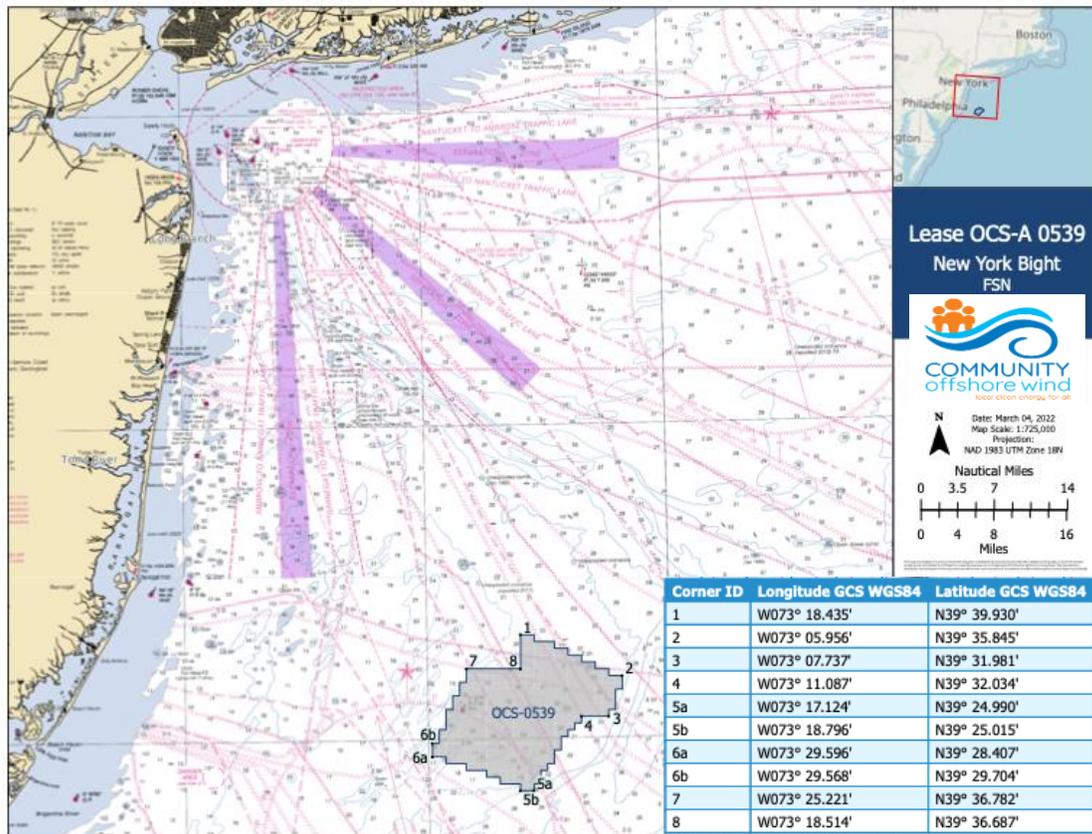


Figure 1. Location of OCS-A 0539 in relation to major navigational routes into the harbor of New York, New York. Coordinates of primary boundaries of Lease Area included in table.

As part of the Project development, Community Offshore Wind is committed to a holistic, adaptive, and integrative approach to fisheries communication and outreach, in partnership with fisheries participants and other stakeholders, including fishing organizations, fishing communities, fisheries agencies, and the general public. The Fisheries Communications Plan (Plan) is foundational to sustainable and successful Project outcomes, and is the primary tool through which the Project team will build collaborative relationships with fisheries participants and stakeholders and affected communities to inform impact avoidance throughout the lifecycle of the Project. The company’s fisheries communications team will guide the development, use, and adaptation of the Plan to reflect feedback and curate knowledge from the fishing community, and promote a shared understanding of current and historic fisheries resources and uses.

This Plan is intended to be a living document that is inclusive of all fisheries participants and stakeholders and is responsive to diverse perspectives and needs. Community Offshore Wind recognizes that effective engagement is built one relationship at a time, and that a successful process often involves difficult conversations. We value open and honest communication and are committed to an “early and often” approach to outreach.

1.1 Fisheries Communication Principles and Objectives

The following principles guide the development, implementation, and future modifications of the Plan, and reflect the core values and philosophy of Community Offshore Wind.:

- **Safety:** Promote the safety of fishermen, communities, project crews, and marine life, from Project design through implementation.
- **Respect:** Build trust through respect for the local knowledge, expertise, and concerns of the fishing community.
- **Understanding:** Develop a detailed understanding of the fisheries resources and uses in the area to inform the successful development of the project.
- **Transparency:** Promote transparency through timely two-way communication that allows for sharing clear feedback and is responsive to fisheries participants and stakeholder communication preferences.
- **Efficiency:** Ensure communication and outreach activities are internally and externally coordinated to achieve efficient communications at the appropriate cadence for all fisheries stakeholder groups.
- **Equity:** Ensure engagement efforts are comprehensive across fisheries participants, stakeholders, and communities, including underserved and non-traditional constituents.
- **Adaptability:** Respond to changing fisheries participant and stakeholder needs and circumstances as an opportunity to adapt and improve communication methods and strategies.
- **Collaboration:** Build a shared, sustainable future for area fisheries and offshore wind through collaboration and inclusivity that ultimately lessens the impacts of climate change.

The goal of Community Offshore Wind is to proactively ensure that all fishing community stakeholders are informed of the Project, and aware of the many opportunities for communication and input throughout the project lifecycle. In addition, our goal is to ensure that the Project team develops a comprehensive understanding of the individual fisheries in the Lease Area, and their social and economic significance to onshore communities within the region. The fisheries team is committed to sharing this knowledge across Community Offshore Wind’s workstreams to best serve the needs of fisheries participants and communities. Together, we are striving to achieve net positive biodiversity outcomes above and below the water line. This Plan includes time and resources for the Fisheries Team to develop and present educational materials across the Community Offshore Wind Project workstreams about relevant fisheries and other ocean user groups in and around the Lease Area and potential export cable routes. The more the Project team understands and appreciates the importance of regional fisheries, the more successful the overall Project will be. The objectives of the Plan in support of these goals are:

- Develop a detailed technical understanding of the current and historical fisheries operating and transiting within and around the Lease Area, and curate the knowledge and expertise of local fishermen and other experts to achieve this.
- Foster a proactive approach to promoting safety and deconflicting the operations of survey and construction crews and fishermen within the Lease Area that is based on the local knowledge of fishing communities and representatives.

- Collaborate with fisheries participants and stakeholders to apply their collective knowledge and understanding of fisheries resources and habitats to avoid and minimize impacts to the extent practicable throughout the Project life cycle.
- Recognize and balance the Project's need for detailed local knowledge with the burden of engagement for fisheries participants and stakeholders through the use of thoughtful and efficient communication methods, and a commitment to coordinate outreach activities with other developers.
- Engage fishermen and stakeholders in identifying opportunities for cooperative monitoring and research that will contribute to the mutual understanding and successful shared use of the area.
- Develop comprehensive and inclusive stakeholder engagement strategies that are sensitive to the needs of both underserved communities and non-traditional stakeholders, and foster effective two-way communication.

1.2 Fisheries Team

Community Offshore Wind has assembled a fisheries team with experience that spans decades of direct experience in state, interstate, and federal fisheries management, cooperative fisheries research, commercial fisheries development, seafood processing, and commercial and recreational fisheries. The team benefits from strong advisory support from its fisheries technical advisors/fisheries representatives who have extensive experience in their respective fisheries in the project area and broader region. Community Offshore Wind's Fisheries Team includes:

Fisheries Liaisons

Deirdre Boelke (**Primary Contact**)
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Marine Affairs Manager

Rick Robins
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Deirdre Boelke, Fisheries Liaison (Primary Contact), has over 20 years of staff experience with the New England Fishery Management Council. She worked on most fishery management plans during her tenure with the Council, including plan coordinator for the Atlantic sea scallop and Atlantic herring fishery management plans. She was the staff lead for the Council's Atlantic sea scallop Research Set Aside program, which coordinated cooperative research to support the management of the fishery. She also staffed the coastwide climate change scenario planning initiative and other regional and national fishery management policy projects.

Michelle Duval, Fisheries Liaison, has extensive experience in state and federal fisheries management, serving for 10 years with North Carolina Division of Marine Fisheries, representing the agency to the Atlantic States Marine Fisheries Commission and the South Atlantic Fishery Management Council, which she also chaired. She currently serves on the Mid-Atlantic Fishery Management Council as Chair of the Research Set Aside Committee and serves on the New England Fishery Management Council's Sea Scallop Committee.

As Fisheries Liaisons (Liaisons), Deirdre and Michelle will represent the Project to the fishing community and to serve as a primary point of contact for fisheries participants and stakeholders. Responsibilities include, but are not limited to:

- Engage directly with fisheries stakeholders, and with the project's Fisheries Technical Advisors and Representatives, to develop and curate the local knowledge to successfully avoid fisheries impacts.
- Effectively convey industry and stakeholder concerns to project management team to proactively and collaboratively identify solutions.
- Develop a flexible two-way communications network between the fishing industry and the project that is responsive to stakeholder needs and provides timely feedback.
- Coordinate communications between the Project and state and federal fisheries managers and agencies.

Rick Robins, Marine Affairs Manager, has a background in commercial fisheries development, seafood processing and export market development, and state and federal fisheries management. He served as an Associate Member of the Virginia Marine Resources Commission, chaired the Mid-Atlantic Fishery Management Council, and served as a fisheries liaison for offshore wind energy development.

As Marine Affairs Manager, it is Rick's role to plan and coordinate the company's marine operations and interactions with the maritime industries. Responsibilities include:

- Lead and coordinate marine affairs to support the development of the company's wind energy development projects.
- Lead engagement with all relevant maritime stakeholders, including, but not limited to: commercial and recreational fisheries, commercial shipping, owner/operators of subsea infrastructure, ports and harbors operators, the US Department of Defense, the US Coast Guard (USCG), the Bureau of Ocean Energy Management (BOEM), and the Bureau of Safety and Environmental Enforcement.
- Lead development of offshore wind projects' marine affairs strategies and maritime stakeholder engagement plans.
- Provide internal coordination on all marine affairs issues and considerations to support project development.

The goal of Community Offshore Wind's fisheries team is to ensure the objectives of the Plan are achieved through effective implementation of outreach and engagement strategies that are targeted to the specific needs and preferences of various fisheries stakeholders. In particular, the fisheries team has extensive experience working with regional Fishery Management Councils responsible for developing federal fishery management advice. The Council process is a stakeholder driven, fully public and transparent process that uses local knowledge to develop science-based plans that balance many objectives. The team intends to use many of these same principles to design a successful Project in close collaboration with stakeholders. The roles and responsibilities of team members are similar, but complementary, as described above. Overall, this fisheries team has extensive professional experience across a wide range of fisheries and is highly approachable. Each member has direct experience working with fishery stakeholders throughout the region. They already have strong relationships with fishing communities along the east coast built on trust and communications. In addition to the Marine Affairs Manager and Fisheries Liaisons, Community Offshore Wind will engage Fisheries Technical Advisors and Fisheries Representatives. The Plan will be updated to include contact information as these individuals are onboarded:

Fisheries Technical Advisor (FTA): The role of Fisheries Technical Advisors is to provide technical expertise regarding the operations and characteristics of fisheries working in and/or transiting through the Lease Area so that potential negative fisheries impacts can be avoided, minimized, and thoughtfully considered throughout the Project lifecycle. Responsibilities include, but are not limited to:

- Provide information regarding vessel movements and configuration and fishing of mobile and fixed gears in the Lease Area.
- Describe the seasonality and distribution of fisheries over time within the Lease Area.
- Provide recommendations regarding fisheries constituent identification and interaction.

Fisheries Representative (FR): Fisheries Representatives serve the interests of the fisheries for which they have knowledge and expertise and are trusted focal points for fishing industry contact and communication regarding the Project. FRs typically also serve as FTAs to provide technical expertise to the Project team. Responsibilities of FRs include, but are not limited to:

- Identify and cultivate industry concerns and proactively share those with the Project team to facilitate shared use and fisheries impact avoidance.
- Work with the Liaisons to improve and adapt the Plan and ensure it is responsive to fisheries participant and stakeholder feedback.
- Disseminate Project information to industry to promote awareness and facilitate effective outreach and engagement.

Community Offshore Wind Plans to add FTAs/FRs across a range of fisheries active in the project area and is currently recruiting for these positions.

Brady Lybarger is a commercial Fisheries Technical Advisor and Fisheries Representative from the sea scallop fishery. He is based in Cape May, New Jersey and has participated in the commercial scallop fishery since 1999. He has been a scallop advisory panel member for the New England Fishery Management Council for about ten years, and has participated in several Scallop Research Set Aside projects.

Brady is also an avid recreational fisherman and participates in the commercial hook and line fishery, currently targeting tuna, swordfish and tilefish. He also owns a direct to consumer seafood business in Cape May, NJ that offers fresh seafood such as scallops, shrimp, and tuna directly to consumers since 2020.

Fisheries Technical Advisors/Representatives

Brady Lybarger

scallopshackfarms@gmail.com

Cell: 609-602-1417

Commercial Representative

1.3 Best Practices

As noted in Section 1.1, this Plan is intended to be adaptive to changing conditions and fisheries participants' and stakeholder needs and is expected to improve over time as their feedback is incorporated and as the Project matures. Community Offshore Wind is committed to open, honest, and frequent engagement with the fishing community to ensure inclusion of stakeholder input regarding project design, construction, and operation. We will work with fishing representatives to establish appropriate and accessible feedback mechanisms so that communities can see and understand our dedication to transparency and collaboration.

Development of the Plan was informed by guidance and recommended best practices that include, but are not limited to, the following resources:

- BOEM Decision Memorandum, NY Bight Final Sale Notice.¹
- Development of Mitigation Measures to Address Potential Use Conflicts between Commercial Wind Energy Lessees/Grantees and Commercial Fishermen on the Atlantic Outer Continental Shelf. OCS Study BOEM 2014-654.²
- FLOWW Best Practice Guidance for Offshore Renewables Developments: Recommendations for Fisheries Liaison. January 2014.³
- Guiding Principles for Offshore Wind Stakeholder Engagement (v1 10/21). NYSERDA.⁴
- Guidelines for Providing Information on Fisheries Social and Economic Conditions for Renewable Energy Development on the Atlantic Outer Continental Shelf. BOEM. 2020.⁵
- Information Guidelines for a Renewable Energy Construction and Operations Plan (COP), Attachment A. Version 4.0, 2020.⁶
- Central California Joint Fisheries/Cable Liaison Committee Final Agreement Between Cable Companies and Fishermen as Amended (v. 140519).⁷
- Oregon Fishermen’s Cable Committee Procedures (v. 2.6.17)⁸
- International Cable Protection Committee Government Best Practices for Protecting and Promoting Submarine Telecommunications Cables (v. 1.1).⁹
- Maine Offshore Wind Roadmap: Draft Initial Recommendations. March 1, 2022.¹⁰
- BOEM Request for Information: Guidance for Mitigating Impacts to Commercial and Recreational Fisheries from Offshore Wind Energy Development. Nov. 22, 2021.¹¹
- BOEM Draft Guidelines for Mitigating Impacts to Commercial and Recreational Fisheries on the Outer Continental Shelf. June 22, 2022.¹²

Importantly, the communication and engagement strategies the team proposes to use have been reviewed with several members of the commercial and recreational fishing industries as well as other stakeholders. The team is grateful for this early feedback, and will continue to refine these strategies with stakeholder input over the life of the Project.

1.4 Authorities, Regulations, and Lease Conditions

Several statutory authorities and regulations intersect the Plan, directly or indirectly. This includes requirements under subsection 8(p) of the Outer Continental Shelf Lands Act (OCSLA) that BOEM ensure any activities provide for protection of the environment and prevent interference with reasonable uses of

¹ <https://www.boem.gov/renewable-energy/state-activities/new-york-bight-final-sale-notice-decision-memorandum>

² <https://www.boem.gov/sites/default/files/renewable-energy-program/Fishing-BMP-Final-Report-July-2014.pdf>

³ <https://www.sff.co.uk/wp-content/uploads/2016/01/FLOWW-Best-Practice-Guidance-for-Offshore-Renewables-Developments-Jan-2014.pdf>

⁴ <https://www.nyserda.ny.gov/-/media/Project/Nyserda/Files/Programs/Offshore-Wind/LSR-OSW-engageguide.pdf>

⁵ <https://www.boem.gov/sites/default/files/documents/about-boem/Social%20%26amp%3B%20Econ%20Fishing%20Guidelines.pdf>

⁶ <https://www.boem.gov/sites/default/files/documents/about-boem/COP%20Guidelines.pdf>

⁷ http://www.cencalcablefishery.com/uploads/2/2/6/5/22655546/140519_final_agreement_as_amended.pdf

⁸ <http://www.ofcc.com/Procedures2.6.17.pdf>

⁹ <https://www.iscpc.org/documents/?id=3733>

¹⁰ <https://www.maineoffshorewind.org/working-group-recommendations/environment-wildlife/>

¹¹ <https://www.boem.gov/renewable-energy/boem-2021-0083-0001>

¹² <https://www.boem.gov/renewable-energy/draft-fisheries-mitigation-guidance>

the federal Exclusive Economic Zone (EEZ), including fishing. The National Environmental Policy Act (NEPA; 42 U.S.C. §§ 4321 *et seq.*) also requires that BOEM evaluate the social and economic impacts of any potential project, and BOEM's own regulations require that it coordinate with other federal agencies to avoid conflicts among users and maximize the economic and ecological benefits of potential projects (30 CFR 585.102(a)(5)).

This Plan is intended to develop the necessary information for the Project to meet these requirements and additional regulatory provisions within 30 CFR Part 585 Subpart F (e.g., communications with stakeholders, agencies, and other potentially affected parties; social and economic conditions of commercial and recreational fisheries; and measures to avoid, minimize, reduce, eliminate, and monitor environmental impacts).

Community Offshore Wind is also subject to a number of Lease-specific terms, conditions, and stipulations contained in Appendix C of the Lease agreement. The design and implementation of this Plan is intended to meet the conditions included in Section 3 (Reporting), specifically 3.1, 3.1.1, 3.1.2.1, 3.1.2.4, and 3.1.3.

2 Project Background

2.1 Community Offshore Wind Lease Area

On March 21, 2021, BOEM announced its intent to conduct an Environmental Assessment (EA) for activities associated with site assessment (e.g., installation of meteorological buoys) and characterization (e.g., biological, geophysical, archaeological, etc. surveys) of the New York Bight Wind Energy Areas (WEAs), including cable corridors and project easements. A draft EA was released for public comment on August 10, 2021, and a final EA was issued on December 16, 2021, that concluded site assessment and characterization activities would have no significant impact on the environment in any of the wind energy areas.

On June 14, 2021, BOEM published a Proposed Sale Notice (PSN) for eight potential lease areas. The Final Sale Notice (FSN) was published on January 12, 2022, proposing the auction of six final lease areas. The Community Offshore Wind Lease Area was substantially modified by BOEM between the PSN and FSN to deconflict and address high value commercial fisheries, recreational fishing hot spots, and benthic habitats in the region. Specifically, BOEM removed from consideration a portion of adjacent lease OCS-A 0540 and all of OCS-A 0543 (adjacent to OCS-A 0540), as these areas had the highest landings and revenue from the surfclam fishery and significant overlap with habitats identified through New Jersey's Prime Fishing Areas dataset. As a result, BOEM expanded Lease OCS-A 0539 westward and removed OCS-A 0540 due to its reduced viability as a stand-alone lease¹³.

BOEM also adjusted the eastern border of Lease OCS-A 0539 to establish a 2.5 NM buffer between the Lease and the nearby scallop fishery access area in response to fishing industry requests, identification of important fish habitats, and the occurrence of active scallop fishing activity adjacent to the access area¹⁴. Additionally, 11,637 acres of the Lease Area are subject to a no surface occupancy Lease stipulation (i.e., a permanent prohibition on placement of objects on the ocean surface) along the northern, southern, and eastern borders of the lease. The no-occupancy areas on the northern and southern borders

¹³ [New York Bight Final Sale Notice Decision Memorandum](#), p. 10

¹⁴ [New York Bight Final Sale Notice Decision Memorandum](#), p. 9-10

contribute to the 2.44 nautical mile transit corridors between adjacent lease areas in response to fishing community and Department of Defense requests, and in consideration of vessel traffic patterns BOEM's proactive establishment of corridors at the northern and southern boundaries of Lease OCS-A 0539 provides additional accommodation of commercial and recreational fisheries transits through the Hudson South lease areas.

This Plan has been developed at the outset of the site assessment and characterization component of the Community Offshore Wind Project, which will inform the development of a Construction and Operations Plan (COP) for the Lease, and will be adjusted in response to fisheries participant and stakeholder feedback. The COP will be subject to regulatory review, as required by law, that will provide additional opportunities for public input prior to construction and implementation. As the Project matures into the construction and operation phases, the Plan will also evolve to reflect the communication and engagement needs specific to these Project stages.

2.2 RWE Renewables and National Grid

Community Offshore Wind is a joint venture of RWE Renewables and National Grid and is dedicated to providing clean energy, good local jobs, and building a network of trust in the communities it serves. RWE is a global leader in the development of offshore wind facilities, with 20 successful projects in the past two decades, while National Grid brings expertise in renewable energy delivery systems in the northeast and internationally. Both organizations have ambitious objectives for achieving net zero emissions in the coming decades through innovations such as testing recyclable turbine blades and piloting green hydrogen, while generating sustainable economic opportunities for local communities.

RWE and National Grid share a common goal of advancing an equitable clean energy future through the core principles of promoting health, safety, and care for the environment and community throughout the lifecycle of the Project. This includes a commitment to continuous improvement and evolution by truly listening to stakeholders, integrating that feedback directly into the development and design of the Project, and becoming a standard-bearer for accountability and transparency.

3 Fisheries Characterization

Both commercial and recreational fisheries operate within the Lease Area, and as noted in Section 2.1, BOEM implemented modifications to reduce interactions with high value commercial fisheries and fish habitats. While data limitations may preclude precise spatial identification of specific fisheries working in or transiting the Lease, one of the objectives of this Plan is to curate the detailed knowledge necessary to fill in data gaps in collaboration with fisheries participants and stakeholders.

3.1 Stakeholder Identification

Information used to identify categories of fisheries stakeholders includes available commercial, recreational, and habitat data sets from the Mid-Atlantic Regional Council on the Ocean (MARCO) Data Portal, Northeast Ocean Data Portal, aggregated commercial Vessel Trip Reports (VTRs) from the National Marine Fisheries Service (NMFS), as well as proactive outreach to individual commercial and recreational fishery participants. Additional fisheries stakeholders will be identified by the Liaisons in coordination with FRs and FTAs. The Liaisons will work with these stakeholders as well as state and federal fisheries managers to fill data gaps and ensure existing data are appropriately interpreted so that fisheries impacts can be avoided to the extent practicable.

In addition to commercial and recreational fisheries participants and stakeholders, Community Offshore Wind understands the significance and value of other coastal and marine recreational activities, including whale watching, surfing, paddleboarding, SCUBA diving, kayaking, sailing, and birdwatching, among others. The regional ocean planning bodies in the Northeast and Mid-Atlantic (the Northeast Regional Ocean Council [NROC] and Mid-Atlantic Regional Council on the Ocean [MARCO], respectively), in collaboration with the states and recreational user groups, have coordinated the collection of data and information to identify important use areas, patterns, and demographics. The Project's outreach activities will include these recreational ocean user groups, and the Plan will be updated to reflect their communication needs and preferences that are not included in other Project stakeholder engagement plans. While some engagement efforts may overlap due to the intersection of multiple interests, these will be coordinated among the Project team.

Community Offshore Wind recognizes the importance of equity and inclusivity in stakeholder identification and engagement, particularly for underserved communities, who face challenges that often prevent full participation in public processes. Consistent with the principles described in the NMFS Draft Equity and Environmental Justice Strategy¹⁵, the Plan seeks to improve Project awareness and identification of underserved communities so that outreach activities can be tailored to address their specific barriers to engagement. This includes underserved components of traditional fisheries stakeholder designations, e.g., commercial, recreational, for-hire, and private anglers, as well as other ocean users. The intent is to build an engagement network and approaches that are comprehensive across fisheries and ocean user groups, and promote participation by non-traditional stakeholders and others who may not typically be involved in these processes.

3.2 Current and Historical Fisheries Operations

3.2.1 Commercial Fisheries

According to federal VTR data, which includes spatial reporting requirements, commercial fisheries operating in the Lease Area are primarily Atlantic sea scallop and surfclam, but also include summer flounder, monkfish, and inconsistent harvest of black sea bass and skates. These fisheries are harvested with a variety of gear types. Dredges are used almost exclusively in the sea scallop fishery, while surfclams are harvested solely with hydraulic dredges. Summer flounder and black sea bass are pursued with bottom trawls, although pot gear is also occasionally used for black sea bass. Monkfish harvest in the area is primarily subject to targeted use of anchored gillnets on a seasonal basis. Examination of VTR data from the MARCO Data Portal indicate that dredges are the predominate gear type used in the Project area, but also show limited bottom trawl, pot, and gillnet gear. Important commercial ports with harvest from within the Lease Area include Atlantic City, Barnegat Light, Point Pleasant, and Cape May, New Jersey. Other ports with commercial harvest include Long Beach, and Montauk, New York; New Bedford, Massachusetts; and ports in the Hampton Roads area of Virginia.

Limited information exists regarding commercial fisheries that may be transiting the area. While spatial reporting is a requirement of the VTR program, these data are coarse and not intended for fine-scale representation of where fisheries operate. Vessels participating in specific commercial fisheries are subject to Vessel Monitoring System (VMS) requirements, including those in the sea scallop, surfclam, and monkfish fisheries. Examination of VMS data in the MARCO Data Portal indicates most surfclam harvest has occurred in the western two-thirds of the Lease Area, while most sea scallop harvest has

¹⁵ https://media.fisheries.noaa.gov/2022-05/2022-05-NOAAFisheries-EEJ_508.pdf

occurred in the eastern third. VMS data also suggest possible transit and/or historical trips from mid-water trawl fisheries such as those for Atlantic mackerel and squid, as well as Northeast Multispecies (groundfish). It is important to note that VMS regulations generally require vessels to maintain VMS units in operational mode at all times, even when participating in a non-VMS fishery. Automatic Identification System (AIS) data may provide additional information regarding commercial vessel transit and use of the Lease Area, but the detailed local knowledge of fishermen is critical to identifying and properly characterizing these data. Project leadership has proactively met with stakeholders in Shinnecock, New York, Greenport, NY, Barnegat Light, Belford, and Cape May, New Jersey, and other regional ports to begin this dialogue. Fishery information will be updated as local fisheries knowledge is developed in collaboration with fishery participants.

Effective April 1, 2022, NMFS implemented the Atlantic Sea Scallop 2022-2023 fishing year regulations, which include the New York Bight Scallop Rotational Closed Area. The closed area encompasses the eastern half of the Lease Area (as well as the entirety of OCS-A 0538 and the southern half of OCS-A 0537), and was established to protect several scallop year classes that are anticipated to support future fishing activities. The Virginia Institute of Marine Sciences (VIMS) 2021 dredge survey indicated the presence of 1-2 year old scallops in the northeastern portion of the Lease Area. Based on normal growth rates, these scallops would be expected to be available to the fishery within 2-4 years.

3.2.2 Recreational Fisheries

Information on recreational fisheries operating in and transiting through the Lease Area is also limited. Similar to commercial fisheries, for-hire vessels operating in federally-managed fisheries are subject to VTR requirements and information from the MARCO data portal indicates occasional for-hire fishing (charter and party boats) activity within the Lease Area, though higher amounts of activity inshore of and beyond the Lease Area were observed. Seasonally-important recreational fisheries for both private anglers and for-hire fleets have included summer flounder, black sea bass, scup, and bluefish, as well as pelagic species such as dolphinfish (mahi mahi) and Highly Migratory Species (HMS) such as bluefin and yellowfin tunas. Blueline and golden tilefishes (deepwater bottom species) have also increased in popularity over the years, although they are targeted over bottom contours seaward of the Lease Area. It is likely that important ports for the for-hire and private boat fleets that may be transiting and/or operating within the area include Barnegat Light, Point Pleasant, Cape May, Little Egg Inlet, Ocean City, New Jersey, and additional ports in New York.

The New Jersey Department of Environmental Protection (NJDEP) maintains an Artificial Reef Program, although the majority of reefs are within 2NM to 8NM of shore; only one reef is located 23NM from shore and is well to the southwest of the Lease Area. As noted in Section 2.1, the New Jersey Prime Fishing Areas dataset was used to deconflict the Lease Area with recreational fishing hot spots and activities. While none of the Prime Fishing Areas overlap the Lease Area, three sites are adjacent to it: 1) Fingers is an irregular lump adjacent to the southwestern (inshore) boundary of the Lease that is surrounded by sandy, shelly bottom; 2) Triple Wrecks South is a sandy slough so named for the wrecks on it, and abuts the northeastern corner of the Lease, extending to the north-northeast and south-southwest of the Lease Area; 3) The CORVALLIS, an isolated wreck adjacent to the northern boundary of the Lease Area and the southern boundary of lease OCS-A 0538. Curated local knowledge will also be critical to identifying information gaps for recreational fisheries, locations of any known structures or other important oceanographic features within the Lease and surrounding area, and appropriately interpreting existing data so that impacts can be thoughtfully considered and avoided. The fisheries team will compile the available data on any known hangs within the project area. No named shipwrecks are located within the Lease Area.

3.2.3 Other Ocean Uses

Data from the Northeast Coastal and Marine Recreational Use Characterization Study conducted by NROC¹⁶ and recreational ocean use workshops conducted by the mid-Atlantic states are available via the NROC and MARCO Data Portals, and provide a footprint of the range and general density of shore-based, coastal, and ocean uses from Virginia through Maine. As noted previously, these include whale and dolphin-watching, shore-based wildlife viewing, diving, recreational boating, sailing, surfing, and kayaking. The information currently in the data portals does not display overlap of any of these activities within the Lease Area, but indicates several activities occur to the east and south along the continental shelf break, and to the north along the Hudson Canyon and vicinity. The data layers show many of these activities have occurred inshore of the Lease Area and in higher densities, and could be impacted by future cable routes.

Many coastal and ocean recreational users and operators belong to organizations and/or clubs promoting resource conservation and enjoyment of these recreational pursuits. The fisheries team will coordinate our outreach to these groups with the efforts of other Project team members to reduce stakeholder engagement burden, increase efficiency, and ensure we are providing accessible opportunities for two-way communication and feedback. Our objective is to ensure recreational users are able to participate throughout the Project development process.

3.3 Fisheries Habitats

The Lease Area overlaps Essential Fish Habitats (EFH) for various life stages of most species managed by the Mid-Atlantic Fishery Management Council (MAFMC), with the exception of golden and blueline tilefish. It is also designated EFH for different life stages of several groundfish species managed by the New England Fishery Management Council (NEFMC), as well as monkfish, skates, and sea scallops. EFH designations for multiple HMS species occur in the area, primarily sharks but also bluefin and skipjack Tunas. According to information in the MARCO Data Portal, benthic habitats within the Lease Area include mostly moderate to high flat gravel and sand, with some sandy depressions.

3.4 Fisheries Management

The fisheries occurring and potentially transiting the Lease Area are managed by a suite of federal and state agencies and partners, including the NJDEP Division of Fish & Wildlife, New York State Department of Environmental Conservation (NYSDEC), MAFMC (e.g., summer flounder, scup, black sea bass, surfclam), NEFMC (sea scallop, monkfish [jointly with MAFMC]), the Atlantic States Marine Fisheries Commission (ASMFC), NMFS HMS Division (tunas, billfishes, sharks), NMFS Greater Atlantic Regional Fisheries Office (GARFO), and NMFS Northeast Fisheries Science Center. Each entity is responsible for the stewardship of fisheries resources through the conduct and/or oversight of biological and habitat surveys, fishery-dependent data collection and analyses, and policy implementation. These efforts contribute to a fisheries management framework that is coordinated to varying degrees across state and federal jurisdictions. Each organization has constituent outreach, communication, and public engagement processes that are important to the success of both individual and collective management initiatives.

This Plan recognizes the knowledge and expertise of agencies and partners and seeks to integrate their input and experience in stakeholder mapping to promote sustainable shared use of the Project Area.

¹⁶ http://archive.neoceanplanning.org/wp-content/uploads/2015/10/Recreation-Study_Final-Report.pdf

While the project area is most closely located to New Jersey and New York, the fisheries communications team is also committed to understanding the relationship of other state's fleets to the area. Given the regional nature and economic importance of the fisheries operating in and/or transiting through the Lease, the fisheries communications team will engage state agencies from North Carolina through Maine. Project leadership has proactively reached out to states and federal partners to begin this dialogue and develop relationships with industry stakeholders. This Plan has identified communication with fishery managers as a potential opportunity for collaboration among developers. The team recognizes that multiple state and federal agencies have already invested large amounts of resources and time to support development of wind energy to date, and this is an area where efficiency can be explored. The team will also ensure that engagement with marine fisheries agencies is coordinated with the Project's Agency Communications Plan to reduce duplication of effort.

4 Offshore Project Operations

Offshore survey activities will occur in the Lease Area and potential export cable corridors as part of site assessment and characterization activities. One of the primary objectives of any survey campaign will be proactive coordination with commercial and recreational fleets to develop comprehensive awareness of the seasonality and pattern of fisheries activities so that impacts are avoided and deconflicted, particularly during peak fishing seasons. The goal of the Plan is to consider each survey campaign as an opportunity to improve two-way communications and feedback mechanisms between the Project and fisheries stakeholders as part of an adaptive communications framework. As the project matures from site assessment to construction and operations, this section of the Plan will be updated accordingly.

4.1 Survey Operations and Site Assessment

Site characterization and assessment will involve high-resolution geophysical, geotechnical, and benthic activities, such as depth sounding with multi-beam echo sounders to determine bathymetry, seafloor imaging with sidescan sonar, sub-bottom profilers to determine stratigraphy below the seabed, magnetometers to map ferrous returns, collection of sediment cores, and collection of benthic sediment samples to aid in habitat characterization. These activities are likely to involve multiple vessels depending on location and water depth, particularly once specific export cable corridors have been identified.

As a component of the Project's proactive approach to fisheries impact avoidance, a pre-survey risk assessment will be conducted in advance of each survey campaign to identify spatial and temporal overlap with commercial and recreational fishing activities. The assessment will be conducted in coordination with FRs and fishery participants to appropriately characterize peak and seasonal activity, and will include mitigation measures designed to avoid, minimize, and mitigate any specific fisheries risks identified. Such measures will be collaboratively developed and could include a protocol for calibration of sonar gear to identify appropriate features for this activity and specifically avoid popular fishing structures, as well as use of scout vessels. Onboard fisheries liaisons (OFLs) may also be employed depending on the survey methods used and the potential for interaction with fishing activities and/or gear. The fisheries communication team has been actively involved in the initial survey planning phase of this Project to ensure fishery and ecosystem issues are integrated in the design and execution of all survey operations.

4.2 Survey Team Communications

The Liaisons will work with the survey team during each pre-survey risk assessment (Section 4.1) to provide forecasts of expected commercial and recreational fisheries activities, state and federal resource

surveys, recreational fishing tournaments (e.g., HMS), and known fixed-gear placements to facilitate impact avoidance. The Liaisons will conduct daily briefings with survey vessels to provide the survey teams with updated information regarding fisheries operating in or transiting through the survey area prior to initiation of each day's activities, and will receive feedback from the survey team daily. The Liaisons will serve as the primary contact for both industry and the survey team to identify and resolve any issues that occur during survey operations, and will develop notices of survey operations for distribution to commercial and recreational fishery participants and stakeholders via communication methods and outlets identified for each sector (see sections 5.2 and 5.3), as well as USCG Notices to Mariners. All notices will be distributed to the fishing industry as early as practicable and no later than two weeks in advance of any scheduled survey or site assessment activity. The Liaisons will also work with the FRs to ground-truth and update information conveyed to survey teams. Survey vessels will monitor VHF channel 16 at all times during survey operations for communication with fishing vessels in the area on a bridge-to-bridge basis.

Given the importance of timely and accurate two-way feedback during survey preparation and operations, the communications team is exploring innovative digital technologies, to communicate survey activity, receive stakeholder input, and facilitate avoidance of fisheries impacts. If successful, these could reduce the burden of engagement on fishing communities, while also promoting safe co-occurrence of fishing and survey operations. The team is committed to continued pursuit of approaches that support efficient and innovative communications for the benefit of fishing participants and stakeholders.

4.3 Gear Loss and Interactions

While every effort will be made to avoid and deconflict fisheries impacts prior to each survey campaign, the Project has established a gear loss claim procedure for loss or damage to fishing gear due to survey activities (please see Appendix 3). The procedure establishes the reporting process for fishermen who experience a gear loss or damage associated with the project's offshore operations, and confirm the Project's commitment to processing claims for lost/damaged fishing gear in a timely manner. A Survey Fishing Gear Incident Form and procedures will be used by contracted survey vessels to report any gear interactions, and a Gear Loss/Damage Claim Form is available to fishermen who experience a gear loss or damage event associated with any vessels contracted to the Project and will be posted on the Project website. The Liaisons will be the point of contact for fishermen to assist them with this process. As per the lease stipulations, an annual summary of claims will be provided to BOEM.

Community Offshore Wind acknowledges the concerns expressed by fishermen regarding the potential differences in gear loss/damage claim processes across different Projects. We are committed to working with other leaseholders to develop procedures that will minimize stakeholder burden and increase transparency and consistency.

5 Fisheries Communication Strategies

The communication strategies outlined below are built on the Project's core communication principles to meet the Plan objectives described in Section 1.1. These approaches are intended to be specific and adaptable to the needs of each stakeholder group and promote effective, two-way engagement that contributes to the safe, successful, and sustainable shared use of the Lease Area. This Plan anticipates using a combination of engagement methods including one-on-one interviews, small group meetings in fishing communities, larger workshops that potentially include other developers and multiple stakeholder types, etc. to identify key concerns and provide avenues for stakeholders to contribute their observations and requests. Each component outlined in the following sections should function as an interconnected

node in a broader communications network to advance shared understanding between the Project and fisheries stakeholders that is based on the curated local knowledge of the fishing community. As the network and strategies evolve throughout the Project lifetime, the Plan will be updated accordingly, and revised versions will be posted on the Community Offshore Wind website. As noted previously, the fisheries team proactively engaged some members of the commercial and recreational fishing communities to discuss the suitability of various communications nodes and approaches.

The Project is also committed to understanding the differing communication preferences within and among stakeholder groups. A successful Project outcome requires addressing these needs in a manner that is sensitive to cultural and language differences, as well as accessibility to information sources. The Liaisons will coordinate with FRs to identify specific approaches that meet unique stakeholder needs and promote inclusivity.

Community Offshore Wind recognizes the high stakeholder engagement burden given the number of active leases in the Mid-Atlantic and New England regions. The Project is committed to building initiatives with other developers to streamline this burden, while acknowledging the inherent tension this creates among competing entities. For example, the team has discussed it may be more efficient for multiple developers to host topic-based workshops so stakeholders could provide input on a particular issue, compared to area-specific feedback. This team is aware of the time constraints many fishery stakeholders have and efficiency is a core objective of this plan.

5.1 Commercial Fisheries Communications

The Liaisons will work closely with the FRs and industry to develop the most appropriate methods (e.g., paper, text, email, public listserves, social media, websites) to reach the greatest number of stakeholders, being mindful of the cadence and mode of information delivery. Approaches will be tailored to each fishery and/or communication node, although some overlap is expected. The Liaisons will also develop and maintain a list of contacts for various commercial fishing constituencies (e.g., fish houses/dealers/processors, commercial associations, key fishery participants, etc.).

5.1.1 Fisheries Operating in and Transiting Lease

As described in Section 3.2.1, the primary commercial fisheries operating in the Lease Area are dredge fisheries, but some bottom and mid-water trawl, gillnet, and pot effort has also historically occurred in and/or transited through this area. The Liaisons will work with the FRs, FTAs, local industry, state and federal marine fisheries agencies, and regional fishery management councils to identify stakeholders with current and historical knowledge who may be available for direct communication. Engagement with industry members who can interpret and fill information gaps is critical to a shared understanding and impact avoidance. For example, our marine affairs team proactively engaged industry with Project engineers to promote technical understanding of dredge gear configuration and operation. Such exchanges can also inform development of appropriate communication strategies for different phases of the Project.

In recognition of stakeholder burden, the Liaisons will work with the FRs to coordinate in-person engagements with individuals and groups. Anticipated communication methods during survey activities include, but are not limited to: USCG Notices to Mariners; local notices to fishermen via appropriate state agency communication lists; text and/or email messages to individuals operating in the same fishery/gear type; social media and postings on the Project website; and distribution/posting of paper notices of survey operations at appropriate locations.

5.1.2 Commercial Fisheries Associations/Representatives

Commercial fisheries associations and representatives serve a valuable role for commercial stakeholders as trusted sources of information regarding management issues under consideration and upcoming regulatory changes at both the state and federal level. Most, if not all, send out regular communications to their memberships, hold leadership (i.e., board of directors) meetings, and may host or participate in community engagement events. The Liaisons will work with the FR to identify a list of appropriate organizations for outreach regarding the Project. The Liaisons will endeavor to provide general Project information and fishery notices regarding survey activities to associations and representatives for distribution to their membership, attend association meetings to listen to and provide feedback regarding industry concerns (as appropriate and requested), and be available as a resource. The Liaisons will work with other leaseholder liaisons to coordinate communication and engagement efforts to reduce the burden on organizations to respond to multiple requests. As appropriate, the Project may also host a booth at trade shows where representatives of commercial fishing organizations may be in attendance to provide information that organizations may distribute to their members.

5.1.3 Shoreside Infrastructure/Communities

Shoreside infrastructure such as docks, fish houses/dealer/processor facilities, and vessel repair shops can be important communication sites for busy commercial stakeholders entering or leaving port. The Liaisons will work with the FRs to identify shoreside infrastructure hubs for posting of fishery notices, via electronic or traditional media as desired and appropriate, regarding upcoming survey activities. The Liaisons will also engage directly with shoreside infrastructure owners to establish communication and serve as a resource for industry concerns and questions.

5.2 Recreational Fisheries Communications

Recreational fishermen receive information using similar modalities as commercial fishermen (i.e., social media, websites, other electronic platforms, paper) as well as similar types of information sources (e.g., USCG Notices to Mariners, organizations and clubs, marinas, boat ramps). The Liaisons will work with FRs to identify and tailor the mode and frequency of communications as appropriate for each recreational stakeholder constituency to promote avoidance of recreational fisheries impacts throughout the life cycle of the Project.

5.2.1 Fisheries Operating in and Transiting Lease

The majority of offshore recreational fishing effort operating out of New Jersey and New York is from private anglers fishing for summer flounder, black sea bass, and bluefish, as well as striped bass, sharks, tunas, and other HMS species. However, spatial data on recreational fisheries are limited and the team plans to work directly with recreational captains and angling organizations to develop a detailed understanding of recreational effort, including for HMS species, within and around the Lease Area. This will include efforts by the fisheries team to understand fisheries transits through the project area. It is likely that targeted, deepwater trips (such as for bluefin and golden tilefish), which may be combined with trips for HMS species, will transit the Lease Area on the way to fishing grounds seaward of the Lease. In 2021, there were over 4,000 HMS Angling Permits homeported in New Jersey (second only to Florida) and just under 2,800 homeported in New York, indicating high interest in these fisheries¹⁷. The Liaisons

¹⁷ [2021 Stock Assessment and Fishery Evaluation Report \(SAFE\) for Atlantic Highly Migratory Species](#), p. 69

will work with the FRs, state and federal agencies, regional fishery management councils and partners, as well as local fishing clubs, to identify anglers with historic experience in and near the Lease Area. Whenever possible, engagement with local fishermen to curate their knowledge and determine communication preferences will be coordinated with other leaseholders to minimize engagement burden. The fisheries team is committed to improving the efficiency and effectiveness of recreational fishery outreach through collaboration with other leaseholders.

5.2.2 For-Hire Fisheries

For-hire fisheries (charter boats and headboats) are socially, culturally, and economically important to surrounding shoreside communities, and the Liaisons will develop outreach protocols suited to this unique sector. The for-hire trips most likely to be transiting and/or operating in the lease area are HMS trips; as of October 2021, there were just over 400 HMS Charter/Headboat Permit homeported in New Jersey (second to Florida), and about 370 homeported in New York¹⁸. The Liaisons will coordinate with the FRs and state and federal agencies to identify marinas that serve as hubs for the charter and headboat fleets, and will engage marina operators as important constituents in communication efforts. As noted above, outreach and communication methods will likely include written/posted materials regarding survey activities, as well as electronic and social media, but the mode and frequency will be tailored according to feedback from marina operators.

5.2.3 Recreational Tournaments

Recreational fishing tournaments occur seasonally, generally spring through fall, and tournaments focused on HMS species are most likely to incur transit through the lease area. The Liaisons will work with for-hire captains, recreational fishing organizations, and agencies to develop a list of tournaments in the area, and will post written survey information at tournament locations, as well as communicate to tournament organizers the timing and extent of survey operations. For tournament fleets that may transit the project area, tournaments will be provided in advance with communications materials describing any offshore survey operations or related activities to promote awareness and safety. The project will also offer to send a representative to tournament captain's meetings as appropriate to notify the captains of any offshore operations.

5.2.4 Recreational Fisheries Organizations/Representatives

A number of recreational fishing organizations exist in the region and serve important roles as communication and information dissemination nodes for private anglers and for-hire fleets. Some serve both constituencies while others focus specifically on one stakeholder group, but most communicate regularly with their memberships via electronic communications, social media, and/or printed newsletters. Many organizations participate in the fisheries management process, and some host fishing tournaments or sponsor community events. The Liaisons will develop a list of recreational fishing organizations to engage in dialogue regarding survey activities, member concerns and feedback, and determine the appropriate modes and frequency of communication in coordination with organization leadership.

¹⁸ [2021 Stock Assessment and Fishery Evaluation Report \(SAFE\) for Atlantic Highly Migratory Species](#), p. 68

5.2.5 Shoreside Infrastructure/Communities

Marinas, boat ramps, and tackle shops are components of shoreside infrastructure that are also important communication conduits for the recreational fishing community. The Liaisons will work with state agency staff, FRs, and recreational fishing organizations to identify high use infrastructure for posting of survey information. Tackle shops or sporting goods stores may also serve as community hubs, and some occasionally sponsor or host lectures or information sessions for clients/constituents. The Liaisons will explore the possibility of adding these as engagement nodes and coordinating with other leaseholders in outreach activities tailored for these groups.

5.3 State and Federal Management Entities and Agencies

State and federal fisheries agencies and regional management entities participate in the stewardship of fisheries occurring in and transiting through the Lease Area, and conduct or coordinate several fishery-independent surveys within the Lease Area and/or within potential export cable corridors. These surveys provide critically important information for regional fisheries assessment and management, and data to inform the Project and Plan goal of fisheries impact avoidance. The Liaisons will work with state and federal agency staff to develop a list of resource surveys, and with survey coordinators to avoid scheduling conflicts between resource and project survey operations. The intent of these activities is to ensure the concerns as well as expertise of agencies and management entities are incorporated throughout the project lifecycle.

This Plan acknowledges that a similar communication burden exists for agencies as for stakeholders given the pace of offshore leasing activities, and is committed to working with other developers to coordinate and streamline these efforts whenever possible. As noted previously, the fisheries team will also coordinate efforts with the Project's Agency Communications Plan. The objective is to develop an appropriate frequency and method of communication with state and federal agencies, fisheries management entities, and other partners that will promote future collaborative opportunities (see Section 6) and support agency climate resiliency initiatives.

5.3.1 Federal Agencies

The Plan will coordinate engagement with GARFO, Northeast Fisheries Science Center (NEFSC), and the NMFS HMS Division to ensure that Project survey activities are appropriately communicated and scheduled to avoid impacts to important agency biological surveys, such as: the NEFSC Spring and Fall Bottom Trawl Surveys; Northeast Area Monitoring and Assessment Program (NEAMAP) Survey; Ecosystem Monitoring Surveys; North Atlantic Right Whale Aerial Surveys; Marine Mammal and Sea Turtle Aerial Surveys; Marine Mammal, Sea Turtle, and Seabird Ship-based Surveys; Seal Aerial Abundance Surveys; Coastal Shark Bottom Longline Surveys; and the Cooperative Atlantic States Shark Popping and Longline/Gillnet Survey. The Liaisons will also work with federal agencies and the managers of industry collaborative resource surveys (e.g., School of Marine Science and Technology (SMAST) at University of Massachusetts-Dartmouth, Virginia Institute of Marine Science (VIMS) and Coonamessett Farm Foundation (CFF) scallop surveys, NOAA/surflam industry resource surveys) to align Project survey schedules with these activities. The Plan recognizes the impacts that construction and operations of offshore wind facilities will have on these critical surveys. An objective of this engagement is to explore opportunities to develop future project monitoring activities that are compatible with existing surveys and can contribute to the management of fisheries resources, consistent with the Draft NOAA Fisheries and BOEM Federal Survey Mitigation Strategy.

5.3.2 State Agencies

Although the Lease Area is closest to New York and New Jersey, the Liaisons will coordinate engagement with state marine fisheries agencies from North Carolina through Maine due to the regional nature of the fisheries operating in and transiting through the Lease. Project leadership proactively contacted NJDEP and NYSDEC, as well as the New York State Environmental Research and Development Authority (NYSERDA), and other state agencies, to begin building these important relationships. Since then, the fisheries team has conducted targeted outreach with fisheries division staff from several state agencies to explore and discuss the proposed communication strategies. Further engagement with the NYSERDA Fisheries Technical Working Group (F-TWG), of which RWE is a member, and the NJDEP Offshore Wind (OSW) Working Group is anticipated. The Liaisons will provide an overview of the Plan to state agency staff for feedback and suggestions, and to determine the appropriate communication methods, outlets, and tempo for agency engagement. The Liaisons will also explore leveraging agency communication portals with staff to expand stakeholder engagement and awareness of the Project, and to promote inclusion of all interested and affected constituencies. As noted, objectives of the Plan include coordination of Project survey operations so as to avoid impacts to state biological resource surveys, and incorporation of agency expertise.

5.3.3 Regional Fishery Management Entities

The regional fishery management councils and the Atlantic States Marine Fisheries Commission (ASMFC) are important stewards of marine fisheries resources, working in partnership with each other and NMFS to develop and implement regulations that promote sustainable future fishing opportunities. The MAFMC and NEFMC have extensive communication and stakeholder engagement networks, and the Liaisons will work with both councils to provide project updates as appropriate (e.g., an introductory presentation to the MAFMC at its August 2022 meeting) and to determine acceptable methods and frequency of communications. This may include working with staff to provide survey notices and fact sheets for the Joint NEFMC/MAFMC Offshore Wind webpage and/or for distribution via email and social media postings. Similarly, the ASMFC is responsible for fishery management plans in state waters along the entire east coast. Therefore, they too have an extensive stakeholder network including commercial, recreational, and other interested parties. The team will also explore coordination of information “open houses” with other developers to provide opportunities for stakeholder feedback in conjunction with Council and/or Commission meetings.

5.4 Other Partners

Multiple organizations are active participants in the conversations surrounding development of offshore wind in the U.S., including the Responsible Offshore Development Alliance (RODA), the Responsible Offshore Science Alliance (ROSA), the Regional Wildlife Science Collaborative for Offshore Wind (RWSC), academic institutions, and several environmental nongovernmental organizations. Community Offshore Wind recognizes the contributions and continuing efforts of RODA, ROSA, RWSC, scientists, and others to improving the dialogue between fishing communities and the offshore wind industry, developing recommendations regarding impact fees and mitigation, hosting workshops and other collaborations, and conducting research and monitoring to promote a shared understanding of the state of the science and future scientific needs. The Project’s fisheries communications team is committed to participating in and contributing to these efforts and future initiatives, and providing efficient and productive settings for early engagement and dialogue.

5.5 Communications Tracking

The Plan includes a stakeholder management system to record efforts across all Project communications plans and track stakeholder concerns and requests. Every engagement opportunity will be documented by engagement type, stakeholder category, relevance and specific input provided. The team will detail how that input has been communicated and integrated into the overall planning of the Project. This will improve transparency and illustrate the variety of engagement strategies planned. This information will be included in the semi-annual progress reports, which are a BOEM lease condition, and will be posted on the Project website. Reports will note when and how each concern has been addressed or integrated into the design, development, or operation of the project.

6 Collaborative Opportunities

A major focus of the Plan is to engage fishing communities in the development of collaborative opportunities for monitoring and research, as well as safety and training enhancements, that are informed by their local knowledge of historic and current fishing activities and resources. The objective is a robust research, monitoring, enhancement, and data sharing program that addresses relevant needs identified by fishing community stakeholders, state and federal agencies, and other partners. Coordination with other developers will be explored whenever feasible to maximize the efficiency and effectiveness of these efforts.

6.1 Monitoring

Pre-, during, and post-construction monitoring is an important component of avoiding and addressing fisheries impacts, providing for the continuity of existing data streams, and piloting the application of new technologies and survey designs. Community Offshore Wind envisions a collaborative monitoring program that is adaptive to fisheries management, stakeholder, and Project needs, and provides opportunities for coordination across leaseholders. The following is a non-exhaustive list of potential collaborative monitoring initiatives:

- Provide opportunities for commercial and for-hire vessels to participate in pre- and post-construction resource, mapping, and benthic surveys.
- Piloting integration/transition from NOAA vessels to industry vessels in fishery independent survey areas impacted by turbine construction.
- Development and testing of consistent monitoring methods and survey designs in coordination with other leaseholders to facilitate integration with long-term resource surveys.
- Join ROSA Advisory Council, pending membership approval, and participate in the organization's efforts to advance collaborative and consistent regional approaches to monitoring.
- Support and participate in the development of the American Clean Power Recreational Fisheries Engagement initiative, and explore opportunities for recreational participation in innovative monitoring approaches.
- Support for socio-economic monitoring of fishing communities to document Project impacts and benefits.

6.2 Research

State and federal agencies, regional fishery management bodies, and other partners have contributed significant resources to identifying research needs regarding impacts of offshore wind development on fisheries resources and management. Community Offshore Wind is committed to active participation and

coordination with other leaseholders in addressing and supporting these needs, recognizing the strain that rapid expansion of offshore wind has placed on the region's research community. The following is a non-exhaustive list of potential opportunities that will be expanded as the Project's fisheries communications team engages in existing conversations on development of research needs:

- Engagement with academic institutions and research collaboratives (e.g., VIMS, Rutgers, SMAST, CFF, State University of New York (SUNY), Science Center for Marine Fisheries (SCMFIS), etc.) regarding research needs for fisheries occurring in the Lease Area.
- Explore potential sponsorship/support opportunities for workshops and research activities focused on scallop and/or surf clam resources.
- Coordinate with regional fishery management councils, NMFS, ROSA, RWSC, and academic partners to identify and develop collaborative research projects for affected species that are suitable for commercial and headboat platforms.
- Provide support for exploratory research to improve compatibility and/or efficiency of dredge gear within offshore wind arrays.
- Support research to address potential impacts of wind energy areas on federal surveys and resource assessments (e.g., collaborate on relevant resource assessment modeling efforts, potential calibration of various survey techniques, etc.)
- Support habitat research relevant to species occurring within lease area.
- Explore potential research opportunities for private anglers through the American Clean Power Association's Recreational Fisheries Engagement initiative.
- Support for internship opportunities.

6.3 Information and Data Sharing

A tremendous amount of data and information will be generated during site characterization and assessment, construction and post-construction monitoring, and collaborative opportunities described above. The project is committed to providing timely access to fisheries data and information to the extent practicable to improve management of ocean resources. Anticipated activities to support this objective include:

- Explore utility of project data to ecosystem and other resource assessments.
- Collaborate with researchers and/or educators to distill research and monitoring results into formats suitable for general public audiences (e.g., ArcGIS Story Maps) and students.
- Provide public access to research and monitoring data within the bounds of federal confidentiality requirements necessary to protect individual fishing entities.
- Develop a data sharing/confidentiality policy that clearly outlines the Project's expectations of contracted entities (e.g., academic researchers) with respect to pre-, during, and post-construction data collection funded by the Project.

6.4 Safety and Training

Safety of fishermen, communities, and Project crews is a core principle of the Plan that is aligned with the overall philosophy of avoidance of fisheries impacts whenever possible. The Project is committed to promoting the safe and sustainable coexistence of fishing activities and offshore wind through initiatives such as:

- Engage local fishermen to serve as scout vessels during survey operations and as guard vessels during project construction.

- Incorporate the ability for fishermen to provide real-time updates regarding changes in fishing operations via innovative digital approaches (see Section 4. 2).
- Provide marine simulator training for commercial and recreational vessels to experience navigation through different potential project design configurations under a variety of weather conditions.
- Support the American Clean Power Association’s Recreational Fishing Industry Engagement initiative as a venue to identify and address the unique safety concerns of for-hire and private anglers.
- Provide support for vessel radar upgrades and/or testing of new equipment for commercial and for-hire fishing vessels.
- Collaborate with NOAA, the USCG, and chart plotting companies to develop an efficient process for providing updated chart information at appropriate timeframes, based on site assessment activities and continuing throughout project construction and operation.

7 Conflict Prevention and Resolution

The philosophy of Community Offshore Wind is that integration of curated, local fisheries knowledge into the Project design will prevent conflicts by avoiding fisheries impacts to the greatest extent practicable. The intent of the FCP is for Liaisons to work with FRs and fishing communities to develop this knowledge, collaboratively identify potential impacts from the Project, and where those impacts cannot be avoided, engage in a bottom-up process to develop approaches to minimize, rehabilitate, and mitigate those impacts. Approaches to prevent conflicts that might arise include but are not limited to the following:

- Engage fishing communities early in discussions of options for export and inter-array cable layouts, as well as installation/burial techniques, that minimize impacts to fishing activities and habitats.
- Coordinate with fishing communities and adjacent developers to identify options that could avoid or reduce impacts on fishing activities.
- Engage fishing communities to develop seasonal and geographic awareness of fisheries operations so they can be considered in the scheduling of site assessment and construction activities.

Our fisheries team will focus on constructive, proactive engagement with the fishing industry in order to avoid and minimize project conflicts with marine fisheries. In recognition that it may not be possible to avoid all conflicts, the Project will implement a stepwise approach to address disputes. This process will begin with the fisheries team working to address differences within a reasonable timeframe (e.g., 30 days), followed by an intermediate step allowing for external consultations as needed, and a final step of engaging a professional facilitator to assist in the identification of potential solutions or resolutions. The intent is to provide members of the fishing community a clear process to address disagreements, as well as opportunities to notify the Project of previously unknown conflicts and concerns via multiple tools (e.g., website, mobile app, contact with FRs and Liaisons), and suggestions for resolution. We are committed to successful, long-term coexistence with the fisheries, and will be proactive in our efforts to identify and work through any potential conflicts.

8 Coordination Across Leases

Coordination with other developers is a theme that is integrated throughout the Plan, and the Project is committed to advancing these efforts. Project leadership currently participates in the American Clean

Power Fisheries Subcommittee, as well as the NYSERDA F-TWG and E-TWG to collaborate on issues of common interest among leaseholders, including:

- Collaborating with other leaseholders to develop consistent monitoring practices that are informed by state and federal resource needs, and fisheries stakeholder concerns.
- Development of consistent protocols for compensation for gear loss and damage as well as potential lost fishing income.
- Coordinated stakeholder engagement efforts (e.g., joint topic workshops, port hours, curating local knowledge, identifying communication preferences and opportunities to improve communications efficiency and reduce the burden on fishermen, etc.)
- Agency communication and engagement.

9 Indicators and Metrics

This plan will include specific metrics and indicators to measure the success and efficacy of the Plan. The team will collaborate with stakeholders to seek early feedback on candidate qualitative and quantitative metrics. Once defined these performance metrics will be described in future versions of the Plan and updates included in progress reports. This is an important step in identifying clear ways to evaluate and continuously improve the Plan. Some candidate metrics include:

- Target meeting frequencies for state and federal agencies and their offshore wind working groups, as well as fisheries management entities, to convey updates on project status and solicit feedback.
- Number of interviews with participants and representatives of various fisheries sectors.
- Number of open houses and/or port meetings hosted (in-person and virtual) to develop collaborative research and monitoring opportunities.
- Achievement of team development goals (e.g., number of FRs representing different fisheries and sectors)
- Number of fishery and/or sector specific fact sheets developed.

Appendix 1 – Fisheries Team Contact Information

Name/Contact Information	Title
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Rick Robins RWE Renewables Americas, LLC 100 Federal St. Boston, MA 02110 RickR@communityoffshorewind.com Cell: 757-876-3778	Marine Affairs Manager

Appendix 2 – Example Engagement Tracking Template

The following is an example of a potential stakeholder engagement tracking template and the types of information the fisheries team anticipates collecting to describe and document how input from fisheries participants and stakeholders is being integrated into the Project, and how feedback is being provided. As noted in Section 5.5, a Project-wide stakeholder management system is being developed to comprehensively track all stakeholder input and feedback mechanisms across all required Project communications plans.

Date of Engagement	Engagement Type	Fisheries Team member(s)	Stakeholder Category	Stakeholder Name(s)	Organization (if applicable)	Location	Phone	Email	Summary of Issues Discussed	Project-Specific Input Provided	Actions in Response to Feedback

Appendix 3 – Gear Loss Claim Form



Fishing Gear Avoidance and Claims Process

Community Offshore Wind, LLC and our contractors are committed to avoiding interactions with commercial fishing gear. Our fisheries team—including our Fisheries Liaisons in coordination with our Fisheries Technical Advisors/Fisheries Representatives—conduct risk assessments in consultation with the local fishing industry to assess the spatial and seasonal distribution of fixed fishing gear in the project area. Effective communication and close coordination are key to avoiding negative fisheries interactions and our team is committed to proactive communication through fisheries notices, notices to mariners, and direct outreach to local fishermen to notify the fleet of the project’s offshore operations. Our survey operations also use onboard fisheries liaisons and scout vessels, as indicated by the risk assessments, in order to reduce the risk of interacting with fixed fishing gear.

In the event of an interaction with commercial fishing gear, Community Offshore Wind, LLC has a gear loss claims procedure in place to provide a process for fishermen to file a claim for their gear damage or loss.

Claim Filing Process

If a fisherman believes or has information that they experienced gear damage or loss as a result of Community Offshore Wind’s operations, they should review and complete the Gear Loss Claim Application, together with the appropriate supporting documentation.

The completed application and supporting documentation must be submitted by email to our Fisheries Liaison, DeirdreB@communityoffshorewind.com with an electronic copy to our Marine Affairs Manager at RickR@communityoffshorewind.com.

To have a claim reviewed, applicants must:

1. Contact Deirdre Boelke, Fisheries Liaison, as soon as safely possible following the gear damage or loss event. She should be contacted by phone at 978.518.0638. If she is unavailable by phone, contact Rick Robins, Marine Affairs Manager, at 757.876.3778.
2. Provide a complete, signed application form and supporting documents within 30 days of the gear damage or loss incident.
3. Review and include all documents required in the application Check List.

Process for claim review:

- Gear damage or loss claim applications will be reviewed by the Community Offshore Wind Fisheries Liaison and a representative of Community Offshore Wind.

- Applicants will be notified of the result of the review, in writing, within 30 days of receipt of a complete application.
- If the claim is found to be valid, a check will be provided to the Applicant.
- If the claim is denied, a written explanation will be provided to the Applicant.
- Applicants who disagree with the decision may file a written notice of appeal with Community Offshore Wind, LLC, and Community Offshore Wind, LLC may engage or consult with a third party or external reviewers to review the application on appeal. The decision on appeal will be final and not subject to any further right of appeal.
- Applicants may not file multiple claims for gear loss in the same area. Prevention methods should be followed by all parties.
- Community Offshore Wind, LLC reserves the right to request additional information to support review of claim.

Gear Loss Claim Application Form

Date of application: Click or tap here to enter text.

Name of applicant: Click or tap here to enter text.

Entity type: (LLC, corporation, individual proprietor) Click or tap here to enter text.

Address: Click or tap here to enter text.

Email: Click or tap here to enter text.

Phone: Click or tap here to enter text.

Vessel name: Click or tap here to enter text.

Home port: Click or tap here to enter text.

Vessel documentation number: Click or tap here to enter text.

Federal fishing permit number: Click or tap here to enter text.

State fisheries landing permit: Click or tap here to enter text.

Gear type: Click or tap here to enter text.

Description of incident causing gear damage or loss,
and extent of the gear damage or loss, believed

attributable to offshore operations associated with the project: Click or tap here to enter text.

Date of gear loss incident (specify actual/observed or estimated): Click or tap here to enter text.

Time of day and weather conditions (if known): Click or tap here to enter text.

Location of gear damage or loss (lat/lon or TDs—specify): Click or tap here to enter text.

Spatial record of gear damage location (chart plotter, logbook, other—specify, and please provide image, copy, or download of gear location): Click or tap here to enter text.

Gear description and markings: Click or tap here to enter text.

Description of offshore wind vessels and any other vessels in area of gear damage/loss (specify source—observation, AIS, etc.): Click or tap here to enter text.

When was gear last set or hauled: [Click or tap here to enter text.](#)

Was any gear retrieved, how much, and condition: [Click or tap here to enter text.](#)

How much gear (pots, traps, high flyers, etc.) was reported damaged or lost in this specific incident?
[Click or tap here to enter text.](#)

Claim amount requested for damaged or lost gear: [Click or tap here to enter text.](#)

Provide detailed invoice for original gear, if available, and invoice for gear repair or replacement.

Provide completed W-9 form (<https://www.irs.gov/pub/irs-pdf/fw9.pdf>).

Provide any available photos of undamaged and damaged gear.

Additional documentation is required if Applicant is claiming lost fishing time and this section only needs to be completed if Applicant is claiming lost fishing time:

Date of gear damage/loss: [Click or tap here to enter text.](#)

Date of gear repair/replacement: [Click or tap here to enter text.](#)

Amount of claim for lost fishing time: [Click or tap here to enter text.](#)

Description of lost fishing time and revenue: [Click or tap here to enter text.](#)

Description of fish landing history for the 30-day period prior to gear damage/loss, and vessel trip report (VTR) records or state landing records if fishery is not subject to VTR requirements: [Click or tap here to enter text.](#)

Provide documentation of gear tag replacement application/receipt, state and federal if applicable

By submitting this Application, Applicant authorizes Community Offshore Wind, LLC to make whatever reasonable inquiries and investigations it deems necessary to verify my application and request for compensation.

Applicant understands that submitting this Application does not guaranty payment. Applicant further acknowledges and agrees that if this claim is accepted and paid in its entirety, that acceptance of such payment constitutes full, final, and complete payment for this particular claim and that neither Community Offshore Wind, LLC nor any of its affiliates shall have any further outstanding or ongoing obligation with respect to this specific claim and Applicant shall not, directly or indirectly, assert any claim, or commence, join in, prosecute, participate in, or fund any part of, any suit or other proceeding of any kind against Community Offshore Wind, LLC or its affiliates, based upon this specific claim. If a claim is denied in part, Applicant may accept payment for the undisputed part without waiving Applicant's right to appeal the disputed part of the claim. Applicant recognizes that submission of this Application does not affect Applicant's rights concerning matters other than those specifically identified in this specific Application.

I attest, under penalty of perjury, that to the best of my knowledge the information in this Application is true and correct.

Signature _____

Date _____

Application Check-list

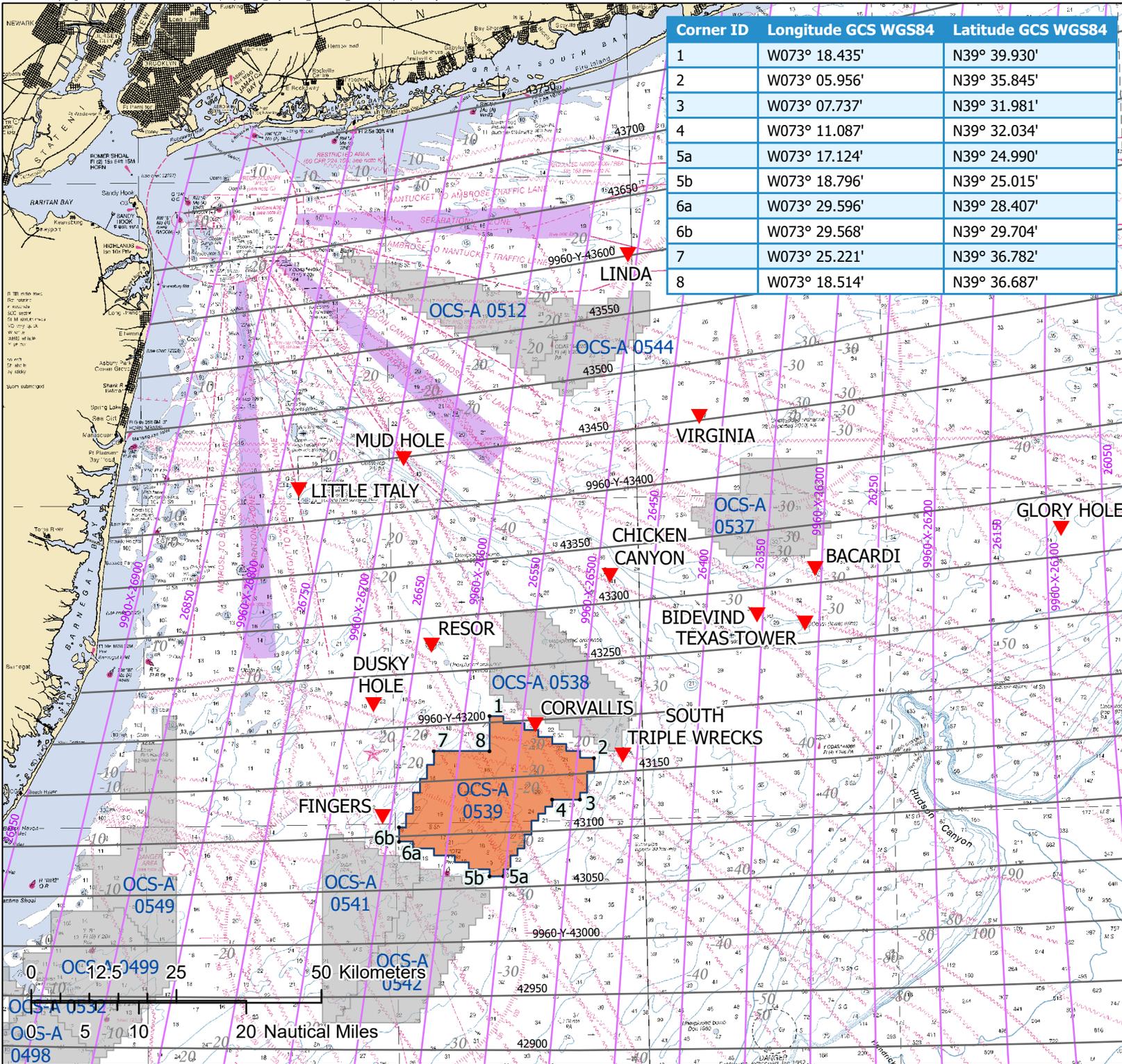
- Completed and signed application
 - Completed and signed W-9 form
 - Image or copy of documentation (chart plotter, logbook, etc.) of location of gear damage incident
 - Provide any available photos of undamaged and damaged gear
 - Invoices for original gear and replacement gear
 - Any additional information Applicant wishes to have considered in support of application
-

Additional information required for any claims of lost fishing time

- VTRs and state landings reports, as appropriate to the fishery, for the 30-day period prior to the incident
- Documentation of tag replacement applications and receipts, if applicable

Our fisheries liaisons are here to help—please let the liaison know if you have any questions and please return this form and attachments by delivering an electronic copy via email to Deirdre Boelke, Fisheries Liaison for Community Offshore Wind, LLC at DeirdreB@communityoffshorewind.com , with a copy to Rick Robins, Marine Affairs Manager, at RickR@communityoffshorewind.com.

Please note that the payment cannot be processed without a signature and completed W-9 form. If applications are deemed to be incomplete, they will be returned to the applicant within 15 business days to complete the application.



Corner ID	Longitude GCS WGS84	Latitude GCS WGS84
1	W073° 18.435'	N39° 39.930'
2	W073° 05.956'	N39° 35.845'
3	W073° 07.737'	N39° 31.981'
4	W073° 11.087'	N39° 32.034'
5a	W073° 17.124'	N39° 24.990'
5b	W073° 18.796'	N39° 25.015'
6a	W073° 29.596'	N39° 28.407'
6b	W073° 29.568'	N39° 29.704'
7	W073° 25.221'	N39° 36.782'
8	W073° 18.514'	N39° 36.687'



Community Offshore Wind - Lease Area 0539

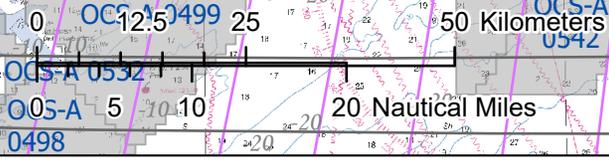
- LoranC Grid Lines**
- Time Difference line
 - Time Difference line
 - Fishing Areas
 - Lease Area 0539
 - Other lease areas

NOT TO BE USED FOR NAVIGATION



Contact Info - Fisheries Liaisons
 Deirdre Boelke - cell: 978-518-0638
 DeirdreB@communityoffshorewind.com
 Michelle Duval - cell: 919-601-3798
 MichelleD@communityoffshorewind.com
<http://communityoffshorewind.com/fisheries>

Date: August 31, 2022
 Map Scale: 1:900,000
 Projection: NAD 1983 UTM Zone 18N





New England Fishery Management Council

50 WATER STREET | NEWBURYPORT, MASSACHUSETTS 01950 | PHONE 978 465 0492 | FAX 978 465 3116
Eric Reid, *Chair* | Thomas A. Nies, *Executive Director*

August 26, 2022

LTJG Thomas Davis, Chief
Waterways Management Division
First Coast Guard District

Dear Lieutenant Davis:

Please accept these comments from the New England Fishery Management Council on the Notice of Study; request for comments on Port Access Route Study: Approaches to Maine, New Hampshire, and Massachusetts (MNMPARS). We will provide more specific comments in the future on any alternative routing measures that are developed; general comments for the current study follow.

The New England Fishery Management Council (Council) has primary management jurisdiction for 28 marine fishery species under nine FMPs in federal waters and is composed of members from Connecticut to Maine. In addition to managing these fisheries, the Council has developed measures to identify and conserve essential fish habitats, protect deep sea corals, and manage forage fisheries sustainably. A primary concern of ours is safe and efficient vessel operations given the potential for future offshore wind development in the Gulf of Maine. The Council supports policies for U.S. wind energy development and operations that will sustain the health of marine ecosystems and fisheries resources. While the Council recognizes the importance of domestic energy development to U.S. economic security, it recognizes that the marine fisheries in the Gulf of Maine, along the New Hampshire Seacoast, and in Massachusetts Bay are profoundly important to the social and economic well-being of coastal communities in the Northeast US and provide numerous benefits to the nation, including domestic food security. This letter focuses on aspects of MNMPARS most relevant to New England fisheries resources, habitats, and stakeholders.

How vessel navigation routes will change as a result of planned or potential future developments

Several factors will likely affect routing measures in the Gulf of Maine region including warming waters, regulatory changes, and offshore wind. Several of these measures are still under development, thus, it will be important for the routing measures to be updated accordingly. Furthermore, it is important to keep in mind that past fishing activity is not representative of future fishing activity. This is explained further below.

Climate change is likely going to cause major changes in fish distributions and fisheries, with some fish moving into deeper waters, which will subsequently change where fishermen catch

those and other species. It is possible that vessels will move into new areas to harvest the fish in which they have quota as compared to their current fishing grounds. They may also change their homeports or where they deliver the fish.

Regulatory changes include measures to protect Atlantic Large Whales, particularly the North Atlantic right whale, and Atlantic sturgeon. Right whale measures are developed through the [Atlantic Large Whale Take Reduction Team](#) and a [draft Action Plan](#) for Atlantic sturgeon was released during summer 2022. Measures to protect species covered under the Endangered Species Act and Marine Mammal Protection Act are likely to change when, where, and how fishing activity occurs, and may change how other vessel traffic interacts with the fishing industry. For example, proposed vessel speed limits to reduce ship strikes of whales could result in very different traffic patterns as merchant vessels attempt to minimize the economic impacts of speeds zones. These changes should be considered when developing the PARS.

Fishery related measures in the Gulf of Maine include those recently implemented in the Northern Gulf of Maine scallop fishery (Scallop Amendment 21). Major changes have been made to the scallop fishery which increased scallop fishing activity in the area of Stellwagen Bank. This increased fishing activity in the area during the spring of 2022, with about 3,000 trips (~108 vessels taking an average of 30 trips each) taken this year as compared to 565 trips taken by 37 vessels in 2021. Many of those vessels based out of Gloucester, MA, made daily trips to the fishing area over the course of several weeks. This illustrates how regulatory changes may change traffic patterns. While it is difficult to account for future change, the PARS should provide flexible options that allow vessels to adjust to shifts in fishing effort.

While currently most aquaculture facilities are sited in coastal waters and may create near-shore navigational hazards, there is also increased interest in developing offshore aquaculture facilities in the Gulf of Maine. It is difficult to predict the locations and size of these facilities, but it is clear they may lead to an increased number of anchored structures that will need to be considered for vessel routing. NOAA Fisheries is identifying [Aquaculture Opportunity Areas](#) (AOAs) as a way to consider how and where to develop offshore aquaculture. AOAs have not yet been identified for the Northeast region, though it could be possible in the future. They will most likely be located with easy access to an existing port, which will increase the traffic in these areas.

The development of offshore wind in the Gulf of Maine is a major factor that will change where fishermen are able to fish and where NOAA Fisheries' surveys are able to be conducted (this work is being explored through a [collaboration between NOAA Fisheries and Bureau of Ocean Energy Management](#)). It is critical that the MNMPARS evaluate the cumulative impacts of wind development. The Council is very concerned how the timing of the MNMPARS will line up with the wind energy area development process in the Gulf of Maine, which is occurring through BOEM's [Gulf of Maine Task Force](#). The task force is considering offshore wind development in the same geographic area as this PARS. The PARS is likely to be finalized in spring of 2023, while the Task Force meetings only recently resumed in May 2022. BOEM and the U.S. Coast Guard should coordinate the timing of these projects because information from BOEM's Task Force process may help to inform assumptions made in the MNMPARS. For example, the Task Force meetings may identify the most likely locations in the Gulf of Maine for wind energy development, the likely size and locations of WEAs and lease areas, the spacing and arrangement

of turbines and other structures that might be anticipated, and the possible configuration of interarray and export cables. We recommend regularly reviewing and updating the PARS as offshore wind development progresses and as potential locations for wind arrays and export cables are identified. Without information on these issues, it will be very difficult to estimate the effects of future offshore wind development on navigation, and therefore the need for routing measures.

Analysis of AIS data to identify vessel traffic patterns

The PARS Federal Register notice states that AIS data were used to identify primary vessel traffic patterns for access to principal ports within the study area. We do not recommend relying solely on AIS data given not every fishing vessel has AIS, including the smaller vessels fishing in the Gulf of Maine region. Other data sources to include in identification of vessel traffic patterns are Vessel Monitoring System (VMS) and Vessel Trip Reports (VTR). It is important to note that not every vessel has a VMS unit on board (e.g., lobster fishery) and that not every vessel submits a VTR, thus, all these data sources should be examined in aggregate to gain a more comprehensive understanding of vessel traffic patterns.

This Notice does not include any specific vessel routing measures nor specific study objectives. The Council is not able to provide more specific comments given the large study area (20,500 square nautical miles) and lack of potential alternatives and specific objectives.

Conclusion

Again, we strongly support the Coast Guard undertaking the MNMPARS and we appreciate the opportunity to provide comments to ensure the study meets the needs of fisheries resources, habitats, stakeholders, and the scientific surveys necessary for effective fishery management decision-making. The Council looks forward to working with the Coast Guard to ensure that the MNMPARS meets its objectives so that offshore wind installations and other changes in patterns of vessel traffic offshore do not preclude the ability of the Council and NMFS to effectively manage the region's fishery resources.

Please contact me if you have any questions.

Sincerely,



Thomas A. Nies
Executive Director



August 23, 2022

Michelle Morin
BOEM Office of Renewable Energy Programs
45600 Woodland Road
Sterling, Virginia 20166

Re: Draft environmental impact statement for Ocean Wind 1 project off New Jersey

Dear Ms. Morin,

Please accept these comments from the Mid-Atlantic Fishery Management Council (Mid-Atlantic Council) and the New England Fishery Management Council (New England Council) regarding the draft environmental impact statement (DEIS) for the Ocean Wind 1 project off New Jersey. The DEIS analyzes the potential environmental impacts of the project as described in the Constructions and Operations Plan (COP) (i.e., the proposed action), as well as the impacts of four alternatives to the proposed action, and a no action alternative. After considering comments received through this comment period, BOEM will publish a final environmental impact statement (FEIS), anticipated in March 2023. The FEIS will inform BOEM's decision to approve, approve with modifications, or disapprove the COP, anticipated in April 2023.

The Mid-Atlantic Council manages commercial and recreational fisheries for more than 65 marine species¹ in federal waters and is composed of members from the coastal states of New York to North Carolina (including Pennsylvania). The New England Council manages over 28 marine fishery species in federal waters and is composed of members from the coastal states of Maine to Connecticut. In addition to managing these fisheries, both Councils have enacted measures to identify and conserve essential fish habitat (EFH), protect deep sea corals, and sustainably manage forage fisheries. 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 marine fisheries throughout the Mid-Atlantic and New England, including within the US Wind project area and in surrounding areas, are profoundly important to the social and economic well-being of communities in this region and provide numerous benefits to the nation, including domestic food security.

General Comments

Given the current pace of offshore wind energy development in this region, we are unable to provide a thorough and detailed review of each individual project. For example, this comment period overlapped with four other wind energy comment periods of interest to our Councils. The analysis in the DEIS has important ramifications for terms and conditions which may be implemented through final project approval, including fisheries mitigation and compensation measures. However, at 1,408 pages (including appendices), we were unable to review the DEIS in detail given other priorities and constraints on staff time. With this in mind, we strongly encourage BOEM to consider the

¹ Fifteen 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.

recommendations listed in the wind energy policies adopted by both Councils, which apply across all projects.² Our two Councils worked together on these policies and adopted the same policy language.

We also urge BOEM to adopt the recommendations provided by NOAA Fisheries for this project, including recommendations regarding data considerations, impacts analysis, and ways to minimize the negative impacts of this project on marine habitats, commercial and recreational fisheries, and fishery species.

Alternatives to Meet the Purpose and Need

The DEIS includes five action alternatives. Alternative A is the proposed action and includes up to 98 wind turbine generators and up to 3 offshore substations with two export cable route corridors. Alternative B includes sub-alternatives to remove up to 9 or up to 19 turbine locations (depending on the sub-alternative) nearest to coastal communities to reduce visual impacts. Alternative C would remove or relocate 8 wind turbine locations to establish a buffer between this project and the neighboring Atlantic Shores South project. Alternative D would remove up to 15 wind turbine locations from sand ridge and trough habitat in the northeastern portion of the lease area. Alternative E would limit the export cable route to one of the two proposed locations to minimize impacts to submerged aquatic vegetation (SAV).

We appreciate that Alternatives B-E include specific proposed layouts, including indication of which turbine locations would be removed or how the layout would otherwise be modified. This is an improvement over the South Fork Wind DEIS which included a fisheries habitat impact minimization alternative but did not specify how many or which turbine locations would be considered for micro-siting or removal.

The Ocean Wind 1 DEIS includes a lengthy purpose and need section. We recommend that the FEIS include a short purpose and need statement supported by additional background information. The purpose and need statement should indicate that renewable energy goals should be met while also avoiding risks to the health of marine ecosystems, ecologically and economically sustainable fisheries, and ocean habitats. To the extent that these risks cannot be avoided, they should be minimized, mitigated, and compensated for.

We are concerned that including the New Jersey Board of Public Utilities procurement of 1,100 MW as a component of the purpose and need limits BOEM's ability to approve a smaller project than that proposed by the developer. This will limit BOEM's ability to avoid and minimize negative impacts of the project while still meeting the purpose and need. In addition, the DEIS does not indicate if all action alternatives can generate 1,100 MW of electricity either independently, or when combined. For example, it appears that under a combination of Alternatives B, C, and D, the number of turbines would be reduced from 98 to as few as 61. Without knowing the minimum number of turbines necessary to meet the purpose and need, it is challenging to provide recommendations on how Alternatives B through E should be combined, either partially or to their full extent.

² Available at https://www.mafmc.org/s/MAFMC_wind_policy_Dec2021.pdf

Impacts of Alternatives and Recommendations for Preferred Alternatives

As described in the DEIS, the action alternatives are expected to have the following impacts that are of concern to our Councils:

- Negligible to minor adverse impacts (Alternative D) or negligible to moderate adverse impacts (Alternatives A, B, C, and E) on benthic resources due to cable laying, pile-driving noise, anchoring, and the presence of structures, as well as moderate beneficial impacts due to the presence of new structures. These impacts would vary by species.
- Minor to major adverse impacts on commercial fisheries and for-hire recreational fishing due to potential disruptions to fishing operations. (We recommend removal of the term “potential” as some fishing operations will be disrupted.) Although these impacts may be lesser in magnitude under Alternatives B-E, compared to Alternative A, the impact level of minor to major adverse is the same across Alternatives A-E.
- Negligible to moderate adverse impacts for finfish, invertebrates, and EFH due to noise, disturbance, displacement, habitat conversion, behavioral changes, injury, and mortality, depending on the species. BOEM expects that many of these impacts may be minor in the long-term as species may recover naturally over time after construction is complete. In addition, some species may benefit from the artificial reef effect. Although these impacts may be lesser in magnitude under some alternatives, the impact level of minor to major adverse is the same across Alternatives A-E.
- Major adverse impacts for navigation and vessel traffic due to changes in navigation routes due to the presences of turbines, substations, and cables, as well as delays in ports, degraded communication and radar signals, and increased difficulty for offshore search and rescue missions. In addition, displaced fishing effort may move to other areas and increase congestion in some areas. Although these impacts may be lesser in magnitude under some alternatives, the impact level of major adverse is the same across Alternatives A-E.
- Minor adverse impacts for recreation and tourism (which includes private recreational fishing) due to increased navigational risk within the project area and minor beneficial impacts due to the reef effect.

In recognition of the wide range of adverse impacts on fisheries, fishery species, and habitats across all action alternatives as described in the DEIS, we recommend approval of a combination of Alternatives B-E to minimize the footprint of the project and therefore reduce the magnitude of adverse impacts.

Specifically, we recommend approval of a combination of Alternatives B-2 (remove up to 19 turbine locations to reduce visual impacts), Alternative C-1 (remove 8 turbine locations to create a buffer between this project and the Atlantic Shores South project – without compressing the layout to maintain the same number of turbines), Alternative D (remove all 15 turbine locations in sand ridge and trough habitat as identified under this alternative), and Alternative E (limit the export cable route traversing Island Beach State Park to the northern option to minimize impacts to SAV). As noted above, it is unclear if the full extent of each of these alternatives could be combined while achieving the purpose and need. If the full extent of these alternatives cannot be combined, we support approval of Alternatives D, E, and C prior to consideration of Alternative B as visual impacts are outside the realm of the mission of the Councils.

We strongly support all efforts to avoid impacts to SAV. The Mid-Atlantic Council has designated all native species of macroalgae, seagrasses, and freshwater and tidal macrophytes in any size bed, as well as loose aggregations, as habitat areas of particular concern (HAPC) for summer flounder. In defining this HAPC, the Council also noted that if native species of SAV are eliminated, then exotic species should be protected because of functional value; however, all efforts should be made to restore native species. SAV also provides important habitat for many other species.

Additional Terms and Conditions

The recommendations outlined in our offshore wind energy policies, referenced above, should be reflected as terms and conditions for approval of the US Wind 1 project.

We provided a separate comment letter on the draft Guidelines for Mitigating Impacts to Commercial and Recreational Fisheries.³ We support many of the mitigation measures recommended in that draft guidance. We recommend that all final mitigation guidelines be reflected in terms and conditions for BOEM's approval of the Ocean Wind 1 project. For example, the project design envelope for Ocean Wind 1 includes burial depths of 4 to 6 feet for inter-array and substation interconnection cables. BOEM's draft fisheries mitigation guidelines recommend a minimum cable burial depth of 6 feet. Although the Councils have not endorsed a specific cable burial depth to minimize impacts to fisheries, we strongly support the draft guidance recommending a minimum burial depth of 6 feet. We recommend that BOEM not approve any cable burial depths of less than 6 feet for US Wind 1 or any other wind projects.

Conclusion

We appreciate the opportunity to provide comments to ensure that issues of social and ecological importance are considered in the final EIS for Ocean Wind 1. We look forward to working with BOEM to ensure that wind development in our region minimizes impacts on the marine environment and can be developed in a manner that ensures coexistence with our fisheries. Please contact us if you have any questions.

Sincerely,



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



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

cc: J. Beaty, M. Luisi, W. Townsend

³ Available at <https://www.mafmc.org/correspondence>.



New England
Fishery Management
Council



August 24, 2022

Ms. Jill Lewandowski
Office of Environmental Programs
Bureau of Ocean Energy Management (BOEM)
45600 Woodland Road (VAM-OREP)
Sterling, Virginia 20166

RE: Programmatic EIS for New York Bight Wind Leases

Dear Ms. Lewandowski:

Please accept these comments from the New England Fishery Management Council (New England Council) and the Mid-Atlantic Fishery Management Council (Mid-Atlantic Council) regarding the Notice of Intent (NOI) to prepare a programmatic environmental impact statement (PEIS) for the region offshore of New York and New Jersey referred to as the New York Bight. BOEM awarded six wind energy leases in the New York Bight in 2022. The proposed action for the PEIS is the adoption of programmatic avoidance, minimization, mitigation, and monitoring measures that BOEM may require as conditions of approval for projects in this area.

The New England Council has primary management jurisdiction over 28 marine fishery species in federal waters and is composed of members from Maine to Connecticut. The Mid-Atlantic Council manages more than 65 marine species¹ 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 (EFH), protect deep sea corals, and sustainably manage forage fisheries. The Councils support efforts to mitigate the effects of climate change, including the development of renewable energy projects, provided risks to the health of marine ecosystems, ecologically and economically sustainable fisheries, and ocean habitats are avoided.

While the Councils recognize the importance of domestic energy development to U.S. economic security, it is important to note that marine fisheries throughout New England and the Mid-Atlantic 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. We strongly support development of a PEIS for these six lease areas. This could help ensure consistency in approaches across multiple wind projects and could create efficiencies by analyzing impacts more thoroughly earlier in the process than has been done for other existing offshore wind energy leases to date.

¹ Fifteen 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.

The PEIS will analyze the expected impacts of a representative project in the New York Bight. The representative project will be informed by input provided by the lessees on the type of projects they intend to develop. It will be important to define a reasonable and realistic representative project design envelope to help ensure that the impacts analysis in the PEIS is sufficient and to allow project specific NEPA documents to tier off the PEIS. For example, the representative project design envelope should account for technological advances which are reasonably expected to occur between development of the PEIS and construction of projects in these six lease areas. The PEIS alternatives should be broad enough that the document will be useful if advances such as this lead to projects that are different than current industry planning.

We recommend that BOEM provide more details on the process for the project-specific NEPA documents which will follow the PEIS, including for documents which tier off the PEIS and for situations where a more thorough analysis is needed. We recommend that all additional NEPA documents following the PEIS be made available for public comment in draft form to allow for improvements based on public comments before they are finalized. For example, we recognize that NEPA guidelines do not require public comment on draft Environmental Assessments; however, making such documents available for review will be important for transparency.

The PEIS provides an opportunity to focus on the unique characteristics of the New York Bight, including the many important commercial and recreational fisheries which operate in this region. However, the impacts analysis should also consider the cumulative impacts of lease areas in neighboring regions. Specifically, the PEIS should assume eventual full build out of all lease areas along the east coast and should also consider areas which may be leased in the Central Atlantic and the Gulf of Maine in upcoming years. As we have stated in multiple previous comment letters, we are very concerned about the cumulative impacts of the many planned offshore wind energy projects on the fisheries we manage, which are regional in nature and will be impacted by multiple projects.

We recommend that BOEM use this PEIS to adopt programmatic avoidance, minimization, mitigation, and monitoring measures based on the forthcoming final Guidance for Mitigating Impacts of Offshore Wind Energy Projects on Commercial and Recreational Fisheries. Our Councils submitted separate comments on the draft guidance (available [here](#)).

We also recommend that BOEM use the PEIS as an opportunity to consider requirements related to coordinated transmission across multiple projects, for example through shared cable corridors, backbone transmission lines, and in other ways. BOEM should consider how to best build off the ongoing transmission planning work undertaken at the federal level with the Department of Energy and other agencies, as well as state efforts, including by the New York State Energy Research and Development Authority. As we have stated in previous comment letters, the Councils strongly support coordinated transmission. Considering coordinated transmission in the PEIS can help communicate to wind energy project developers that this is a priority of federal agencies and the states that will play a role in reviewing, approving, and procuring energy from offshore wind energy projects.

We look forward to working with BOEM on these important issues. Once the draft PEIS document is available, we may provide more detailed comments and recommendations. Please contact us if you have any questions.

Sincerely,

Handwritten signature of Thomas A. Nies in cursive.

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

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Dr. Christopher M. Moore
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cc: J. Beaty, M. Luisi, W. Townsend

**Comments Re: Draft Fisheries Mitigation Guidance 06232022; Document ID
BOEM-2022-0033-0003**

BOEM's Draft Fisheries Mitigation Guidance Document is a misguided and incomplete assessment of fisheries impacts. It does not bind or regulate offshore wind developers in any way, despite BOEM being the regulatory agency over offshore energy development. As such, the document is not only misguided but also meaningless. However, the agency's continued deference to developers, coupled with a refusal to analyze actual impacts to the commercial fishing industry, this guidance will perpetuate conflicts between commercial fishing and offshore wind development. Below are our comments on each section of the Draft Guidance document.

1. Introduction to Guidelines:

In this section of the Draft, BOEM states that it "requires lessees to submit information on social and economic conditions, including...commercial fishing (including typical fishing seasons, location, and type)" that could be affected by the lessee's proposed activities....The information required in the regulations assists BOEM in complying with the Outer Continental Shelf Lands Act (OSCLA), the National Environmental Policy Act (NEPA), and other relevant laws....The guidelines in this document discuss the remaining BMPs and provide suggestions for complying with information requirements in the regulatory provisions listed above."

This reasoning is unhelpful at best and shines a spotlight on a serious flaw in BOEM's process. BOEM relies on the developer for relevant information and analysis. The developer's interest lies solely in complete project approval. By allowing developer-generated information to be the source of BOEM's compliance with its own legal duties, the process is weighted in favor of the developer from the start. It is BOEM's responsibility to gather information from the appropriate sources/cooperating agencies, conduct analysis on a developer's plan or proposal at every stage of the process, weigh it against BOEM's legal requirements, and require the developer to comply with the law. Instead, BOEM flips this responsibility around in full deference to the developer.

If a developer says something is "unfeasible", BOEM says it is unfeasible. For example, if an alternative may "reduce economic benefits from offshore wind development" because the developer applying for a permit alleges that the alternative would "increase transmission losses", create "technical complexities" or "project delay", then BOEM will

disapprove the alternative in favor of full economic benefit to the developer regardless of its other legal duties or considerations.¹

BOEM does not conduct its own analysis of or investigate developer claims; it merely accepts them and uses these claims as the basis for BOEM decision-making. In fact, early in the BOEM process that later led to the leasing of what is now known as the Equinor Empire Wind lease, the developer and BOEM told the commercial fishing industry that relocating the lease to another area off Long Island with less fisheries conflict would not be possible because the export cable length would have to increase, losing too much electricity and making the project unviable. However, now Equinor is planning an export cable well over 100 miles long from a lease off the coast of Massachusetts running all the way past Rhode Island, past Connecticut, and into New York City.² Apparently, longer cable routes are not actually such an issue. But it is now too late to relocate the Empire Wind lease site and reduce conflicts, as the commercial fishing industry had asked and other federal agencies and Congressional officials suggested, prior even to the leasing stage.³ BOEM does not critically validate or scrutinize developer claims. This Guidance document perpetuates that problem.

This theme of abdication of agency responsibility is consistent across the board throughout the BOEM process, even regarding cooperating agencies. For example, despite the fact that the U.S. Coast Guard is the federal agency responsible for maritime safety, rather than conduct an independent analysis of various aspects of maritime safety such as radar interference as regards offshore wind installations, the U.S. Coast Guard relies on the developer's Navigation Safety Risk Assessment to analyze impacts.⁴ Such deference to the developer via the BOEM process has attracted sharp bipartisan criticism from the U.S. House Committee on Transportation and Infrastructure. According to the Committee Chair and Ranking Member, "The Coast Guard...holds sole responsibility for ensuring safety in U.S. waters...In 2019, the Coast Guard's Notice of Availability of the Massachusetts and Rhode Island Port Access Route Study (MARIPARS) failed to incorporate findings and comments provided by the fishing community that highlight safety and transiting concerns. These concerns went beyond the general siting of offshore energy leasing areas, touching on navigational safety (including the potential for increased future traffic volumes, which was not fully reviewed), search and rescue capabilities, and the effect that turbine arrangements are known to have on radar interference. Last month, some unanswered concerns in the MARIPARS were reiterated to the USCG in the initial comment period for the Maine, New Hampshire, and Massachusetts PARS....Unfortunately, the indication we have received from stakeholders is that the USCG has become less responsive over time to questions and suggestions on these issues and has instead allowed BOEM to drive the planning process. It is not enough for the USCG to oversee safety measures after transit areas are established with other parameters in mind; therefore, we respectfully remind you that it is the Coast Guard's duty to assert itself as the entity responsible for determining how transiting routes

¹ See Vineyard Wind ROD, p. 25.

² See attached Beacon Wind cable route.

³ See attached NMFS comment letter on the NY WEA EA, dated July 11, 2016, and attached letter to BOEM Director Hopper from U.S. Senators Reed and Whitehouse, dated September 21, 2016. See also Glenn Goodwin Declaration, *Fisheries Survival Fund et al v Jewell (D.C. Cir. 2018)*, attached.

⁴ See attached letter to R.I. Senator Sosnowski from the U.S. Coast Guard, dated November 25, 2019.

are laid out so that maritime space is safe for all users for the foreseeable future. As such, we request that you use your authority under section 46 U.S.C. 70003(a), to ensure the paramount use of areas designated as port access routes is navigation.”⁵ In many cases of navigational hazard, such as radar interference and loss of HF radar for search and rescue, the U.S. Coast Guard defers to BOEM as the permitting agency to make impact determinations. As the U.S. Coast Guard has allowed BOEM to drive the planning process, BOEM has allowed the developer to drive the planning process.

BOEM needs to start taking its role as a regulator seriously. BOEM exists to regulate offshore wind. Not promote it, not rubber-stamp it. The government regulates; that is its job. By allowing the developer to be the entity generating information necessary for BOEM’s compliance with its own legal obligations, the tail is wagging the dog. This will lead to continued conflicts, unacceptable fisheries impacts and litigation.

2. Authority and Regulations:

BOEM in this section highlights another deficiency in its own process. This section states, “For **BOEM to evaluate** potential impacts to social and economic conditions of the fishing industry, a **lessee’s SAP, COP, or GAP should provide the necessary information** to assist BOEM in determining whether the proposed activities could result in unreasonable interference with other uses of the OCS...(emphasis ours)”. Again, this is backwards- the developer, who only has a vested interest in 100% project approval, is the entity providing all the information that BOEM needs to evaluate unreasonable interference with other uses of the OCS. Does BOEM truly believe that the developer will provide evidence to BOEM that its project will have negative impacts on the commercial fishing industry or indeed any other user if it risks project disapproval? Does BOEM truly believe that the developer will provide evidence to BOEM that its project will result in unreasonable interference to the fishing industry or marine navigation? Of course not.

The BOEM regulations cited in the Draft Guidance show that lessees are required to demonstrate that they “have planned and are prepared to conduct the proposed activities in a manner that does not unreasonably interfere with other uses of the OCS.” Yet BOEM has no regulations even defining what unreasonable interference is, or thresholds for what constitutes unreasonable, or even for what constitutes interference. For commercial fishing, BOEM and developers have refused to recognize that offshore wind farms will create de facto closed areas for certain types of fisheries and gear types, despite information provided to the agency by industry as well as documented examples from overseas where this has occurred.⁶ Yet, BOEM continues to refuse to truly recognize this as interference and continues to incorrectly assume that fisheries can “adapt” over time, which is unsupported and even contradicted by existing evidence.⁷ We address this issue later in our comments in more detail.

⁵ See attached letter to Admiral Fagan, Commandant U.S. Coast Guard, from U.S. House Committee on Transportation and Infrastructure leadership, dated July 6, 2022.

⁶ See, for example, our Vineyard Wind SEIS comments, p. 38-43.

⁷ For example, in a report by Gray et al for the UK Crown Estate, “Changes to fishing practices around the UK as a result of the development of offshore wind farms- Phase 1 (Revised)”, the authors state: “Findings suggest that fishing activity within OWF boundaries has changed, primarily because fishermen are fearful of fishing gear becoming entrapped by seabed obstacles such as cables, cable crossing points and rock armouring, and wary of

Without any clear guidelines on what constitutes interference or any threshold for what constitutes reasonable vs unreasonable, BOEM simply gives the developers a blank slate to determine this on their own. There is zero benchmark. According to BOEM's most recent Solicitor opinion on the topic, the Secretary has the discretion to determine what constitutes interference with reasonable uses.⁸ If this is the case, where are the corresponding agency guidelines to aid in decision making? If the Secretary has the discretion as well as the duty to make this determination, why does the agency leave the information collection and burden to satisfy an undefined legal mandate to the developer?

Before BOEM moves to finalize any Guidelines for Fisheries Mitigation and Compensation, it must first develop its own enforceable regulatory guidance on unreasonable interference. Leaving that burden to the developer is dereliction of BOEM's regulatory duties, arbitrary, capricious and unsupported. Contrary to BOEM's assertions in the Guidance public comment period that it cannot revise its regulations on issues related to this Draft Guidance, BOEM can revise its regulations and has done so recently on other subjects. BOEM can and should revise its own regulations prior to further development of this initiative in order to provide clarity and take responsibility over its own regulatory authority.

As the Outer Continental Shelf Lands Act, as amended in 2005, mandates that "[t]he Secretary shall ensure" that offshore wind leasing "is carried out in a manner that provides for...prevention of interference with reasonable uses (as determined by the Secretary) of the exclusive economic zone, the high seas, and the territorial seas", and as commercial fishing is clearly a reasonable use of the ocean- not only in a common sense determination but also as evidenced by the fact that other federal legislation (the Magnuson Stevens Fishery Conservation and Management Act) regulates fishing in the EEZ, the fact that NOAA as a federal agency permits, regulates and enforces compliance with these permits and regulations to fish in the EEZ, and the fact that USCG regulations/COLREGS specifically mention fishing with regards to navigation and "rules of the road" in the ocean- then, prevention of interference with reasonable uses clearly applies to commercial fishing. If fishing were not a reasonable use of the ocean, there would not be federal agencies legislatively designated to manage and regulate it. Therefore, the very first and foremost action taken by a developer to prevent unreasonable interference with commercial fishing is **avoidance**. Avoidance of siting and building offshore wind facilities on commercial fishing grounds in the first place. Yet this very obvious and blatant first step of "mitigation" is not even mentioned by the Draft Guidance.

This should be the primary focal point of the Draft Guidance, and any accompanying BOEM regulations or guidance regarding unreasonable interference. It is mind boggling that the agency would completely omit the most important aspect of fisheries mitigation in a Draft Guidelines for Mitigating Impacts to Commercial and Recreational Fisheries. BOEM cannot omit avoidance as the very first requisite step in fisheries mitigation. It should be the very first section

vessel breakdown with the consequent risk of turbine collision. Wind farm maintenance work was claimed to cause disruption to fishing (for example interrupting tows) and increasing steaming distances to fishing grounds, although fishing is not prevented within OWFs" (p. vi) and "Existing datasets (VMS, landings and sightings) and information from fishermen and fisheries officers, revealed that fishing activity had declined in the five wind farm sites following their construction" (p. 12).

⁸ See <https://doi.gov/sites/doi.gov/files/m-37067.pdf>.

of this Draft. Except that it cannot be or remain simply Guidance. It has to be regulatory and enforceable, in compliance with BOEM's legal responsibilities.

While two very different Department of Interior Solicitor memorandums (M-37059 and M-37067) have been issued as to the interpretation of the statutory mandate to prevent interference with reasonable uses of the ocean per OSLA, both acknowledge a statutory duty to do so. Therefore avoidance of fishing grounds so as to prevent interference with commercial fishing should be the first step in statutory compliance. The two legal memos differ on how absolute this requirement is, whether or how it is balanced with other duties or statutory provisions, etc., but nevertheless emphasize a need to at least attempt to prevent unreasonable interference with other uses. Which is listed in the Draft Guidance as a regulatory component for a SAP, COP or GAP- but only for information required by developers to submit to BOEM. The law doesn't put the burden on the developer; it puts it on the Secretary and by implication, BOEM. BOEM must ensure that it conducts its process in such a way that it prevents interference with reasonable uses. Therefore, BOEM must include avoidance as the very first step in fisheries mitigation. If it intends the Draft Guidance to remain only guidance, then BOEM must revise its own regulations and procedures to require avoidance up front, as this is not an optional component of the offshore wind leasing process. It is a legal one.

This approach is further solidified by the CEQ regulations (40 CFR 1508.1(s)) referenced by the Draft. The very first recommended practice for mitigating impacts to commercial and recreational fishing is "Avoiding the impact altogether by not taking a certain action or parts of an action". When avoidance occurs, it negates the need for further action, including compensation or other remedies proposed by BOEM in the Draft Guidance. By omitting avoidance as a key focal point in this document, BOEM is indicating to the fishing industry that it has no intent of avoidance whatsoever. And that is a major problem.

3. General Approach to Developing Mitigation Measures:

In this section, BOEM lists various tools to help a developer "identify [fishing] communities to engage", pre-activity, so that the developer can make "reasonable efforts" (whatever that means, since it will mean different things to the fishing industry than it will to a developer) to mitigate impacts via communication. However, BOEM does not even mention engaging with RODA, the only national organization of commercial fishermen, businesses, and communities dealing with offshore wind, despite BOEM having an MOU with RODA. Furthermore, developer "engagement" with fishing communities is largely worthless unless there are regulatory requirements binding that create actionable outcomes. The commercial fishing industry has been "engaging" with developers as well as BOEM for many years now and has continually raised the same issues which continue to go unaddressed. "Guidance" for more communication without actionable outcomes is not helpful. It is counterproductive.

4. Project Siting, Design, Navigation, and Access:

Ironically, this section fails to mention any burden on or from BOEM to consider Project Siting. It doesn't even mention siting in the context of the developer. It discusses facility design, cable design, turbine and substation design, but fails to actual discuss the first element of the heading: Project Siting. As detailed previously, this is the single most important aspect of the offshore leasing process. If project siting involves avoidance of fishing grounds, the rest of the

Draft document is a moot point. However, that is a BOEM responsibility and a request we have made for years to the agency. The only time this section mentions avoidance during siting is “Turbine locations should be sited to avoid known sensitive benthic features, such as natural and artificial reefs”. Why does BOEM omit giving the fishing industry at least the same consideration as an artificial reef? Again, BOEM must be specific in its guidance and regulations that avoidance of commercial fishing grounds is the first step in this process, for both itself and the developer.

See footnote 3 of this comment for document references that demonstrate how Project Siting could have avoided what has now become a fisheries conflict. In that case, because a Call Area had been identified on top of clearly identifiable commercial fishing grounds for multiple fisheries, in particular the longfin squid fishery, both NOAA and legislative officials requested to relocate the area prior to leasing and therefore prior to any developer commitment. BOEM chose instead to ignore these requests. Project Siting is the most important mitigation measure and cannot be overlooked as the single most effective way to minimize impacts on commercial fisheries.

BOEM must also consider how its Draft Mitigation document interacts with its other policies. On June 23, 2022, on the same day that it released its Draft Fisheries Mitigation Strategy,⁹ BOEM announced that it has standardized its NEPA review for offshore wind in such a way that makes the relevant CEQ regulations (40 CFR 1508.1(s)), as well as the Draft documents tenets of “Project Siting, Design, Navigation and Access” impossible to follow. The CEQ regulations that recommend “avoiding the impact altogether by not taking a certain action or parts of an action” or designating areas of a lease as no build zones to accommodate transit lanes for commercial fishing transit through the project area have been rendered defunct by BOEM’s new standardized NEPA approach to developing alternatives for review. In fact, the new NEPA standardization for offshore wind constrains BOEM approval of NEPA alternatives for analysis to deliberately exclude anything other than full buildout of the project.

BOEM has never taken public comment on this new NEPA standardization, which is not surprising considering the uproar this approach would generate from all stakeholders other than developers. The document, titled “Process for Identifying Alternatives for Environmental Reviews of Offshore Wind Construction and Operations Plans pursuant to the National Environmental Policy Act (NEPA)” identifies “screening criteria” for “selecting which alternatives to analyze in detail” at the COP EIS stage,¹⁰ which is the only juncture in the BOEM process where impacts to fisheries as well as other resources are analyzed in detail.

The document explains that the project COP, as well as BOEM analysis of said COP, must meet the “Purpose and Need” for the COP EIS. Only alternatives that meet the Purpose and Need will be analyzed in detail in the COP EIS. These new and standardized “screening criteria” include: “state laws that establish renewable energy goals and mandates”, the “applicant’s primary goal(s)”, “awarded contracts for offtake” (i.e. developer power purchase agreements

⁹ See <https://www.boem.gov/newsroom/notes-stakeholders/boem-standardizes-process-environmental-reviews-offshore-wind> and <https://www.boem.gov/newsroom/press-releases/boem-seeks-public-comment-draft-fisheries-mitigation-strategy>.

¹⁰ See <https://www.boem.gov/sites/default/files/documents/renewable-energy/BOEM%20COP%20EIS%20Alternatives-2022-06-22.pdf>.

with state utilities), and “the MW nameplate capacity for the proposed project”.¹¹ Therefore, if the developer has proposed a 500 MW project, contracted with a state utility in a power purchase agreement for a 500 MW project prior to COP review- never mind adding if the state has mandated a certain amount of offshore wind nameplate generation- BOEM’s NEPA review cannot disapprove, for example, 30% of the project lease for buildout to accommodate commercial fishing interests, or designate a no- build transit lane through the project to accommodate safe commercial fishing vessel transit through a WEA, or any other alternative that would not include 100% buildout of the project. No alternative other than the developer’s nameplate capacity and/or its power purchase agreement with a utility can even be CONSIDERED in analysis. In effect, BOEM has simply become an arm of the developers themselves. This is unethical, an artificial constraint of legal review, and on its face illegal.

The NEPA standardization document also specifically outlawed relocating a majority of the project outside of the defined project area into a different portion of the lease held by the applicant, i.e. avoidance. Therefore, if a project is sited on heavily fished ground, and if relocating the project to a different area of the same lease would deconflict and avoid interference with a commercial fishery, no such alternative will be considered by BOEM. BOEM has simply made its standardized process in such a way as to exclude consideration of all ocean users, including commercial fishing, other than developers. This is also on its face a violation of the Outer Continental Shelf Lands Act requirement that BOEM prevent interference with reasonable uses of the ocean. Reasonable uses would of course include federally permitted uses of the ocean such as commercial fishing. However, if BOEM has effectually constrained itself in such a way that its process cannot prevent interference with these uses, its process in turn violates OSCLA.

BOEM alleges in its NEPA standardization document that a lease area for which a COP is submitted “represents the defined geographic area and has been analyzed for consistency with the Outer Continental Shelf Lands Act (OSCLA)” including “consideration of other ocean and OCS uses”. This is completely false and what led to the letters noted in footnote 3 of this comment, as well as what prompted legal action by the fishing industry over what is now the Equinor Empire Wind lease.¹² Wind farm impacts to commercial fisheries are not considered by BOEM until after the lease is issued, during the project COP analysis stage.¹³ BOEM argued in the Empire Wind case that the lease EA and associated lease issuance merely authorized site assessment activities, not future construction activities, and therefore did not impact fisheries. No OSCLA compliance analysis was done to consider fisheries use of the area and the future foreseeable impact of a wind farm in the lease.

In fact, the entire challenge to the lease was due to the fact that the lease was sited on a heavily fished area with no analysis of what that meant for fisheries stakeholders, and no attempt was made to re site the lease prior to lease sale- i.e. to prevent interference with reasonable uses of the ocean- even after suggestions to do so from NMFS and various elected officials, as well as stakeholders. The fishing industry argued that per NEPA, the future

¹¹ See <https://www.boem.gov/sites/default/files/documents/renewable-energy/BOEM%20COP%20EIS%20Alternatives-2022-06-22.pdf>, p. 3.

¹² ¹² See *Fisheries Survival Fund et al v Jewell* (D.C. Cir. 2018).

¹³ While the NY Bight process did examine some fisheries impacts prior to leasing, this was an anomaly in the BOEM process thus far.

foreseeable impact of a wind lease was a wind farm. Attempts to de-conflict at the leasing stage in order to avoid fisheries impacts fell on deaf BOEM ears. The court held that the future foreseeable impact of a wind lease did not include a wind farm, as the lease only authorized site assessment activities, not construction of a project.

To date, all commercial fisheries “future foreseeable impacts” resulting from a wind lease that consider ultimately a wind facility are only analyzed at the COP EIS/ROD stage. It is at this stage that NEPA consideration of impacts, and ultimately OSCLA compliance, is analyzed. Now that BOEM has standardized its NEPA analysis in such a way that fisheries avoidance or prevention of interference with reasonable uses in the form of disapproval/partial disapproval/project relocation within a lease is impossible, because do so would not meet the Purpose and Need of the COP EIS, BOEM has artificially tied its own hands from complying with the law.

The judge in the Equinor case stated that because BOEM reserves the right to cancel a lease, or reject a developer’s COP, due to results from environmental and socioeconomic reviews that occur later in the process after leasing and the lease EA (i.e the COP EIS stage), that the fishing industry had no immediate effect on their legal interests as a result of the EA/lease sale itself. This was because the judge asserted BOEM would conduct this environmental and socioeconomic NEPA analysis at the COP EIS stage, make a decision based on that analysis, and approve or disapprove a project at that time. Therefore, the judge ruled that the fisheries claims under NEPA and OSCLA were not “ripe” for consideration at the leasing stage because BOEM retained the “right to disapprove.... A COP based on the Lessor’s determination that the proposed activities would have unaccepted environmental consequences” . This decision alone demonstrates that the lease sale itself is NOT analyzed for consistency with OSCLA, contrary to the claim made in BOEM’s NEPA standardization document. It also runs contrary to BOEM’s new standardization.

With its new NEPA standardization, BOEM cannot reserve the right to cancel a lease, reject, partially reject, or even relocate a developer’s project within the lease to “avoid the impact altogether by not taking a certain action or parts of an action” per CEQ regulations (40 CFR 1508.1(s)). BOEM makes the Equinor judge rationale moot. Instead, it constrains its own NEPA analysis only to alternatives that completely fulfill a developer’s goals, and full buildout of the project or pre-planned power purchase agreements. There is now no distinction between the agency and the offshore wind industry.

BOEM cannot simply wash its hands of its statutory duties under OSCLA, or NEPA, simply by creating an unenforceable “Draft Fisheries Mitigation Document” that shows by its own terms BOEM’s failure to comply with both statutes. It cannot use the Draft Fisheries Mitigation document to excuse or compensate for the fact that it has not only completely abdicated its legal responsibilities to developers but actually designed its own NEPA process in such a way that only the project goals, nameplate capacity of the project, and pre-existing power purchase contracts of the developer can receive final agency approval. However, it is very apparent from the omissions contained in the Draft Fisheries Mitigation Document, as well as the inclusions in its NEPA standardization document, that this is precisely what BOEM intends to do.

With this in mind, it is difficult to even determine a reason for commenting on the Draft Fisheries Mitigation Document from a stakeholder perspective. The process is so broken, so pre-

arranged so as to completely fail fisheries interests in favor of developer interests, that an unenforceable agency “mitigation” plan appears more of a smokescreen than an authentic endeavor.

5. Safety Measures:

During BOEM’s presentation given during its public meetings on the Draft Guidance, it suggests “considering lessee- funded radar system upgrades for commercial and for hire recreational fishing vessels (e.g. solid state Doppler-based marine vessel radar systems)”.¹⁴ The Draft Guidance reiterates this approach on page 6. BOEM must not have read the results of its own BOEM-sponsored study conducted by the National Academies of Science, “Wind Turbine Generator Impacts to Marine Vessel Radar (2022)”.¹⁵ That study states, “As presently deployed, WTGs reduce the effectiveness of both magnetron-based and Doppler-based MVR...It is noteworthy that there are no published studies of WTG interference on Doppler-based solid-state radar used for marine navigation.”¹⁶

It is no surprise to us that the NAS study confirmed the very real problem of radar interference due to offshore wind for all vessel classes, that the vast size of projects planned for US waters exacerbates the problem, confirmed that the larger the turbines the bigger the problem, confirmed that this radar interference will compromise USCG search and rescue, with no solutions to the problem at this time and that potential solutions require more investigation before they can be deployed.¹⁷ We have highlighted these issues to BOEM multiple times. In fact, some of the information regarding radar interference we supplied to both the USCG and BOEM in our comments on the Vineyard Wind SEIS is quoted by the NAS report.¹⁸ Unfortunately, this information was ignored by BOEM and went unaddressed. BOEM can no longer ignore the very real navigational and life-threatening hazard to mariners resulting from marine vessel radar interference due to its approved projects. It cannot ignore the findings of a report it itself commissioned. And it cannot continue to hang its hat on unproven technology as the solution to this problem. Rather, BOEM and the USCG should commission real-life trials of solid-state/Doppler radar in large scale offshore wind farms in the UK to test if solid state/Doppler technology can reduce interference to a more manageable level. The fact that no studies regarding solid state/Doppler marine vessel radar and wind turbine interference exist despite both existing in Europe is a tell-tale that no panacea currently exists for marine vessel radar interference from wind farms, including solid state/Doppler radar.

¹⁴ See <https://www.boem.gov/newsroom/press-releases/boem-seeks-public-comment-draft-fisheries-mitigation-strategy>, slide 24.

¹⁵ “Wind Turbine Generator Impacts to Marine Vessel Radar (2022), National Academies Press, available at <https://nap.nationalacademies.org/catalog/26430/wind-turbine-generator-impacts-to-marine-vessel-radar>.

¹⁶ “Wind Turbine Generator Impacts to Marine Vessel Radar (2022), National Academies Press, available at <https://nap.nationalacademies.org/catalog/26430/wind-turbine-generator-impacts-to-marine-vessel-radar>, p. 5; emphasis ours.

¹⁷ “Wind Turbine Generator Impacts to Marine Vessel Radar (2022), National Academies Press, available at <https://nap.nationalacademies.org/catalog/26430/wind-turbine-generator-impacts-to-marine-vessel-radar>, p. 4, 5, 10, 14, 76.

¹⁸ “Wind Turbine Generator Impacts to Marine Vessel Radar (2022), National Academies Press, available at <https://nap.nationalacademies.org/catalog/26430/wind-turbine-generator-impacts-to-marine-vessel-radar>, see Figure 1.3, p. 13 and our Vineyard Wind SEIS comment letter at p. 56.

The safety measures proposed in the Draft also simply include “monitoring safety threats” including radar interference, collisions, allisions, impacts on search and rescue etc., throughout the life of the project. Monitoring does nothing. Corrective action, clearly prescribed, and clearly enforceable, is necessary. Particularly when dealing with safety at sea. BOEM seems intent on keeping interaction with anything that could be difficult or costly for a developer to “monitoring”, “engagement”, or some other non-actionable approach. This is unacceptable. Again, we assert that the regulator must regulate the regulated. Suggestions, non-committal approaches that have no real action associated with addressing an issue, and non-actionable recommendations are completely useless in practice. Simply monitoring vessel collisions, monitoring loss of life at sea due to lack of accurate radar or loss of search and rescue capabilities, and the like do nothing. If BOEM acknowledges that these are real issues, BOEM needs to come up with a plan of how to correct and address each one of these impacts. Without a pre-determined game plan, you lose the game. And there is no second chance once the game is over. BOEM, prior to any ROD approvals, must address these issues with clearly prescribed and enforceable corrective action in a comprehensive manner. If the agency refuses to do this, we will simply have 30 years of approved projects in the ocean where nothing can be done or required of developers who have already received approval to truly mitigate impacts. Loss of life and safety at sea is too important a topic to be left to merely “monitoring”.

We also suggest that BOEM include in a list of safety issues to be comprehensively addressed that of unexploded ordinance (UXO). To date, UXO in an approved wind farm lease has been dug up during pre-construction operations, exposed, and left on the ocean floor in heavily fished mobile bottom tending gear fishing grounds with high potential for interaction, potentially fatal interaction, with commercial fishing vessels.¹⁹ This danger should be not only broadcast over every means possible to alert mariners to the danger, but also have a clear course of action and timeline for that action. To date, the 1000 lb UXO has been exposed for over a month with no clear plan for its removal. In the UK, the current practice of UXO detonation for removal of UXO during wind farm construction results in explosion, underwater noise affecting marine mammals and commercially harvested species; other alternatives such as Low-Order slow burn used to burn out munitions from the inside of the casing of a UXO will often result in sea pollution due to the deposit of hazardous waste on the seabed.²⁰ Both of these methods will have negative impact on the commercial fishing industry and must be addressed.

6. Environmental (Fisheries) Monitoring:

There are far too many environmental issues to address in this comment. However, the Draft Guidance in this section specifically mentions “the need and methods to monitor changes in fishing activity as a result of offshore wind development.” This is not difficult. Vessel Monitoring System data will show that vessels avoid both fishing in a wind farm and transiting through a wind farm. Vessels have already changed their transit patterns because of the five

¹⁹ See Vineyard Wind Notice to Mariners No. 63 at https://www.vineyardwind.com/mariners-updates/63?utm_campaign=Weekly%20OWMUs&utm_medium=email&hsmi=222566663&hsenc=p2ANqtz-9f1GnjIQ-kG6CDEZUK9TGUCQi1lg54Llb4MFVS_72Mzn8RZIA5IH5RXI_n6ZqcwiKpkTSXDDZ33DxJ7fNK3fUZ5bNz1Q&utm_content=222566663&utm_source=hs_email, and email, attached.

²⁰ See <https://www.marinelink.com/news/navigating-a-minefield-why-uxo-hamper-uks-498869>.

Block Island Wind Farm turbines. They will certainly change their patterns for both transit and fishing as a result of thousands of turbines up and down the East Coast. The most disruptive impacts could easily be avoided through careful project siting; however, it is clear from the Draft Guidance and BOEM's recent NEPA standardization that BOEM has no intent to go down this path.

It is also substantially documented that mobile bottom tending gear, particularly bottom trawl, vessels cease fishing activity in offshore wind farms. The UK Crown Estate, the entity that oversees offshore wind in the UK, as early as 2016 released data demonstrating that "fishing activity within offshore wind farms has changed, primarily because fishermen are fearful of fishing gear becoming entrapped by seabed obstacles such as cables, cable crossing points and rock armouring, and wary of vessel breakdown with the consequent risk of turbine collision", including avoidance of export cable routes.²¹ Notably, BOEM has refused to acknowledge the impacts of export cable routes in past analysis; it cannot continue to ignore these impacts. This report points to VMS data as some of the strongest evidence of changes to fishing in offshore wind farms.²²

It is also notable that notices to mariners jointly from the UK's Kingfisher Information Service (a fisheries information service providing fishermen the location of subsurface and subsea hazards around the UK) and developers themselves already contain such statements as "The closer to the surface a subsea cable is lifted when fouled by fishing gear, the more damage there is to the fishing vessel. In the interests of fishing safety and to prevent damage to subsea structures fishermen are advised to exercise caution when fishing in the vicinity of subsea cables and renewable energy structures. Loss of gear, fishing time, and catch can result if a trawler snags a subsea structure and there is serious risk of loss of life."²³ Essentially, bottom trawl vessels are warned to steer clear of offshore wind farms and export cables. BOEM has already received this information multiple times. It cannot keep pretending that it has not.

Similarly, a 2016 Rhode Island DEM report provided to BOEM and attached as part of this comment, raised the issue of bottom trawl vessel de facto exclusion from offshore wind farms.²⁴ That report referenced UK experiences in loss of bottom trawl activity in offshore wind farms, as well as NOAA Fisheries comments that WEAs could prevent highly mobile gear from fully utilizing developed areas. BOEM itself has acknowledged that bottom trawl fisheries such as the squid trawl fishery will not be able to operate inside offshore wind farms, "some fisheries-like the squid trawl fishery- may not be able to safely operate and harvest the resource the resource in the WDA using status quo fishing techniques. In this situation, a large portion of annual income for vessels may be inaccessible during operations, resulting in major impacts on individual vessel owners..."²⁵ Not all fisheries operate in the same manner. It is clear from existing analysis and experiences elsewhere that bottom trawl fisheries will lose huge amounts of fishable area as a result of BOEM's offshore wind bonanza. This must be incorporated into all fisheries impacts analysis.

²¹ Gray et. al. "Changes to fishing practices around the UK as a result of the development of offshore windfarms – Phase 1 (Revised)", The Crown Estate, 2016, p. vi, 1.

²² Ibid, p. 11.

²³ See p. 38-39 of our comments to BOEM's Vineyard Wind SEIS. Emphasis ours.

²⁴ RI DEM, Division of Fish and Wildlife, Marine Fisheries Section, "Rhode Island Stakeholder Concerns Regarding the New York Wind Energy Area", 2016.

²⁵ See Vineyard Wind DEIS at [Vineyard Wind Offshore Wind Energy Project Draft EIS \(boem.gov\)](https://www.boem.gov/Vineyard-Wind-Offshore-Wind-Energy-Project-Draft-EIS), p. 3-184.

A recent 2022 report from the UK entitled “Spatial Squeeze in Fisheries” analyzes the impacts and potential future impacts to commercial fisheries in the UK due to offshore wind farms and fisheries closures themselves, as the two cannot be disassociated when determining cumulative impacts. Each fishery must be analyzed in this way, as each fishery is subject to its own set of spatial regulations, preventing vessels displaced by wind farms from simply relocating to another area. The entire fisheries regulatory context must be considered when conducting analysis for cumulative impacts regarding offshore wind. The fisheries regulations already exist. Many fishable areas currently available outside closed or regulated areas are located in what now are BOEM wind leases. The cumulative impact of essentially creating a closed area via a wind farm on what is currently “open” bottom can ultimately be the complete closure of a fishery. That is, in fact, what the “Spatial Squeeze in Fisheries” paper found- that due to the combination of both fisheries regulations and offshore wind development that by 2050 it is quite possible that there will be no bottom trawling left in the UK.²⁶ The report focused on bottom trawling because bottom trawling is already being impacted by displacement from offshore wind farms.²⁷ We suggest that BOEM incorporate this same type of analysis, which is already being driven by real-life experience, into all of its NEPA review for fisheries, including cumulative impacts, moving forward. The report has been provided as an attachment to this comment.

Another valuable resource for BOEM to incorporate into analysis regarding existing fisheries closed/regulated areas and particularly cumulative impacts has recently been completed by the federal fisheries Council Coordinating Committee. This Committee consists of the chairs, vice chairs, executive directors and appropriate staff of the legislatively established Regional Fishery Management Councils. In response to the Biden Administration’s 30x30 America the Beautiful initiative, which is frequently cited as BOEM as a Purpose and Need of proposed offshore wind actions, the Council Coordinating Committee established an Area-Based Management Subcommittee which met from November 2021 through May 2022 to investigate and quantify the area-based fishery and environmental conservation protections currently in place in each federal U.S. ocean region.²⁸ The draft report completed by the Subcommittee, entitled “An Evaluation of Conservation Areas in the U.S. EEZ” modeled its definition of conservation area after America the Beautiful and IUCN definitions and utilized standard methodology across the US for its analysis.²⁹ The results demonstrated 55% conservation of the Mid Atlantic EEZ and 69% conservation of the New England EEZ.³⁰ This amounts to tens of

²⁶ ABPmer, (2022). Spatial Squeeze in Fisheries, Final Report, ABPmer Report No. R.3900, June 2022, p. v; report attached.

²⁷ Ibid, p. ii.

²⁸ See

https://static1.squarespace.com/static/56c65ea3f2b77e3a78d3441e/t/6272e64278679a29eb03e5bf/1651698562632/F4_MeetingMinutes_CCC_ABMSubcommittee.pdf.

²⁹ See the Draft Report at

https://static1.squarespace.com/static/56c65ea3f2b77e3a78d3441e/t/6272ebae0d318014e42b96aa/1651698616717/F2_CCCSubCtte_ConservationAreaReport_FinalDraft_2022-05-04.pdf.

³⁰ See [https://s3.us-east-](https://s3.us-east-1.amazonaws.com/nefmc.org/8a_F1_CCCABMSubcommittee_Talk_May2022_Revised.pdf)

[1.amazonaws.com/nefmc.org/8a_F1_CCCABMSubcommittee_Talk_May2022_Revised.pdf](https://s3.us-east-1.amazonaws.com/nefmc.org/8a_F1_CCCABMSubcommittee_Talk_May2022_Revised.pdf), slide 13, and Draft Report at

https://static1.squarespace.com/static/56c65ea3f2b77e3a78d3441e/t/6272ebae0d318014e42b96aa/1651698616717/F2_CCCSubCtte_ConservationAreaReport_FinalDraft_2022-05-04.pdf, p. 23.

thousands of square miles off of the New England and Mid Atlantic coasts that is already spatially regulated for the commercial fishing industry. We have attached that report to this comment for future BOEM use in cumulative impacts analysis.

7. Financial Compensation:

First and foremost, we reiterate that proper adherence to OSCLA through avoidance- i.e., prevention of interference with reasonable uses- would make this entire section a moot point. BOEM continues to claim that it does not have legal authority to establish a compensation fund on its own. This is true. This is because BOEM has a legal duty to prevent interference with reasonable uses such as commercial fishing as a mandate when leasing for offshore wind. This stands in stark contrast to BOEM's statutory obligations under OSCLA regarding oil and gas leasing.

It is the same law, OSCLA, that grants BOEM authority for both oil and gas leasing and offshore wind leasing. However, the provisions for the two types of leasing are not alike. BOEM has no statutory duty to prevent interference with reasonable uses of the ocean when conducting oil and gas leasing. This is why OSCLA legislatively provides for the "Fisherman's Contingency Fund" in Part 296 of the law.³¹ This Fisherman's Contingency Fund is created to cover economic losses of income and property as a result of damage caused by oil and gas obstructions on the Outer Continental Shelf. Because BOEM is not required to prevent interference with reasonable uses such as commercial fishing when leasing for oil and gas, such a contingency fund was necessary. In contrast, the OSCLA provisions regarding offshore wind leasing create no similar statutory authority or obligation. Instead, when conducting offshore wind leasing, OSCLA mandates that the Secretary must do so in a way that prevents interference with reasonable uses of the Outer Continental Shelf. Congress mandated avoidance as the one and only solution to addressing fisheries impacts in the context of offshore wind. If avoidance was not an absolute, such as with oil and gas leasing, Congress would have established a Fisherman's Contingency Fund similar to that for oil and gas contained in the same law. Because Congress delineated a difference in legal mandates regarding the two types of OSCLA leasing, it created different provisions for each type. Offshore wind leasing was designed to be more constrained than oil and gas leasing. That was not an oversight of Congress. It was deliberate.

BOEM here in its Draft Guidance is simply attempting to ignore its legal mandates under OSCLA regarding offshore wind and create something akin to the oil and gas Fisherman's Contingency Fund. Except because it has no legal authority to do so, it can merely issue these as "guidance" and "recommendations" to developers rather than require it. The entire concept is utterly absurd. BOEM is trying to artificially create something it has no authority to create, because it is not executing the authority it actually has. However, this circles back to the previous sections of this comment letter. BOEM has taken it upon itself to merely become an arm of the developers rather than comply with its own legislative mandates or execute its own regulatory authority.

8. Determining Adequate Reserve Funds for Compensation:

³¹ See [eCFR :: 50 CFR Part 296 -- Fishermen's Contingency Fund](#) and [Fishermen's Contingency Fund Program | NOAA Fisheries](#).

BOEM continues to turn a blind eye to real and calculable impacts on the commercial fishing industry, including shoreside businesses, in deference to what will be the least economic liability for the developer. Nothing has changed with the proposed calculations used by the Draft Guidance.

The Guidance document states that a reasonable definition of revenue exposure is the total ex-vessel value of the fish landed. BOEM “generally expects” that only a portion of the ex-vessel revenue exposure will be lost, and therefore that this represents an “overestimation”-the excess of which is “likely to be sufficient to cover shoreside income loss”. We do not know the basis for BOEM’s expectation. It is not rational in any way and contradicts every piece of information that BOEM has been provided over the years. Having such a general expectation would be akin to generally expecting that if logging were outlawed in the forests of America, but individual loggers themselves were compensated for their losses, somehow every logging company, lumber yard, home improvement store, and construction business relying on that lumber would somehow be also compensated. It flies in the face of basic logic.

BOEM supplements this general expectation with the assertion that “in some localities it may be appropriate to apply a multiplier (previous projects estimated approximately 1-2 percent) to the total revenue exposure to ensure that shoreside income loss is adequately covered.” We do not know what planet BOEM lives on. We are unaware of any industry that operates on 1-2% of its raw material cost. Under this assumption, if Seafreeze were to pay an individual vessel unloading at our facility \$1 per pound for squid, we would be expected to cover all property costs, insurance, machinery maintenance and/or replacement, electric and water costs, freezing costs, packaging costs, ice making, shipping costs, refrigeration and cold storage costs, temporary labor costs, salaries, taxes, financial service costs, inspection fees, compliance costs, and a host of other financial operating costs- without even so much as considering profit- on \$0.01 per pound? Any business operating on this model would be bankrupt in short order. We were so surprised to see this figure mentioned in the document that we asked BOEM during a Draft Guidance webinar if it was a typo. It was not.

BOEM uses the excuse that previously approved COPs used various “tools” to identify a multiplier of 1-2%, which are identified in Appendix A “Data and Methodology for Developing Revenue Exposure Estimates in the Northeast Atlantic”. This merely serves to confirm that BOEM’s COP analysis thus far has been completely inadequate, in fact laughable. Its employed “tools” include the outdated IMPLAN model from 2004, when data from 2020 is available. It is unclear why BOEM does not use or quote the most updated and accurate information but rather relies on nearly 20-year-old data. It is also unclear why BOEM doesn’t investigate publicly available species information on processor pricing, such as Seafreeze’s monthly price sheet³² as compared to average ex-vessel prices which is contained, for example, in Mid Atlantic Fishery Management Council Fishery Performance Reports and Fishery Information documents, all publicly available.³³ The numbers will tell a much different story than a penny on the dollar.

Analysis on economic multipliers must be done on a species-by-species, fishery-by-fishery basis, as discussed both above and below. Not all fisheries are the same. But these types of economic analysis have already been completed for many species through economic studies-

³² See <https://www.seafreezeld.com/price-sheet> and <https://www.seafreezeld.com/price-sheet>.

³³ See <https://www.mafmc.org/msb>.

some of which we have previously submitted to BOEM in comments which continue to be ignored- conducted by entities such as the Science Center for Marine Fisheries, an industry/academic partnership under the National Science Foundation.³⁴ These are not back of the envelope calculations. They are National Science Foundation sanctioned research products.

One such research product, “Economic Impacts Associated with the Commercial Fishery for Longfin Squid (*Doryteuthis pealeii*) in the Northeast U.S.”, conducted in association with the Virginia Institute of Marine Science, calculated a total economic output multiplier for longfin squid of 7.64, i.e. every dollar of landings leads to \$7.64 in total economic output.³⁵ Not \$0.01-\$0.02. Due to the high overlap rate of BOEM approved offshore wind leases with this fishery, it is imperative that BOEM incorporate accurate data regarding the longfin squid fishery into its analysis. Below is a chart showing the astronomical difference between BOEM midpoint estimates of shoreside impacts (\$0.015) and the species-by-species shoreside impacts calculated by various Science Center for Marine Fisheries economic studies:³⁶

Fishery	Landings Value (\$ Mil.)	Total Economic Output (\$ Mil.)	Total Employment	BOEM Total Output (\$ Mil.)
Summer Flounder	\$26.5	\$201.6	1,688	\$26.9
Scup	\$9.3	\$90.9	2,709	\$9.6
Surf Clam/Ocean Quohaug	\$54.8	\$1,039.0	16,465	\$55.6
Squid	\$31.9	\$243.6	2,539	\$32.3
Menhaden	\$102.4	\$419.3	2,059	\$103.9
Red Grouper	\$14.0	\$201.6	1,840	\$14.2

BOEM states in Appendix A that it expects its own 1-2% ex-vessel value shoreside impacts estimate to “overestimate” revenue impacts due to the assumption that shoreside processors and dealers will simply import product to cover losses. Clearly, BOEM has remained willfully ignorant to the operations of shoreside processors on the East Coast. Most are actual fish docks. The term “processor” in the fishing industry context is derived from Title 21 of the Federal Code of Regulations, Part 123. According to legal definition, “Processing means, with

³⁴ See <https://scemfis.org/>.

³⁵ See Scheld, “Economic Impacts Associated with the Commercial Fishery for Longfin Squid (*Doryteuthis pealeii*) in the Northeast U.S.”, 2020, at https://scemfis.org/wp-content/uploads/2020/03/LFS_EI_Report.pdf, also attached.

³⁶ See Murray, T.J. 2020. [Economic Impacts of Reduced Uncertainty Associated with Fishery Management Actions with Summer Flounder](#)

Murray, T.J. 2016. [Economic Activity Associated with SCEMFIS Supported Fishery Products](#) and [Scup markup tables](#)

Murray, T.J. 2016. Economic Activity Associated with SCEMFIS Supported Fisheries Products: Atlantic Surf clams & Ocean Quahog.

Scheld, A. 2020. [Economic Impacts Associated with the Commercial Fishery for Longfin Squid \(*Doryteuthis pealeii*\) in the Northeast U.S.](#), Virginia Institute of Marine Science. March 2020

Murray, T. J. 2022. [Gulf of Mexico Menhaden Economic Impact and Management Uncertainty.](#)

Murray, T. J. 2021 Economic Impacts Associated with Harvest and Marketing of Red Grouper.

See also Hodges, Murray and Scheld, Memo “Comments on “Guidelines for Mitigating Impacts to Commercial and Recreational Fisheries on the Outer Continental Shelf Pursuant to 30 CFR Part 585,” Bureau of Ocean Energy Management, US Department of the Interior”, August 12, 2022, attached.

respect to fishery products: Handling, storing, preparing, heading, eviscerating, shucking, freezing, changing into different market forms, manufacturing, preserving, packing, labeling, dockside unloading, or holding.” The key word here is “or”. Engaging in any of these activities legally makes an entity a “processor” and requires it to be compliant with the FDA regulations concerning Hazard Analysis Critical Control Point (HACCP).

Per this regulation, not all shoreside processors create a finished product that can be simply supplemented with imports. All that it required to legally be deemed a processor and required to create a HACCP plan and undergo HACCP/FDA inspection is to unload a fishing vessel, thereby “dockside unloading” and “handling” whole fish. Many shoreside “processors” are businesses that unload fish, package it, temporarily store it, and sell it to a secondary wholesaler. They do not import. Some businesses do use the unloaded product to prepare a finished, shelf ready product. But this is not always the case. It is certainly not the case for Seafreeze.

For example, our Seafreeze Shoreside facility is located in Narragansett, in the port of Point Judith/Galilee.³⁷ It is a waterfront facility with several docks for unloading product directly off commercial fishing vessels. The only product that we purchase is that unloaded from the vessels at our docks, purchased directly from the vessels. Some species, such as squid which is our primary product by both volume and revenue, is packed and frozen in the facility plate and/or blast freezers. It is then sold. Some species are packed and frozen in this manner, some species are boxed fresh and shipped to fresh markets elsewhere. All product is whole round, and the facility is designed to unload vessels, package and/or freeze whole product, which is then sold on to other secondary and tertiary dealers/wholesalers/processors. Seafreeze Shoreside also produces ice, which is sold to fishing vessels which ice their product. Our entire business depends on and revolves around the commercial vessels unloading at our docks- 100% of our product and income comes directly from these vessels. If they do not have product, we do not have product. If they lose income, we lose income. It is that simple. We do not import. That is not our business model. If vessels lose access to product, we experience direct loss of product into our facility that cannot be supplemented by imports. If vessels unloading at our facility lose access to fishing grounds due to offshore wind and become unprofitable, Seafreeze Shoreside becomes unprofitable. If the vessels go bankrupt due to wind farm impacts, Seafreeze Shoreside goes bankrupt.

Seafreeze Ltd., our facility in North Kingstown, similarly was built to unload our two company freezer vessels.³⁸ It was purpose built to be the unloading dock and cold storage for those two vessels. It was not built to import; it relies on product from those vessels. If those two vessels experience impacts, Seafreeze Ltd. experiences impacts. For Seafreeze Ltd., over 95% of what is sold is our own company product harvested by our two freezer vessels and/or purchased directly from Seafreeze Shoreside. Both of our “processors” are federally licensed dealers, meaning that they are legally approved by NOAA to unload fishing vessels. That is our business plan- unloading fishing vessels. Processors further downstream, those creating a final shelf-ready product, or dealing with finished products, may have the option to import. But facilities literally designed to be docks for commercial fishing vessels that have a business model that revolves around unloading those vessels do not. BOEM’s assertion that shoreside businesses can

³⁷ See <https://www.seafreezeshoreside.com/>.

³⁸ See <https://www.seafreezeltd.com/>.

just import to make up for offshore wind-related losses is incorrect, arrogant, and ignores years of interaction with and input from Seafreeze representatives as well as representatives from other fisheries shoreside businesses. BOEM is again deliberately throwing shoreside business impacts under the bus with the Draft Guidance document, as it has with all COP reviews to date, despite our and other's comments. We can only assume that this is due to BOEM's pattern of reticence to require any substantial requirements of developers that would reduce developer buildout and/or profits.

One aspect of compensation that BOEM has never mentioned is the impact to the value of our businesses themselves, i.e., physical capital exposure. The value of physical capital is based off of the expectation of future profits. If profit margins fall even slightly across a fishery due to offshore wind, taking into account the lifespan of capital stock and discount rates, the losses in value of physical capital for both vessels and shoreside businesses combined could imply tens of millions of dollars in loss of value of physical capital across that fishery.³⁹ Each one of our Seafreeze facilities was purpose built and designed, equipped, and located specifically to offload commercial fishing vessels. We have invested tens of millions of dollars into these facilities. The physical capital in our facilities- commercial docks and fish pumps, dock conveyors, ice makers and refrigeration system/piping, built-in freezers, and other equipment is highly specialized and not able to be easily converted to do something else. Therefore, should offshore wind reduce our profitability, it will also devalue our physical capital assets. No buyer will be interested in purchasing a fish plant if there is no commercial fishing industry. The same with commercial fishing vessels, nets, doors, trawl wire, door and net sensors and associated electronics, etc. If commercial fishing becomes unprofitable due to offshore wind displacement, no buyer will be interested in purchasing commercial fishing vessels or gear. We will address this specific to fishing vessels further below.

BOEM's statement that previously approved BOEM projects considered shoreside impacts businesses is not factual. During the Rhode Island Fisherman's Advisory Board closed negotiations with Vineyard Wind regarding a compensation package for the Rhode Island fishing industry for that project, not one shoreside processor had a seat at the table. The Fisherman's Advisory Board, none of whom owned or operated shoreside infrastructure or had any understanding of what it costs to operate such a business, had no representation from the shoreside sector. We commented to BOEM several times about this issue, but our comments were ignored.⁴⁰ Because of this glaring omission, the Rhode Island Coastal Resources Management Council subsequently revised the state's Coastal Zone Management regulations to add a processor's seat to the Fisherman's Advisory Board.⁴¹ Pretending that impacts to shoreside businesses have always been considered is in fact quite insulting, as we have been raising this issue to BOEM for years with no acknowledgement.

³⁹ See Hodges, Murray and Scheld, Memo "Comments on "Guidelines for Mitigating Impacts to Commercial and Recreational Fisheries on the Outer Continental Shelf Pursuant to 30 CFR Part 585," Bureau of Ocean Energy Management, US Department of the Interior", August 12, 2022, attached.

⁴⁰ See comments submitted to BOEM on the Vineyard Wind DEIS on February 26, 2019 here: <https://www.regulations.gov/comment/BOEM-2018-0069-0163> and here: <https://www.regulations.gov/comment/BOEM-2018-0069-0162>, documents attached.

⁴¹ See http://www.crmc.ri.gov/samp_ocean/20191016_NOAA_RPC_OceanSAMP_Filing.pdf.

BOEM's primary source for commercial fishing revenue exposure is its 2017 report "Socio-Economic Impact of Outer Continental Shelf Wind Energy Development on Fisheries in the U.S. Atlantic" by Kirkpatrick et. al.⁴² This method of ex-vessel revenue exposure is outdated, been superseded by more recent and accurate methodology, and has been proven inaccurate for estimating activity- and therefore revenue- for mobile bottom tending gear fisheries such as the squid fishery. Not all methodology is suited for all fisheries; operational differences can create huge discrepancies between the outcomes of methodology. The Kirkpatrick method, which uses a series of concentric rings around a single Vessel Trip Report coordinate point to estimate revenue for the trip being reported, does not work for mobile fisheries. It works well for static gear fisheries, but it does not work for mobile fisheries because they are just that- mobile. They do not stay in one spot.

We have already demonstrated this to BOEM in the past regarding the Equinor Empire Wind lease area. BOEM is fully aware that this revenue exposure method has been proven as flawed for the mobile bottom tending gear squid fishery. BOEM used the Kirkpatrick method and report in its initial identification of the NY Call Area and in its EA of the NY WEA lease sale, which became the now Empire Wind lease site.⁴³ We have attached our public comment to BOEM on that Call, as well as our comment on the EA. The NY EA specifically mentions the Kirkpatrick et al work and methodology in its analysis and resulting conclusions.⁴⁴ Because the Kirkpatrick method resulted in such a skewed representation of actual fisheries impacts, and BOEM's refusal to acknowledge confidential business information submitted from over 20 squid fishing vessels as well as newer and more accurate data it already had obtained from NMFS, it was necessary to get the state of Rhode Island, the Rhode Island Congressional delegation, as well as NMFS, involved to acknowledge the real impacts to the commercial squid fishery as a result of that lease. We have also attached our 2021 comments on the Equinor NOI that details the history of that entire debacle, which ended with Rhode Island being allocated a seat on the NY Task Force, recommendations to BOEM from both NMFS and the Rhode Island Senate Delegation and NMFS Regional Administrator suggesting re-siting of the lease area to deconflict with the squid fishery (which BOEM ignored), and with the pursuit of legal action against BOEM in the *Fisheries Survival Fund et al v Jewell* lawsuit. It is notable that Seafreeze Shoreside, the Town of Narragansett, RI- where Seafreeze Shoreside is located- and the Narragansett Chamber of Commerce were all plaintiffs to that lawsuit due to the significant impacts on the squid fishery from the Equinor lease. The fishery and associated dependent ports that the Kirkpatrick et. al. method said didn't exist in the NY WEA.

The Kirkpatrick et al method used in the Equinor lease siting as well as the Draft Guidance document listed commercial fishing ports with the most exposed revenue to the lease as being NY, CT, NJ, VA and MA. No mention of any Rhode Island port, although Point Judith/Narragansett, RI, is the single most affected port by the lease. Rhode Island consistently lands more longfin squid than all other East Coast states combined, and the Equinor lease it sited on top of a major squid fishing ground.⁴⁵ The information provided by BOEM based off the

⁴² Kirkpatrick et. al., "Socio-Economic Impact of Outer Continental Shelf Wind Energy Development on Fisheries in the U.S. Atlantic", OCS Study, BOEM 2017-012 at <https://espis.boem.gov/final%20reports/5580.pdf>.

⁴³ See BOEM's EA for the NY WEA at <https://www.boem.gov/NY-Public-EA-June-2016/>, p. 4-148.

⁴⁴ Ibid.

⁴⁵ See http://www.dem.ri.gov/programs/bnatres/fishwild/pdf/RIDEM_VMS_Report_2017.pdf., p. 18 and Longfin Squid Fishery Information Documents available at <https://www.mafmc.org/msb>.

Kirkpatrick method was so inaccurate that the RI DEM Division of Marine Fisheries was forced to become involved early on to represent the interests of the state. A 2016 publication of the RI DEM Division of Marine Fisheries entitled “Rhode Island Stakeholder Concerns Regarding the New York Wind Energy Area” contrasted the commercial fishing activity according to the Kirkpatrick method here:⁴⁶

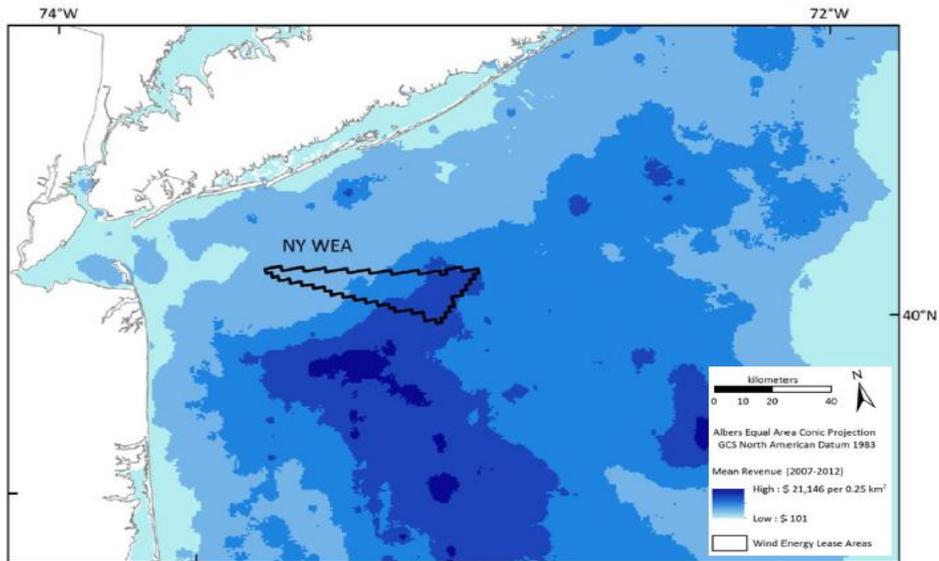


Figure 2. Commercial fishing activity from ports most exposed to the NY WEA, 2007-2012. Figure provided by BOEM and NOAA Fisheries. Revenue-intensity raster built using Vessel Trip Reports.



Rhode Island Department of Environmental Management,
Division of Fish and Wildlife, Marine Fisheries Section
[31]



With actual Vessel Monitoring System data depicting commercial squid fishing activity here:

⁴⁶ RI DEM, Division of Fish and Wildlife, Marine Fisheries Section, “Rhode Island Stakeholder Concerns Regarding the New York Wind Energy Area”, 2016.

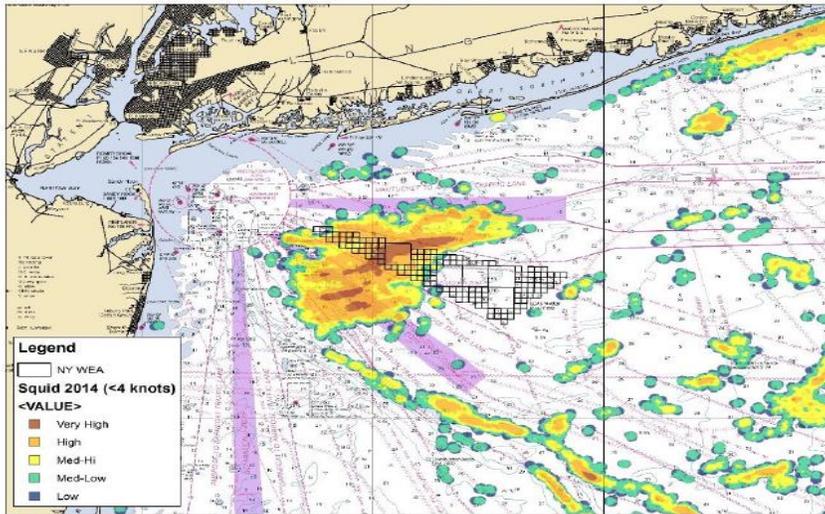


Figure 3. Vessel monitoring system data for the squid fishing fleet in 2014 (Data Source: Northeast Regional Ocean Council)



Rhode Island Department of Environmental Management,
Division of Fish and Wildlife, Marine Fisheries Section
[32]



Activity equals revenue, plain and simple. Utilizing a method for revenue exposure for a mobile gear fishery that bases its entire methodology from a single lat/long coordinate is not only counterintuitive but results in skewed and inaccurate outcomes. We have attached a 2017 presentation from RI DEM to BOEM on its methodology for calculating fisheries landings and revenue in offshore wind leases using Vessel Monitoring System Data rather than data based off a single coordinate. Vessel Monitoring Systems track vessel movement throughout its trip and captures much more accurately the location of vessel activity.⁴⁷

Although BOEM includes references to the RI DEM methodology in Appendix A of the Draft Guidance, it has consistently in practice refused to value fisheries using this method. It consistently gives the methodology a quick reference in passing, but relies on whatever methodology shows lesser financial impact, in deference to developers. We argued to BOEM regarding the Vineyard Wind project that BOEM's estimate that the total revenue exposure to the longfin squid fishery from all cumulative projects, including the Vineyard project itself, at only \$1.16 million from 2020-2030.⁴⁸ However, the RI DEM method valued the Vineyard Wind project area itself for Rhode Island fisheries alone at up to \$35,611,702.85 for a 30- year period, with longfin squid alone accounting for \$20,968,100.76 of this value.⁴⁹ The numbers do not even come close.

⁴⁷ Julia Livermore, "Vessel monitoring system analysis of landings coming from the NY WEA", RI DEM Presentation to BOEM, January 31, 2017.

⁴⁸ See Vineyard Wind SEIS, Appendix B, Table 3.11-3, p. B-78.

⁴⁹ RI DEM, "Rhode Island Fishing Value in the Vineyard Wind Construction and Operations Area", January 14, 2019 at http://www.dem.ri.gov/programs/bnatres/marine/pdf/RIDEM_VWValue.pdf.

Notably, the RI DEM analysis states, “It is important to re-emphasize that the values presented do not include any shoreside impacts (including crew, fuel, gear, ice, processing, or packaging costs). There are entire businesses that provide these services that may also be affected, and many of these services occur in the major RI ports, which will also see impacts from the offshore wind energy area if fishing is precluded from occurring in this area.”⁵⁰ Using the economic multiplier from the SCMFIS National Science Foundation sanctioned longfin squid study, the total commercial fishing revenue derived from the squid fishery exposed by just the Vineyard Wind project is \$160,196,289.80 for Rhode Island businesses alone. BOEM’s approved compensation for that project does not even come close to this figure. This further serves to expose BOEM’s standard course of action in downplaying commercial fishing impacts altogether, a course of action perpetuated by the Draft Guidance document “recommendations”.

The only suitable method for assessing revenue exposure of mobile bottom tending gear fisheries such as the longfin squid fishery is by using VMS analysis. The RI DEM method for generating impacts using VMS is significantly more accurate for mobile fisheries than the Kirkpatrick method. BOEM cannot ignore this or pretend the NY WEA/Equinor lease debacle never occurred. It did occur, and BOEM was forced to acknowledge that Rhode Island was in fact a highly impacted state as a result of that lease, contrary to the Kirkpatrick et al generated “data” for the mobile gear squid fishery. The rule of thumb for all modeling is “garbage in, garbage out.” A method that uses one point to generate estimates of a vessel that is constantly moving is clearly not as accurate as a method that uses many points that follow the vessel activity. BOEM cannot continue to assert to stakeholder that it uses “all methods” when deriving impact estimates. It has not in the past. This needs to change in all BOEM project reviews, and the correct tool should be used for the job. BOEM then needs to assess economic multipliers on a fishery by fishery basis and begin utilizing the best available data immediately. This does not include a 1-2% multiplier.

Additional impacts to vessels themselves have gone unaddressed in the Draft Guidance. For example, BOEM does not address the potential for certain vessels and/or certain fisheries to go bankrupt due to loss of access to fishable area, despite this being a very real potential scenario as BOEM continues to lease and approve projects on currently fishable bottom. For example, BOEM has already acknowledged that that bottom trawl fisheries such as the squid trawl fishery will not be able to operate inside offshore wind farms, “some fisheries- like the squid trawl fishery- may not be able to safely operate and harvest the resource the resource in the WDA using status quo fishing techniques. In this situation, a large portion of annual income for vessels may be inaccessible during operations, resulting in major impacts on individual vessel owners”⁵¹ and “it is likely that they entire...area will be abandoned by commercial fisheries due to difficulties with navigation.”⁵² As the cumulative impacts of projects continue to reduce the available fishing area to bottom trawl fisheries such as the squid fishery, the fishery itself will continue to become less profitable.

⁵⁰ RI DEM, “Rhode Island Fishing Value in the Vineyard Wind Construction and Operations Area”, January 14, 2019 at http://www.dem.ri.gov/programs/bnatres/marine/pdf/RIDEM_VWValue.pdf.

⁵¹ See Vineyard Wind DEIS at [Vineyard Wind Offshore Wind Energy Project Draft EIS \(boem.gov\)](http://www.boem.gov/Vineyard-Wind-Offshore-Wind-Energy-Project-Draft-EIS), p. 3-184.

⁵² See Vineyard Wind ROD at [Record of Decision for Vineyard Wind 1 Signed \(boem.gov\)](http://www.boem.gov/Record-of-Decision-for-Vineyard-Wind-1-Signed), p. 39.

The margins of profitability for vessels are not astronomical. For example, using confidential data provided by the commercial fishing industry, economists at the NOAA Northeast Fisheries Science Center conducted analysis on commercial fishing vessel economic and revenue impacts as a part of the New England Fishery Management Council's Industry Funded Monitoring Omnibus Amendment. That analysis calculated for mobile bottom tending gear vessels such as squid vessels participating seasonally in the herring and mackerel fisheries, that the return to owner (defined as gross revenue less variable, crew share, repair/maintenance and fixed costs) at 7% of ex-vessel value.⁵³ If that margin shrinks smaller due to loss of fishable area and therefore harvest opportunity, it may become too unprofitable to execute the fishery, or not worth the effort or investment. The Draft Guidance does not provide for compensation for the loss of a vessel and/or permit due to unprofitability caused by offshore wind construction.

The asset value of the vessel and/or permit cannot go unnoticed or unvalued. Most fishermen do not have a pension or retirement plan; the resale value of the permit/vessel is that retirement plan. The value of the permit/vessel is also the physical capital invested in by corporate ownership. These vessels are purpose built and not in demand in other sectors. A commercial fishing permit, currently holding significant monetary value, is worthless if the fishery becomes inoperable due to offshore wind. If the vessels themselves become unprofitable, BOEM does not contain any provision in this document for compensation for the devaluation of that investment. This could have disastrous financial consequences for the commercial fishing industry.

9. Duration of Compensatory Mitigation Period:

In this section, BOEM recommends only 5 years of compensation for lost revenue, with compensation declining from 100% revenue exposure to 50% revenue exposure in the 5th year. After 5 years, BOEM "assumed" that "there is adjustment period for fisheries post construction" so further compensation is not warranted as standard. It is again unclear on what information BOEM bases this assumption, as with all other BOEM assumptions. As cumulative impacts accumulate, there will be more impact, not less. Cumulative impacts are just that- cumulative. They grow over time; they do not decrease. It is absolutely astounding that BOEM would even suggest that cumulative impacts decrease over time. It is the opposite of reality.

As detailed throughout this comment letter, it is established by UK experience and BOEM's own admission that for that offshore wind farms will become areas lost to fishing for bottom trawl vessels, such as those owned and operated by Seafreeze. The more projects that are approved on trawl fishery bottom, the more the opportunity and harvest that will be lost to our vessels, and in turn, our shoreside facilities. We reiterate our comments in point 6. The UK experience, combined with current and expected future offshore wind buildout and fisheries regulations, estimates a total loss of bottom trawl fisheries in the next 30 years. As the offshore wind farms planned in the US purport to have an expected 30 year lifespan, it is likely that we can expect the same here should development move forward as planned. Therefore, any and all

⁵³ See Industry Funded Monitoring Amendment, Table 122 "Summary of Total Trip Costs for Herring and Mackerel Vessels in 2014", Average Percent of 2014 Gross Revenue for Squid Vessels, p. 375, at https://s3.us-east-1.amazonaws.com/nefmc.org/2_IndustryFundedMonitoringAmendmentdatedSept16.pdf.

compensation for lost revenue, as well as lost or devalued capital, and cumulative impact analysis, must endure for the life of the project(s) and into decommissioning.

The Draft is also silent on whether compensation would follow the permit/vessel through the life of the project. This is also imperative. Every permit is unique and tracked by NMFS through sale, transfer, etc. There are no new permits issued; very few fisheries are “open access”. Most fisheries, particularly lucrative fisheries such as squid, are all limited access. No new permits are created, and all permits are monitored for landings activity and any vessel transfers or transfers in ownership. Any compensation required by the life of a wind farm project must follow the permit for the life of the project. The physical capital loss compensation must follow the vessel for the life of the project. Vessels are documented and tracked by the U.S. Coast Guard. Assigning compensation to both the permit and the vessel for the life of the project, and into decommissioning, is absolutely necessary for adequate compensation. All damages from the offshore wind industry to the commercial fishing industry must be accounted for.

An utterly ridiculous concept put forward by Appendix A of the Draft Guidance is that in order for “forecasting revenue exposure”, “the lessee should consider information such as stock assessments, fisheries management actions, market conditions, and other factors that may influence revenue and landings over the period of the data analysis”. Does BOEM now expect the developers to be fisheries scientists? Or fisheries market experts? Offshore wind developers have no expertise in the U.S. stock assessment process or fisheries modeling. They also cannot predict what fishery management action may occur 10 years from now. That, according to Congress, is at the sole discretion of the Regional Fishery Management Councils. Does BOEM expect European offshore wind developers to magically become fisheries scientists and U.S. fisheries management experts overnight and consult a crystal ball of “future revenue exposure and impacts”? NMFS is a federal agency responsible for management, oversight and analysis of the nation’s fisheries. NMFS is a cooperating agency with BOEM- why would BOEM not consult NMFS for information regarding revenue exposure? State fisheries agencies such as RI DEM also collect and analyze this type of information. Why would BOEM leave that data collection and associated assumptions to the developer?

This ludicrous proposal circles back again to our previous comments about BOEM leaving federal data collection, analysis and interpretation of this information up to the developer and the developer’s COP, for use in BOEM’s own legal compliance with federal legislative mandates. This is both violative of federal law and wholly unacceptable. Once again, BOEM is acting arbitrarily, capriciously, and otherwise not in accordance with law. It is yet another attempt to hand the developers the key to the castle. A developer will most certainly use whatever data it can find to make an assumption that fisheries landings are expected to decline and therefore hold themselves less liable for damages to the fishing industry. This is in their own best financial interest. BOEM does not question or groundtruth developer generated data, as mentioned in previous sections of this comment. This is another procedural and pervasive issue in the BOEM process that must change if BOEM is to live up to its requirements as a federal regulatory agency.

Allowing developers to generate the data for which they will be held financially liable is not likely to result in an outcome unfavorable to developers. According to Rhode Island state law, a developer negotiating a compensation agreement with the RI CRMC and Fisherman’s

Advisory Board (FAB) shall bear the costs associated with that negotiation, including technical and financial analysis.⁵⁴ The developer can be required to pay for an independent economic analysis conducted by an independent entity on behalf of the FAB. In the case of the Vineyard Wind compensation deal that BOEM approved as appropriate mitigation for the Rhode Island fishing industry,⁵⁵ the FAB/CRMC engaged a Professor of Environmental and Natural Resource Economics named Dr. Sproul from the University of Rhode Island to conduct that independent economic analysis. At the same time, Vineyard Wind engaged the King report as the developer's economic analysis; this report is quoted by BOEM in Appendix A of the Draft Guidance.⁵⁶ The economic report from Dr. Sproul was used in the closed-door negotiation meetings, but never finalized into a final document for CRMC.⁵⁷ The public has never been afforded a copy, draft or otherwise, of Dr. Sproul's report. However, the original Vineyard Wind Fisheries Mitigation Proposal listed as a contingency "The Sproul report or any drafts of that report prepared in response to the January 15, 2019 Dennis King report, not being made public by the FAB".⁵⁸

Leaving data generation, collection and analysis to the developer is not likely to create a fair and equitable outcome for the commercial fishing industry. BOEM cannot continue down the road of being an absentee regulatory agency that defers its responsibilities to the entity it is supposed to be regulating.

Conclusion: The Draft Guidance as written is riddled with inaccurate assumptions, agency abdication of authority, and gross procedural inadequacies. However, the real issue in question is BOEM's procedure. BOEM cannot defer compliance with its legal obligations to data collected and analyzed by the developer. It is clear from BOEM's new NEPA standardization that BOEM has automatically given developers a clean slate in what alternatives will be analyzed for NEPA compliance, eliminating any alternatives that can prevent interference with competing reasonable uses of the ocean and allow it to comply with existing CEQ regulations involving not taking actions or certain parts of an action. All recommendations in the Draft Guidance allow the developer to drive the data, which in turn allows the developer to drive the process. Rather than provide an objective benchmark by which to analyze and compensate for fisheries impacts, the Draft Guidance merely underlines already-apparent conclusions regarding regulatory capture. Rather than making decisions in the public interest, BOEM's proposal would allow it to make decisions in the interests of wind energy developers, whatever the cost to the public. Neither OSCLA nor NEPA authorize such an approach. Accordingly, the Draft Guidance should be rescinded and rewritten in accordance with the suggestions made in this comment letter, utilizing the attached resources, and BOEM should provide the public with another opportunity for comment, next time on a proposal that is at least arguably consistent with BOEM's statutory duties.

Thank you for the opportunity to comment.

⁵⁴ See 605-RICR-20-05-5.3.2 (D) at <https://rules.sos.ri.gov/regulations/Part/650-20-05-5>.

⁵⁵ See Vineyard Wind ROD, Mitigation Measure 75, p. 92, at <https://www.boem.gov/renewable-energy/state-activities/final-record-decision-vineyard-wind-1>.

⁵⁶ King, et. al., "Economic Exposure of Rhode Island Commercial Fisheries to the Vineyard Wind Project", 2019.

⁵⁷ Personal correspondence with CRMC, 2/22/2019.

⁵⁸ See attached document.

Sincerely,
Meghan Lapp
Fisheries Liaison
Seafreeze Shoreside and Seafreeze Ltd.



Responsible Offshore Development Alliance

August 22, 2022

Amanda Lefton, Director
Bureau of Ocean Energy Management
45600 Woodland Road
Sterling, VA 20166

Re. Draft Guidelines for Mitigating Impacts to Commercial and Recreational Fisheries on the Outer Continental Shelf Pursuant to 30 CFR Part 585; Docket No. BOEM-2022-0033

Dear Director Lefton:

The Responsible Offshore Development Alliance (RODA) submits the following comments regarding the Bureau of Ocean Energy Management (BOEM) Draft Guidance for Mitigating Impacts to Commercial and Recreational Fisheries from Offshore Wind Energy Development (Guidance).¹ RODA is a coalition of more than 200 fishery-dependent companies, associations, and community members committed to improving the compatibility of new offshore development with their businesses. Members of our coalition operate in federal and state waters of the New England, Mid-Atlantic, and Pacific coasts.

We appreciate that BOEM, in undertaking the drafting of this Guidance, is acknowledging the risks offshore wind energy (OSW) poses to our nation's world-class seafood production. The greatest single challenge in resolving these conflicts lies in BOEM's piecemeal approaches to OSW planning and development paired with its limited open engagement to date with the fishing communities who are the most affected parties. Plentiful information has already been communicated from the fishing industry, including thoughtful recommendations for reducing impacts from OSW to their livelihoods. We must work collaboratively to create forward-looking, long-term, and programmatic processes to create lasting solutions to these critically important topics.

Fisheries mitigation strategies are the most consequential and important part of OSW development for commercial seafood harvesters. Because mitigation spans a wide range of possibilities from avoidance to compensation, it is the only recourse the fishing industry and agencies charged with protecting fisheries resources have to ensure responsible development. This must aim to protect marine resources and support the existing uses of the Outer Continental Shelf (OCS).

¹ <https://www.regulations.gov/document/BOEM-2022-0033-0003>.

The comments below address three broad topics: (1) this existing and future process for development of this Guidance; (2) structural and framing matters for fisheries mitigation approaches; and (3) technical information regarding fisheries compensation. Considerations and concise recommendations are provided for each topic, and are generally in order of priority; i.e., BOEM must develop compensation guidelines using a robust process and comprehensive structure, but if it does proceed to do so only through isolated comment periods the final section of these recommendations are offered to inform that activity.

This letter builds upon, and in most cases echoes, the detailed comments RODA and other fishing industry members and representatives submitted during the scoping process for the development of these guidelines, including a comprehensive report on recommendations for impact fees we developed through extensive outreach with national fishing industry members, and hundreds or thousands of letters previously submitted to BOEM on relevant topics.² Those comments and report are thus partially reiterated and wholly incorporated by reference herein.

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² RODA’s comment to the RFI can be viewed at http://rodafisheries.org/wp-content/uploads/2022/01/220107_-RFI-Fisheries-Mitigation.pdf; RODA’s report on impact fees can be viewed at http://rodafisheries.org/wp-content/uploads/2021/12/RODA-Impact-Fees-Report_Dec21.pdf.

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PROCESS CONCERNS & RECOMMENDATIONS

The manner in which this Guidance was developed remains fundamentally flawed. Although it is critically important to take action on this topic, the process under which BOEM is doing so does not follow best practices in socioeconomic science or natural resource management, despite repeated requests from RODA and our members to consider alternative approaches.

Inclusive Processes for Mitigation Development

BOEM did not co-develop the mitigation Guidance with impacted parties. This includes the fishing industry, seafood harvesters, and their community members across the supply chain, fisheries experts such as the National Marine Fisheries Service (NMFS), fishery management councils, state fisheries managers, fisheries scientists and economists.

Since the inception of its OSW leasing program, BOEM has operated in a “black box” with insufficient fisheries engagement. It relies on formal notice and public comment periods to solicit information about fisheries and has a poor track record of taking material actions on fishermen’s requests. There are demonstrably more effective ways to co-develop equitable solutions in natural resource management, as simply hosting informational meetings at limited points in the process does not facilitate any discussion or co-production of knowledge nor authentic mitigation plans. Fisheries management and science employ participatory governance, leading to not only better outcomes for impacted parties, but stronger buy-in from the community at-large.³

BOEM’s primary expertise is not in fisheries, so its effective partnership with (and, when merited, deference to) NMFS is tremendously important when undertaking complex actions related to fisheries science, food markets and distribution systems, and socioeconomics. NMFS has spent decades developing transparent processes, working groups, approaches for including fishermen’s ecological knowledge, and peer review opportunities that have resulted in American fisheries being the most sustainably managed in the world. However, in matters related to OSW, neither agency adheres to those processes.

Many in the fishing operations, management, and science communities share our concerns that BOEM processes - including those reportedly in concert with NMFS - significantly diverge from established best practices. Under the Magnuson-Stevens Fishery Conservation and Management

³ A brief explanation of the importance of participatory governance in fisheries and offshore wind is available at <http://rodafisheries.org/wp-content/uploads/2022/08/Participatory-Governance-Fisheries-and-OSW.pdf>.

Act (MSA), Regional Fishery Management Councils are charged with developing plans for the stewardship of fishery resources with the participation and advice from the fishing industry and other interested parties. The manner in which BOEM is developing this Guidance directly contradicts recommendations from the fishery management councils. The Mid-Atlantic Fishery Management Council (MAFMC) specifically directed NMFS to evaluate the consistency of this fisheries mitigation effort with NMFS policies for public participation and environmental justice,⁴ while other councils have discussed the Guidance and expressed similar concerns. NMFS's response to MAFMC essentially indicated that NMFS policies do not apply to an effort led by BOEM. This perfunctory response is deeply troubling; while the councils cannot require BOEM to amend its public participation process, they can direct and recommend NMFS to determine whether the guidance is consistent with its own regulations and best available science, and there is no legal requirement for NMFS to endorse an exceptionally important activity that violates its own policies.

Recommendation 1

BOEM and NMFS should create a standing federal fisheries working group with experts from the industry, academia and state and federal agencies to continue the development of this mitigation framework and the scientific approaches needed for its success. This working group should employ principles of participatory governance to co-produce and co-manage approaches to mitigation from OSW development.

Requirement of Mitigation

BOEM maintains that it lacks authority to directly regulate developers' projects in manners that would most effectively mitigate fishing impacts, despite the requirement in the Outer Continental Shelf Lands Act (OCSLA) for Secretary of the Interior to "ensure that any activity [] is carried out in a manner that provides for the prevention of interference with reasonable uses."⁵ Commercial fishing is statutorily identified as a reasonable use of the OCS.

As stated in each public meeting held for this Guidance, there is unmistakable concern from the fishing industry that guidelines resulting from this process would not be binding nor required to be implemented by OSW developers. BOEM confirmed during the public hearings its position that it cannot make mitigation requirements through this process; this interpretation of the agency's authority fundamentally confounds this effort as impacts to fisheries will not be effectively addressed through mere guidelines and voluntary action by private sector developers.

⁴ See <https://www.mafmc.org/briefing/december-2021>.

⁵ 43 U.S.C. § 1337(p)(4)(I).

As the lead permitting agency, BOEM holds the authority to regulate OSW developers and impose any necessary permit conditions to fulfill its statutory mandate to lease the OCS for energy development in a manner “*subject to environmental safeguards.*”⁶ In plain language, Congress explicitly assigned BOEM the authority to implement regulations to protect the human and physical environment from the impacts of OSW development just as it does for oil and gas and other activities under its jurisdiction. Moreover, where BOEM has opted to create guidelines for development rather than issuing specific requirements in the past, developers have already departed from those guidelines and have publicly acknowledged their interest in regularly employing variances.⁷

The degree to which mitigation (both monetary and non-monetary) is required by any developer, and the criteria for whether BOEM will approve a proposal on these topics, are not clear in the Guidelines. Without formal adherence requirements, issuing guidelines rather than promulgating regulations will result in inequitable, confusing, and fragmented mitigation strategies.

Recommendation 2

The most important step for BOEM to take at this juncture is to implement effective processes, supported by regulations and strong oversight, to ensure the mitigation of fisheries impacts through OSW planning and project design. As an interim solution, states should pursue consistent and mandatory fisheries mitigation as part of any power purchase agreements or federal consistency determinations.

Fisheries Mitigation in NEPA Analyses

Mitigation is the most consequential component of OSW for fisheries in the face of large-scale development and therefore clear regulations should determine its role in project planning and approval. BOEM has stated its intent to address mitigation through project-specific guidelines unless specific congressional mandates direct the agency to proceed otherwise. Its authority to implement such guidelines then rests on its project reviews under the National Environmental Policy Act (NEPA).

⁶ 43 U.S.C § 1332(3).

⁷ See previous RODA comment letters for examples of departures from existing BOEM guidelines on communication with the fishing industry, e.g. https://rodafisheries.org/wp-content/uploads/2022/01/220107_-_RFI-Fisheries-Mitigation.pdf; http://rodafisheries.org/wp-content/uploads/2022/08/220801_CA-PSN.pdf; certain developers have also not complied with BOEM’s guidelines for pre-construction fisheries resource monitoring.

Unfortunately, BOEM’s current sequencing of its NEPA approach to project review under NEPA significantly weakens any weight the agency has committed to afford the Guidance. The only time sufficient planning flexibility exists to modify project plans to avoid or minimize fishing impacts is at the lease planning phase. Once lease boundaries are drawn, mitigation is possible through project design but power procurement contracting greatly limits the flexibility to achieve such a goal. An agency policy to review fisheries mitigation at the latest stages of project planning, once projects are locked in to lease boundaries and procurement terms, will frustrate good faith attempts to operationalize this Guidance.

Compounding BOEM’s poorly timed consideration of fisheries mitigation under NEPA is its new policy of excluding alternatives from environmental review that would specifically reduce or mitigate fisheries impacts. The agency’s recently released “Process for Identifying Alternatives for Environmental Reviews of Offshore Wind Construction and Operations Plans pursuant to the NEPA”⁸ standardizes the alternatives BOEM will consider during the NEPA process⁹ and clarifies BOEM’s policy of considering only a narrow range of alternatives consistent with a developer’s preferred project plans. Indeed, it affords the terms of cost-competitive procurement agreements “more deference than a typical contract between two private for-profit entities,” although such contracts are nearly entirely driven by profit and energy maximization and are executed without any environmental review at all. The document only references mitigation in the context of what should *not* be considered as a NEPA alternative; that is, it suggests actions with “substantially similar effects” to others under consideration should be considered outside of the range of alternatives.¹⁰

Mitigation strategies absolutely must be created correctly from the onset. Fisheries mitigation must be developed thoughtfully and on an appropriate timeline. There should be no expectation that mitigation frameworks will be rushed and need to be wholly redesigned in just a few years time, although they should be set-up with enough flexibility to allow for new information to inform the framework. Given the multitude of demands already on those working at the intersection of fisheries and OSW, and the complexities of ocean ecosystem science, this important component will take time to develop. As recommended above, developing a fisheries working group with experts will allow for dedicated and inclusive participation of the industry and supporting experts to develop the best outcomes for fisheries.

⁸<https://www.boem.gov/sites/default/files/documents/renewable-energy/BOEM%20COP%20EIS%20Alternatives-2022-06-22.pdf>.

⁹ This document was issued without any opportunity for the public to participate in or provide input on its development, thus to our knowledge has not been the subject of any public comment.

¹⁰ This statement contradicts NEPA’s implementing regulations, which specify the alternatives of an Environmental Analysis or Environmental Impact Statement must “include appropriate mitigation measures not already included in the proposed action or alternatives.” 40 C.F.R. § 1502.14(e).

There is significant concern that hastily developed, voluntary guidelines to developers could lead to poorer results for fisheries mitigation than even the marginal ones that currently exist. If BOEM implements this Guidance as proposed, without changes to process or form, it must explicitly state what consequences will be if a developer chooses not to follow them. Any force of review or authority must apply to all sections of the Guidance and all components of mitigation strategies, including those regarding safety at sea.

Recommendation 3

If Guidance is adopted under authorities described, BOEM should include alternatives for analysis in each of its environmental review documents that explicitly consider their inclusion in a project's terms and conditions, whether or not a developer has voluntarily proposed to incorporate them in its Construction and Operations Plan (COP).

Recommendation 4

BOEM should consider all relevant portions of the Guidance prior to any lease sales and include their implementation as legally binding conditions upon lease issuance to the extent possible. In particular, strategies to avoid, minimize, and mitigate impacts that occur prior to COP approval, including but not limited to gear loss plans and minimizing structures in areas of high economic or ecological value, should be implemented at the earliest possible stages of planning.

STRUCTURAL AND FRAMING CONCERNS & RECOMMENDATIONS

NEPA Step-Wise Approach

While compensation is critically important, the other steps in the mitigation hierarchy: avoidance, minimization, and mitigation, are more important and should not be leap-frogged. The Guidance focuses heavily on compensation and only gives a few recommendations for other mitigation aspects.

Mitigation must prioritize avoidance, which entails developing measurable criteria to site OSW off of fishing grounds. These avoidance criteria are the most pressing need for coastal states and regions that are identifying areas for leasing, as opposed to others that have been engaged in OSW discussions for years.

The new criteria for mitigating project design impacts in the draft Guidance include many commendable improvements, such as burying static cables to a minimum depth of six feet, avoiding rock mattresses, and implementing structure-free setbacks between lease areas with differing layouts. However, these types of strategies must be expanded and prioritized, including those that are more suitable for regional lease Terms and Conditions rather than project specific, developer-proposed COPs.

Recommendation 5

Additional mitigation measures that support avoidance, minimization and non-monetary compensation should be developed and refined by the federal fisheries working group as described and recommended above.¹¹ In many cases, these measures may be region and fishery specific.

Cumulative Impacts

NEPA requires BOEM to assess the cumulative effects of a proposed action during the development of an Environmental Impact Statement (EIS), the point where mitigation measures would be evaluated.

*NEPA analyses must assess cumulative effects, which are the impact on the environment resulting from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions. Actions by federal, non-federal agencies, and private parties must be considered.*¹²

It is illogical that the Guidance fails to address cumulative effects because: (1) the mandatory NEPA process already assesses cumulative effects; and (2) the Guidance proposes assessment of a developer's mitigation strategy through NEPA. If adequate analyses have already been done, mitigation that addresses cumulative effects can and must be implemented.

Impacts will only grow in scope and intensity as more projects are built out. A single-project approach is intrinsically deficient because cumulative impacts of multiple OSW farms across a region, or entire coastline, will produce impacts as - if not more - severe to biological resources, fishing industries, and supporting communities than merely the additive effects of single projects. A cumulative approach should be taken to all components of the Guidance, including fisheries communication and outreach, project siting, design, navigation, and access, safety, and financial

¹¹ RODA has an extensive list of opportunities and recommendations for mitigation measures available at <https://rodafisheries.org/offshore-wind/>

¹² 40 C.F.R. § 1508.7(a).

compensation. There must be some recourse to address the cumulative effects that manifest as more projects are developed, especially given that the Guidance does not include any provisions to improve upon a mitigation strategy after a project's approval.

Recommendation 6

The Guidance should address the cumulative effects of multiple projects and multiple stressors from OSW development.

Unforeseen Impacts

There is no recourse for mitigation of impacts that are not initially identified or predicted by a project EIS and materialize later. BOEM has considered deferring to other regulations in case unforeseen impacts arise, such as the Fishery Disaster Determinations. Using Disaster Determinations as a backstop is incredibly concerning because this would mean the environment and fish stocks have been seriously compromised from OSW development, and remediation will be through diversion of funds from NOAA's budget and ultimately U.S. taxpayers. BOEM has only tied mitigation in the draft Guidance to the lease Terms and Conditions of a project, there is no opportunity to improve on strategies as impacts are realized.

Recommendation 7

Mitigation plans for developers should include a provision which allows for verification of existing mitigation plans and allow for additional recourse should impacts manifest.

Safety Measures

Multiple safety measures that should be required for a OSW project are not included in the Guidance, although RODA and others have consistently raised them to BOEM. Consideration should be given for a range of alternatives and range of safety measures in an EIS to inform potential and required mitigation measures to ensure safe navigation. For example, implementation of buffer zones and safety lanes, spatial needs for fishing operations (variable for gear type and vessel size), radar system upgrades and AIS transponders on all fixed structures should all be strongly considered for mitigation. However, many safety measures are better suited to become regional requirements in advance of lease boundary delineation and these should be evaluated and addressed long before the EIS stage as appropriate.

Recommendation 8

The guidance should adhere more closely to recommendations for mitigation in the National Academy of Science's (NAS) report with regards to OSW and radar in the Safety Section of the Mitigation Framework Document, and acknowledge that more studies are needed to better understand complex radar interference issues.¹³

Recommendation 9

BOEM should initiate a fishing navigation and operations study with NMFS and USCG to better understand potential transit and operations within an OSW project, analyzed with various vessels, gear types, in different seasons and other relevant factors that impact safety.

Recommendation 10

BOEM and NMFS should work closely with USCG and maritime experts to improve their procedures for evaluating and regulating safety at sea, including through adjustments to the Port Access Route Study process as outlined in previous RODA comments to these agencies.

Floating Technology Considerations

The Guidance fails to give due consideration to impacts from floating technology despite the expected installation of this type of development in multiple regions across the country. Because the Guidance is expected to be applied nationally, and water depths in some regions will likely require floating turbines and inter array cables, BOEM should attempt to identify mitigation measures as early as possible. Due to the subsea cable networks and anchoring systems of floating structures expected in deeper waters, OSW areas will become de facto closure areas to most commercial fishing, potentially requiring adjusted approaches to mitigation compared to fixed structure projects.

Recommendation 11

Mitigation for floating technology should be considered and applied as early as possible to all components, including project siting, design, navigation and access, safety, environmental monitoring and financial compensation. BOEM must work with experts from both industries to understand the distinctive conflicts and identify mitigation solutions that will be practicable for commercial fishing in the region where this type of technology is proposed.

¹³ <https://www.nationalacademies.org/our-work/wind-turbine-generator-Impacts-to-marine-vessel-radar>.

Environmental Fisheries Monitoring and Burden of Proof

The Guidance is not clear on who carries the burden of proof to demonstrate impacts from OSW. Presumably impacts will be revealed through environmental monitoring, but the Guidance fails to specify any requirements for standardization, coordination, or minimum expectations for monitoring.

Data collection for research and monitoring, including that related to socioeconomic effects, must be set up in a way that will produce measurable and comparable information across spatial and temporal scales. Without diligent forethought in how to properly set up monitoring, it will be extremely difficult to decipher evidence of impacts from OSW development.

The Guidance also does not identify how, nor to what extent, fisheries experts and fisheries ecological knowledge should be incorporated into environmental monitoring. We and others, throughout these comments and in countless others, have repeatedly provided justification for including fisheries knowledge from experts and the industry in every point of the OSW process. This includes monitoring for fisheries impacts.

Recommendation 12

BOEM should adopt the MAFMC and NEFMC wind policy research and monitoring recommendations into the guidance, including monitoring for the life of the project, coordination across different projects, and that data should be made publicly available. Additionally, monitoring of socioeconomic impacts should be further developed in partnership with the impacted communities.

Recommendation 13

Adequate resources (funds and labor) should be dedicated to support the development of transparent, unbiased environmental monitoring plans with federal, state, and industry partners. BOEM should not consider independent monitoring plans that obscure environmental impacts, do not collect relevant data, do not publicly share collected data, or are not comparable across projects and through time to satisfy mitigation or monitoring requirements.

Fisheries Science and Resource Enhancement

The Guidance should support research set-asides for fisheries science and resource enhancement, separate from compensation associated with displacement and direct impacts to harvesting. Even with extensive mitigation measures related to project design such as turbine spacing, micro-siting, row orientation, cable burial, and lighting, a fishery may still lose access to biomass within a

project area. For some fisheries, particularly those targeting shellfish or less mobile stocks, resource enhancement outside the lease area is an additional mitigation measure that should be fully explored and required if found to be viable.

Recommendation 14

Adequate reserve funds should be allocated towards fisheries research and resource enhancement, particularly to begin to address some of the cumulative impacts that will result from OSW development.

TECHNICAL CONCERNS & RECOMMENDATIONS FOR FINANCIAL COMPENSATION

Gear Loss and Damage

The commercial fishing industry generally supports a standardized process for gear loss and damage claims. There are some important differences between the Fisheries Contingency Fund (FCF) used for oil and gas interactions with fishing gear, which is referenced in the Guidelines, and a claims process needed for OSW obstructions. The costs and the magnitude of OSW development differs from oil and gas, and the process for gear loss and damage compensation should be reflective of the bigger magnitude. Additionally, because of the density of multiple hazards and likely difficulty in marking hazards with a turbine array, it may be difficult to avoid obstructions that have caused prior conflicts.

Recommendation 15

A standardized process for gear loss claims associated with OSW development, that minimizes the burden on both parties, needs to be co-designed by fisheries experts and developers. Distinctive from the FCF, gear loss compensation should be based on 100 percent of gross income lost, rather than 50 percent as in the FCF. Second, multiple claims should be permissible for the same locations and within one-quarter mile radius of recorded obstructions. Third, assessment limits should not be capped, particularly because the area covered by WEAs is much larger and we will only know the extent of gear interactions as buildout occurs.

Lost Fishing Income Determination

We are encouraged by the federal government's first explicit acknowledgement that OSW developers should compensate fishing communities for losses to their businesses and livelihoods from these energy projects. Unfortunately, there are a number of shortcomings of the Guidance as it relates to compensation funds and allocation of such funds. Fishermen must be able to directly provide their local ecological and business knowledge into this process and provide federal working groups the benefit of this critical information, yet this directly impacted group continues to be excluded from essential discussions.

The regulating agency, with its federal partners, should instruct how much a developer should set aside for reserve funds based on transparent, consistent, and equitable scientific and economic estimates. The process for this in the Guidance is backwards, with the developer responsible for estimating revenue exposure from development.

The data sets BOEM relies on to determine adequate reserve funds are incomplete and not all fisheries are sufficiently represented. Calculations for reserve funds are based on "revenue exposure" (ex-vessel revenue generated from the project area of potential displacement). This is problematic because it incorrectly assumes there are good revenue estimates for all fisheries within a discrete project area which RODA and other members of the fishing industry have repeatedly identified as a problem. Furthermore, management implications and areas undergoing rebuilding phases will not be fully captured by recent landings alone, which could lead to undervaluation of areas if taken out of context. Any Guidelines must capture the reality of what happens on the water; doing so requires adequate resources to improve data gathering in commensurate spatial scales.

Regional assessments of lost fishing income based upon reasonably OSW foreseeable development in a specified time frame (e.g., five years) could provide an approach to more predictably estimate compensation funding amounts, in lieu of relying on fine-scale spatial data for fisheries where it does not exist. BOEM could assign a portion of total regional OSW impacts among project areas based on lease conditions and other factors. When new Call Areas are considered in a region, the assessments should be updated including cumulative impacts and any changes accounted for in new leases. This could result in consistent determination processes whether prior to lease sale or through inclusion during NEPA review. Any such assessments and assignments of funding responsibilities should employ the precautionary principle.

Recommendation 16

Compensation and valuation of fisheries need to be better studied, particularly if BOEM remains committed to determining funds based on OSW footprints, and to allow for improvements to the guidance in future. Fisheries scientists, economists and participants

must be partners in developing sufficient economic estimates for ex-vessel revenue exposure.

Recommendation 17

BOEM and NMFS, together with public and private sector experts, should conduct regional assessments to determine lost fishing income from reasonably foreseeable OSW development based on the precautionary principle. Such assessments should be updated to include additive and cumulative impacts prior to future leasing in any region.

Shoreside Income Loss Determination

An economic multiplier of 1-2% of ex-vessel landings to cover shoreside income loss presented in Appendix A of the Guidance is wholly inadequate. Upstream and downstream businesses are part of the entire seafood supply chain, dependent on harvests from areas being converted for OSW, and should not be so grossly undervalued. From product handling, to processing, storing, distributing, and marketing, these entire sectors of the fishing industry that are fundamentally interconnected with harvesters represent far more than 1-2% of ex-vessel revenue value. It is also unclear why the Guidance uses the outdated IMPLAN model from 2004 to estimate downstream revenue impacts, when data from 2020 is available.

Several RODA members have submitted comments outlining the severe underestimation of economic multipliers by the Guidance.¹⁴ Lund's Fisheries, Inc. has submitted comments to the docket with an appended memo from the Science Center for Marine Fisheries (SCMFIS) outlining the underestimation of downstream economic impacts. The findings of the SCMFIS memo demonstrate not only the severe underestimation of multipliers, but the lack of recognition of the value added throughout the supply chain and the reliance on outdated information by BOEM. Appropriate multipliers will vary and need to be done on a fishery-by-fishery and species-by-species basis, using economic data some of which may be confidential.

Recommendation 18

Any Guidance must use the best available science to determine sufficient economic multipliers for fisheries and support new analyses for fisheries without robust economic data. Shoreside costs from development must be analyzed on a fishery-by-fishery basis.

¹⁴ Among others from commercial fishing operators and businesses, please review comments from SeaFreeze, Ltd. and Lund's Fisheries on the draft Guidance.

Indirect Losses

The Guidance does not include revenue set aside for indirect impacts, such as those associated with infrastructure investments, certification programs or investments from fishery rebuilding and management requirements.

The Guidance assumes that at some point after construction is completed, fishing businesses will be able to continue operations in their existing fishery. While this is the goal, business plans may change to meet immediate needs felt by displacement or changes to operations, to the extent that capital assets, gear, equipment and other fishery-related investments are devalued. Businesses may also struggle to be financially viable due to the constraints of fisheries regulations, as permits are species specific and often fishing cannot be conducted elsewhere such as in critical habitat areas. Similarly, should a fish stock negatively respond to development or otherwise be critically impacted, certification could potentially be lost, reducing market value for a business and their previous investment in a certification program.

Compensation needs to also address existing requirements to protect essential fish habitat, spawning and juvenile areas and to rebuild federally managed stocks. OSW development in areas that have been previously set-aside for management and rebuilding requirements, may completely undermine years of sacrifice by the industry to allow stocks to rebound. Negative impacts to a rebuilding stock from OSW will serve a double blow to the fishing industry because not only will previous efforts to abide by management requirements be fruitless, but fishing businesses will ultimately be held accountable for low populations of a species due to Magnuson-Stevens Act regulations.

Recommendation 19

Determination of funds should include consideration for indirect losses, including losses to capital investments, certification programs (compliance and investment) and sacrifices to allow for stock rebuilding that is undermined by new development.

Determination Payment Structure

BOEM's approach for a developer compensation payment structure arbitrarily steps down ten percent each year following construction completion. There is no justification that this will be sufficient compensation. It further does not account for capital asset loss or increased investment costs as fisheries try to adjust, nor take into account the increase in cumulative impacts as more projects are built.

Recommendation 20

BOEM should require compensation for the life of the OSW project, from pre-construction activities to decommissioning, and should establish adequate reserve funds for compensation based on the determination of impacts as such.

Administration of Funds

RODA and the fishing industry at large generally support the suggested use of third-party administrators for management of funds. Unfortunately, because this Guidance is still only voluntary for a lessee, it ultimately leaves every detail of such administration to the full discretion of developers. Developers clearly have a significant interest in determination of funding levels, as do fishing community members, and these calculations should occur jointly. However, the administration and distribution of funds *once collected* is a potentially existential matter to the seafood industry and they should therefore play the primary role in structuring this process.

Funds can be paid-out either by an administrator or third-party financial institution, but what remains most important is the framework for how such funds are determined and spent, including allocation and eligibility. This absolutely must be designed transparently and directly with the impacted community, in this case the fishing industry, to ensure equity and goal fulfillment.

Of the existing administration models under consideration and discussion, most relegate fishermen to a minor or meaningless role in determination and therefore will be limited in the benefits they provide this community. The best approach currently in operation is the Rhode Island Fishermen's Viability Trust, where the developer pays into a fund that is entirely managed by a board of fishing representatives. This board will allocate funds to impacted fishermen and businesses through a framework co-developed with their community members, without external influence. Alternatively, a neutral financial institution could wholly manage and administer funds *according to a framework developed by the fishing industry* for processing claims.

Suitability of regional administrators may be appropriate based on project(s) locations and affected fisheries. This would help streamline payouts with individuals or through their associations, and may help pool funds for research set-asides, resource enhancement and other holistic mitigation approaches.

Recommendation 21

Developers should pay into a compensation program but must not control downstream allocation of funding or eligibility. A fisheries working group or board consisting of fisheries experts (fishing industry representatives, fisheries scientists, experts, and

economists) should determine a framework for processing claims which are executed by either: (1) the board of fishing experts; or (2) a neutral financial institution.

Submission of Claims

Claims should be administered directly by the fishing industry or through a third party according to a framework developed by the fishing industry, as described above. A fisheries working group of experts should determine eligibility and review appeals. There are many factors that will affect the time necessary to realize losses, including lengthy delays in federal data collection, processing, and retrieval.

Recommendation 22

Claims should be honored for up to 3 years after income loss to be more consistent with fisheries data collection timelines, with reasonable extensions if data delays occur. Claims appeals should be reviewed by a working group of fisheries experts.

RODA welcomes a future of transparent, collaborative work with BOEM and NMFS under the Memorandum of Understanding between our organizations. In particular, if there is any way we can assist BOEM under the MOU in the development of effective mitigation approaches, we warmly welcome a partnership.

Thank you for your consideration of these comments. Please do not hesitate to reach out if we can provide additional information or clarification.

Sincerely,



Lane Johnston, Programs Manager



Annie Hawkins, Executive Director



Fiona Hogan, Research Director
Responsible Offshore Development Alliance

SUMMARY OF RECOMMENDATIONS

Process Recommendations

1. BOEM and NMFS should create a standing federal fisheries working group that employs principles of participatory governance to co-produce and co-manage mitigation frameworks.
2. BOEM must implement effective processes, supported by regulations and strong oversight, to ensure the mitigation of fisheries impacts. As an interim solution, states should pursue consistent and mandatory fisheries mitigation as part of any power purchase agreements or federal consistency determinations.
3. If Guidance is adopted under authorities described, BOEM should include alternatives for analysis in each of its environmental review documents that explicitly consider their inclusion in a project's terms and conditions, whether or not a developer has voluntarily proposed to incorporate them in its Construction and Operations Plan (COP).
4. BOEM should consider all relevant portions of the Guidance as legally binding conditions upon lease issuance to the extent possible. In particular, strategies to avoid, minimize, and mitigate impacts that occur prior to COP approval should be implemented at the earliest possible stages of planning.

Structural & Framing Recommendations

5. Additional mitigation measures that support avoidance, minimization and non-monetary compensation should be developed and refined by a federal fisheries working group.
6. The Guidance should address the cumulative effects of multiple projects and multiple stressors from OSW development.
7. Mitigation plans for developers should include a provision which allows for verification of existing mitigation plans and allow for additional recourse should impacts manifest.
8. The guidance should adhere more closely to recommendations for mitigation in the National Academy of Science's (NAS) report.
9. BOEM should initiate a fishing navigation and operations study with NMFS and USCG to better understand potential transit and operations within an OSW project.
10. BOEM and NMFS should work closely with USCG and maritime experts to improve their procedures for evaluating and regulating safety at sea, including through adjustments to the Port Access Route Study process as outlined in previous RODA comments to these agencies.
11. Mitigation for floating technology should be considered and applied as early as possible.
12. BOEM should adopt the MAFMC and NEFMC wind policy research and monitoring recommendations into the guidance, including monitoring for the life of the project, coordination across different projects, and that data should be made publicly available.

Additionally, monitoring of socioeconomic impacts should be further developed in partnership with the impacted communities.

13. Adequate resources should be dedicated to support the development of transparent, unbiased environmental monitoring plans with federal, state, and industry partners.
14. Adequate reserve funds should be allocated towards fisheries research and resource enhancement.

Technical Recommendations for Financial Compensation

15. A standardized process for gear loss claims with distinctive consideration for the costs and magnitude of OSW development, that minimizes the burden on both parties, should be co-designed by fisheries experts and developers
16. Compensation and valuation of fisheries need to be better studied, particularly if BOEM remains committed to determining funds based on OSW footprints, and to allow for improvements to the guidance in future. Fisheries scientists, economists and participants must be partners in developing sufficient economic estimates for ex-vessel revenue exposure.
17. BOEM and NMFS, together with public and private sector experts, should conduct regional assessments to determine lost fishing income from reasonably foreseeable OSW development based on the precautionary principle. Such assessments should be updated to include additive and cumulative impacts prior to future leasing in any region.
18. Any Guidance must use the best available science to determine sufficient economic multipliers for fisheries and support new analyses for fisheries without robust economic data. Shoreside costs from development must be analyzed on a fishery-by-fishery basis.
19. Determination of funds should include consideration for indirect losses, including losses to capital investments, certification programs (compliance and investment) and sacrifices to allow for stock rebuilding that is undermined by new development.
20. BOEM should require compensation for the life of the OSW project, from pre-construction activities to decommissioning, and should establish adequate reserve funds for compensation based on the determination of impacts as such.
21. Developers should pay into a compensation program but must not control downstream allocation of funding or eligibility. A fisheries working group or board consisting of fisheries experts (fishing industry representatives, fisheries scientists, experts, and economists) should determine a framework for processing claims.
22. Claims should be honored for up to 3 years after income loss to be more consistent with fisheries data collection timelines, with reasonable extensions if data delays occur. Claims appeals should be reviewed by a working group of fisheries experts.



Pacific Fishery Management Council

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Marc Gorelnik, Chair | Merrick J. Burden, Executive Director

August 22, 2022

Amanda Lefton
Bureau of Ocean Energy Management
Office of Renewable Energy Programs
45600 Woodland Road (VAM-OREP)
Sterling, Virginia 20166

Re: Bureau of Ocean Energy Management (BOEM) Draft Fisheries Mitigation Guidance

Dear Ms. Lefton,

Thank you for the opportunity to provide comments on the Draft Guidelines for Mitigating Impacts to Commercial and Recreational Fisheries on the Outer Continental Shelf (guidance or guidelines). The Pacific Fishery Management Council (Council or Pacific Council) is one of eight Regional Fishery Management Councils (RFMC) established by the Magnuson-Stevens Fishery Conservation and Management Act of 1976 (MSA). The Council is charged with sustainably managing West Coast fisheries and the habitats upon which they depend, and develops fisheries management actions for Federal fisheries of Washington, Oregon, California, and Idaho. The Council is required to achieve optimum yield for public trust marine fishery resources, which requires sustainably managing these resources, their habitats, and the fishing communities that rely on their harvest. The Council supports efforts to mitigate the effects of climate change, including the responsible development of renewable energy projects, provided that the health of marine/estuarine habitats and ecosystems, ecologically and economically sustainable fisheries, and fishing dependent coastal communities are not irreparably harmed. While the Council recognizes the importance of domestic energy development to U.S. economic security, it is important to note that marine fisheries are profoundly important to the social and economic well-being of communities throughout the U.S. and provide numerous benefits to the nation, including domestic food security.

Council Authorities and Responsibilities

Essential Fish Habitat (EFH)

The MSA requires RFMCs to identify, conserve, and enhance EFH for species managed under the Council's fishery management plans (FMPs), including habitats necessary for the spawning, breeding, feeding, and growth to maturity. MSA authorizes the Council to comment on actions that may affect the habitat, including EFH, of a fishery resource under its authority (Section 305(b)(3)(A)) and requires the Council to comment on actions that are likely to substantially affect the habitat of an anadromous fishery resource under its authority (Section 305(b)(3)(B)). United States EFH and habitat areas of particular concern (HAPC) designations can be found on the

National Marine Fisheries Service (NMFS) EFH mapper¹ or by contacting an individual RFMC. The MSA also authorizes the Councils to designate HAPC, a subset of EFH, based on one or more of the following considerations:

- (i) The importance of the ecological function provided by the habitat.
- (ii) The extent to which the habitat is sensitive to human-induced environmental degradation.
- (iii) Whether, and to what extent, development activities are, or will be stressing the habitat type.
- (iv) The rarity of the habitat.

MSA National Standards

The MSA includes ten National Standards (NS) that are principles to be followed in preparing and implementing any FMP to ensure sustainable and responsible fishery management. NMFS has developed regulatory guidance for the NS (50 CFR Part 600 Subpart D). With those standards in mind, the Council **recommends** that avoidance and mitigation efforts address all the NS, in particular NS8 (Communities) and NS10 (Safety at Sea).

General comments

We support the development of the guidance as it provides clarity on BOEM's recommendations for considering and addressing impacts to fisheries. We also appreciate that the guidance provides explicit acknowledgement that offshore wind (OSW) energy developers should compensate fishing communities for impacts to their businesses and livelihoods from these projects. The guidance also represents a step towards greater consistency across projects for evaluating fishing-specific issues, which is very much needed. We appreciate that BOEM worked with NMFS and some affected coastal states in developing the draft guidance. However, we note that the process lacked the input of Treaty Tribes and their respective rights to fisheries resources on the West Coast of the U.S. These Federally recognized fishing rights are guaranteed by Congressionally ratified treaties with the U.S. Government. We suggest working with West Coast (and other regions) states and Tribes in a similar manner BOEM worked with the Atlantic Coast states.

Of particular concern is that the guidance does not establish binding requirements for OSW energy projects. For example, the draft guidance document states: "This guidance does not have the force and effect of law and does not bind the public or BOEM in any way." With this in mind, we recommend removal or modification of language which weakens the recommendations. Terms such as "in some cases" (page 4), "if necessary" (page 5), "make reasonable efforts" (page 5), "where feasible" (page 5), and "consider"(pages 7, 8, and 9) are unnecessary given no binding requirements are established. The guidance would be improved by greater use of terms such as "should."

The final guidance will be applied on a project-by-project basis during BOEM's development of terms and conditions in the Record of Decision for individual projects. We understand BOEM cannot require regional mitigation or mitigation of cumulative impacts unless an individual project's contribution to a regional or cumulative impact can be estimated. We are unaware of any attempts to estimate and address an individual project's contributions to cumulative effects. If BOEM intends to generate such estimates through future National Environmental Policy Act (NEPA) analyses, it should be clarified in the guidance. Because each project is evaluated in a separate NEPA document, the relationship between the effects of individual and cumulative effects

¹ <https://www.habitat.noaa.gov/apps/efhmapper/>

is difficult to discern. The guidance also appears to be reliant on mitigating impacts which are identified in the NEPA process and does not account for mitigating impacts which materialize later.

The inability to address regional differences in mitigation is a serious shortcoming of the guidance. In past comment letters to BOEM, we have expressed our significant concern about the cumulative impacts of multiple wind energy projects on the: (1) ecology of the California Current Large Marine Ecosystem (CCE), (2) the fisheries we manage, and (3) fishing-dependent communities. Each planned OSW area with multiple projects will potentially have cumulative and compounding effects on each of those items identified above. The synergistic effects of multiple projects may be more than additive, meaning impacts and losses would be exacerbated and undercompensated taking a project-by-project approach. The cumulative impacts of these project(s) to treaty-reserved fishing rights, the ecosystem, and treaty fish resources are likely to be significant. The California Current Large Marine Ecosystem supports the ecosystems of the U.S. West Coast. BOEM should (or require developers to) develop a plan to address the cumulative impacts; impacts will only grow in scope and intensity as more projects are built out. This means conditions approved in a first project will differ from later projects because the guidance does not include a recourse to change the mitigation strategy after a project's approval.

It is very important that the guidance differentiate between commercial and recreational fishing, and between fixed and floating OSW installations when addressing impacts, mitigation, and compensation measures. Floating OSW facilities in waters much deeper than fixed OSW on the East Coast will negate the ability to conduct any meaningful commercial or recreational fishing within the area. Anchor cables and suspended power cables will not allow any fishing activity and most shipping activity to occur in those areas. BOEM also should consider region-specific guidance documents or addendums to address regional issues and differences. In addition, OSW technology is evolving, as is our understanding of impacts and the need for avoidance measures, mitigation, and equitable compensation that covers all fishing industry and community losses. It will be important to review, revisit and update this guidance periodically, or as necessary, to ensure continued relevance. A comprehensive analytical process will be necessary because a formulaic 'one size fits all' approach will not be sufficient.

BOEM's national guidance should accommodate the potential development of state or regional guidance documents, and it will be especially important to avoid conflicts with state or regional mitigation guidance to the extent possible. Some guidance documents are already in place (e.g., the New England and the Mid-Atlantic RFMCs), while some are pending (e.g., the Pacific Council's OSW development guidance document and the State of California's plans to convene a working group to develop a statewide strategy for avoidance, minimization, and mitigation of impacts to fishing and fisheries).

General approach to developing mitigation measures

BOEM should clarify or define what is meant by "activity in support of a plan" (page 4). Does this include planning meetings or is it limited to 'on-the-ground/on-the-water' site surveys, construction, and/or operations?

Project siting, design, navigation, and access

Overall, we support the recommended cable and facility design elements as they are similar to recommendations expressed in prior correspondence, as well as with our draft OSW development internal guidance document. We appreciate the phrase “maximize access to fisheries” when describing recommended facility design elements (page 5) and suggest inserting a reference to maintaining consistency with MSA goals and NS. As stated in multiple previous comment letters, we support use of “larger turbine sizes to reduce total project footprint and meet energy production commitments” (page 6).

The guidance differentiates between static and dynamic cables. Additional clarity should be provided by indicating if these terms refer to export cables or interarray cables for fixed and floating facilities. Again, the differences in environmental effects should be considered prior to finalizing the guidance.

The guidance states that dynamic cables “should share corridors and minimize the total cable footprint,” where feasible (page 5). It is unclear how this approach would apply to interarray cables for floating facilities, as these cables connect adjacent turbines. Overall, we support the concept of shared corridors and minimizing the overall footprint. This should apply to all cables. We also support designing for corridors to accommodate transit, search and rescue operations, scientific research activities, and fishing activities. OSW developers should seek the advice of experienced fishermen who access the area prior to finalizing cable routes and deployment.

We support a recommendation that static cables should be buried, because it is the preferred installation method to minimize conflicts with other ocean uses. While the Council has not endorsed a specific burial depth, we have recommended that BOEM require a thorough analysis of seafloor conditions for cable burial during the site assessment phase. We recommend BOEM consider whether six feet is the proper depth given experiences on the East Coast. In 2020, portions of the electric cables for the Block Island Wind Farm became exposed due to wave activity. The operator of that facility expressed an intention to rebury the cables between 10 and 30 feet below the seafloor². It is likely that wave activity on the West Coast will be more significant than that which exposed Block Island’s cables. We suggest that Construction and Operation Plans reflect a safe and informed minimum depth for cable burial.

In addition, we suggest clarifying expectations regarding burial of interarray cables of floating OSW installations, or at least insert a placeholder in the guidance that indicates this issue will be addressed as floating projects are designed. BOEM’s guidance states that “Dynamic cables should be suspended at a depth that minimizes interactions with fishing operations.” We recommend replacing ‘minimizes’ with ‘avoids’ in order to clarify the intent to first avoid impacts whenever feasible, then minimize impacts for those situations in which impacts cannot be avoided.

Buried cables should be routed to avoid rocky habitat. If sufficient burial is not achieved and cable protection measures are necessary, we support the guidance’s recommendation that “cable protection measures should reflect the pre-existing conditions at the site. This mitigation measure chiefly ensures that seafloor cable protection does not introduce new obstructions for mobile fishing gear. Thus, the cable protection measures should be trawl-friendly with tapered or sloped

² [Block Island Wind Farm to go offline in fall to rebury cable \(providencejournal.com\)](https://www.providencejournal.com/story/news/2020/11/19/block-island-wind-farm-to-go-offline-in-fall-to-rebury-cable/5811170002/)

edges” (page 5). The guidance goes on to say that “If cable protection is necessary in ‘non-trawlable’ habitat, such as rocky habitat, then the lessee should consider using materials that mirror the benthic environment” (page 5). While this may be appropriate for guidance applied at a national scale, we emphasize that cables sites on the West Coast should avoid placement through or over rocky habitat. In addition, BOEM is recommending that “facility planning should use nature inclusive designs, where applicable, to maximize available habitat for fish” (page 6). The draft Council policy guidance on OSW and past correspondence include similar recommendations.

Cable routes should be made publicly available to the commercial and recreational fishing sectors, and any exposed cables should be reburied in an expedited fashion and clearly marked until being reburied.

Under Recommended Facility Design Elements #2, we suggest inserting “or rocky habitats (e.g., bedrock, boulder, cobble, gravel)” after “natural or artificial reefs.”

Safety measures

We support the measures in this section of the guidance, many of which are consistent with Council policies. We suggest adding “at a minimum” after “lessee consider” on page 6.

Environmental monitoring

It is unclear if the purpose of this section is to provide guidance for mitigating the effects of environmental monitoring activities on fishing, or if the purpose is to provide guidance on monitoring the environment. The Council recommends clarifying the intent of this section. If the intent is to discuss both, we recommend separate sections for Fisheries Monitoring and Environmental Monitoring. We offer the following comments that could apply to both cases, as appropriate.

This section includes links to BOEM’s website with several guidance documents primarily developed for the Atlantic Outer Continental Shelf (OCS). On its linked webpage, BOEM states it will use these plans to inform and guide actions and decisions in the Northeast and Mid-Atlantic areas. As these guidelines are not tailored to the Pacific OCS, it will be necessary to develop separate environmental assessment and mitigation guidelines to address the unique environment and conditions of the West Coast. Hence, our comments below on environmental monitoring are general in nature.

The Pacific Council has drafted internal guidance on OSW development activities which includes identification of research and monitoring needs for fisheries and the environment. The Council has also provided research and monitoring recommendations in many prior letters to BOEM. Similarly, several other RFMCs have developed policies on OSW energy development that recommend research and monitoring needs. The Council recommends that BOEM’s mitigation guidelines incorporate the recommendations from RFMC policy or guidance documents. For example, the Pacific Council and other Councils have recommended that monitoring occur for the life of the project, including decommissioning, and that efforts be coordinated across developers to ensure development of datasets that can be compared across projects. We also recommend that developer-funded data be made publicly available on a timely and regular basis.

We appreciate that the guidelines recommend “lessees work with state and Federal fisheries management agencies to explore the need and methods to monitor changes in fishing activity as a result of proposed offshore wind energy development” (page 7). Lessees should also work with fishing industry participants, fishing community members, and other interested stakeholders in pursuant of these efforts as well. We suggest BOEM consider making such coordination a requirement of OSW developers, rather than a recommendation. We assume this recommendation will be defined broadly such that effort shift to grounds outside the lease area and the resulting compaction of fishing effort in those grounds will be monitored.

Additionally, BOEM should work with NMFS to retain the integrity of the various fisheries, marine mammal, habitat, avian, and other survey work to the extent practicable. In addition to the collection of long running datasets which inform the fisheries management processes, these surveys will inform changes to the affected habitats, ocean environment, and marine resources as well as changes in fishing effort due to displacement.

We also appreciate that the Responsible Offshore Science Alliance’s (ROSA) Offshore Wind Monitoring Framework and Guidelines document is referenced. However, we note that the section on socio-economic monitoring has yet to be developed. Socio-economic monitoring should address impacts to fishery participants as well as fishing-related industries such as fish processing plants, seafood transportation, and fishing-related retail businesses. Monitoring should include impacts to both commercial and recreational fishing sectors, using landings data, angler trips, revenues, downstream economic losses to fishing communities, reduction in value of permits and vessels, and associated costs incurred by fishery participants. Impacts to recreational fisheries may extend far beyond the ability of individual anglers to access certain locations or species and the long-term expanded economic impacts can be significant. A monitoring plan should include use of logbooks, vessel monitoring, commercial fisheries landings data, and other data sources to accurately characterize and monitor the impacts to fisheries, fishery participants, seafood processors, and related sectors. Recreational socio-economic impacts are difficult to assess, and necessary compensation can be difficult to estimate. We note this should already be underway on the East Coast and socio-economic models created could be used as a template for the West Coast. Landings data and locations of fishing should be compared prior to (and after) any OSW-related activity and should be collated based on the phases of the level of development (surveys, construction and operations (C&O), major repairs, and decommissioning).

Additionally, BOEM should consider applying a community vulnerability index to inform socio-economic monitoring and impacts. During the public workshops on the BOEM Fisheries Mitigation Guidance, BOEM stated that the onus of monitoring changes in fisheries performance due to wind development would likely not be on the individual affected fishermen, but the responsibility of the Councils and NMFS. It is our understanding that the primary responsibility for socio-economic monitoring rests with the OSW developer, who should work collaboratively with the National Oceanic & Atmospheric Administration (NOAA), the Council, and other experts to develop and implement socio-economic monitoring plans. BOEM should clarify their expectations related to this work.

Many fishing industry participants have stated that present plans for division of these monitoring responsibilities with the developers could lead to inconsistent results and incomplete data that will

be impossible to collate. BOEM may wish to consider requiring OSW developers to consult with a Federal governmental agency such as NMFS, as many in the fishing industry have expressed.

As noted above, many of the environmental guidance documents referenced in the guidance are specific to the Atlantic OCS. However, guidelines intended to be nationwide should provide overarching guidance applicable in all regions. For example, BOEM's guidance document should further specify the objectives of environmental monitoring. OSW developers should be required to monitor changes in aquatic species, habitats, and ecosystems in and around the project and regional scales to understand project-specific and cumulative effects of all projects on the region and specifically the CCE. The developers should have a "no-cap cost recovery" program similar to the Pacific Coast Groundfish Trawl Individual Transferable Quota program. Monitoring should analyze the duration, intensity, and magnitude of impacts from OSW operations - not only directly to recreational and commercial fisheries, but also to prey species of each fishery, to affected communities, and to habitats and the ecosystem upon which fish species depend. Baseline assessments should be conducted at least 2-3 years prior to the C&O phase and continue throughout the life of the project, including decommissioning. Monitoring plans should be sufficiently detailed to inform short-term and cumulative effects analyses on habitats, ecosystems, fishing activities, and marine species.

Finally, it is our understanding that NOAA Fisheries and Council staff of the New England and Mid-Atlantic RFMCs are collaborating to develop benthic monitoring recommendations. Once finalized, these recommendations should be referenced in future versions of the guidance, as well as the Council policies and the Pacific Council's draft internal guidance document referenced in this letter.

Financial compensation

The Pacific Council appreciates BOEM's development of a structure for providing financial compensation to affected fishing communities. While compensation is important, the other steps in the mitigation hierarchy (avoidance, minimization, and mitigation) are extremely important and should not be leap-frogged. The financial compensation model is inadequate and should be expanded to include both individual payments and fishing community funds that support fisheries resiliency and the ability to adapt to ongoing changes. We also note that financial compensation for Treaty Rights cannot be determined by the processes proposed. Arguably these inherent rights to Tribe's fisheries resources cannot be compensated financially. BOEM's recent Proposed Sale Notice for California Lease Sales includes incentives for OSW developers to enter into a Community Benefits Agreement (CBA) with the affected community. The Pacific Council suggests using the CBA model to support community resilience, and we provided additional details in our recent comment letter³ including a recommendation that the incentive should be more robust. While a CBA can provide important support for an affected community (including the seafood industry itself), it should not be considered the sole vehicle for a compensation process. The benefits associated with a CBA should not be a substitute for mitigation and/or compensation through the NEPA process or via other agreements between the developers and affected parties. OSW development will have a multitude of impacts and there is no one-size-fits-all approach. The Council is committed to ensuring a sustainable seafood supply, protecting important habitats, and supporting coastal communities. Insulation against impacts from OSW will

³ [Pacific Council comment letter on the California Proposed Sale Notice, 8/1/2022](#)

require a multi-pronged, long-term commitment from both BOEM and OSW developers. Impacts and financial compensation should be evaluated in the context of the net benefit that is forthcoming to the fishing industry and associated communities, to ensure it will cover lost income, depreciated community asset value, and stranded capital for all community businesses and residents for the duration of the project, including decommissioning. Economic impacts occurring prior to any actual development should be included in any evaluation of impacts and losses.

As mentioned earlier, impacts to the recreational fishery extend far beyond economic compensation to businesses in that sector. Lost recreational opportunities owing to reduced access and potential ecosystem changes will result in non-economic damage that cannot be financially compensated. BOEM will need to consider other methods to compensate the recreational fishing community for the negative impacts resulting from OSW projects.

The guidance suggests it should be “considered” if income losses are “likely.” However, it is impossible to fully estimate the extent of losses before construction. Compensation should be planned for because it will not be possible to avoid all negative impacts to commercial and recreational fisheries and related industries. Further, the loss of present fishing grounds will be the direct correlating factor that influences all losses. It may be calculated if the cumulative impacts were known but adding up individual losses attributed to each lessee’s plans will likely make loss estimation complicated and inaccurate.

The guidance states “the scope of impacts or losses addressed by compensatory mitigation should be based on the impacts identified in various environmental documents analyzing the potential effects of the action proposed in the lessee’s submitted plans” (page 7). The final guidance should clarify which environmental documents will be used (e.g., the Final Environmental Impact Statement (EIS) for an individual project or other documents) and how to address discrepancies in information provided in different documents. Reliance on a single document could limit compensation that might be appropriate based on a more detailed evaluation on an individual vessel/fishing business basis or based on updated information. The impacts and data identified in the EIS may not be comprehensive and may not sufficiently consider the full range of impacts and cumulative effects. Furthermore, NOAA Fisheries and/or the RFMCs should be fully engaged in these reviews as they have the expertise to both determine whether the reviews fully encompass the necessary data and also understand the various nuances of impacts to the seafood industries in each region.

For example, if a vessel and its permit are transferred to a new owner, the new owner would not have a permit history, and thus, could not be compensated. This could negatively impact the value of the vessel and permits for an owner who may wish to sell them. In other cases, data confidentiality requirements may preclude presenting revenue information for certain fisheries. We are concerned that if the EIS or other documents do not fully identify all impacts to commercial and recreational fisheries, those impacts will not be mitigated or compensated for. The final guidance should explicitly describe approaches that will be used to address unexpected impacts. EIS documents generally predict future fisheries conditions based on data from recent years; however, the marine environment is continually changing, and the value of fishing areas also change over time. Future conditions, especially conditions beyond a few years into the future, are impossible to accurately predict, but should be accommodated and anticipated as possible.

In addition, BOEM should consider developing a separate compensatory mitigation framework for floating OSW because of the different nature of impacts. Specifically, the presence of anchor cables and possibility of dynamic suspended cables present a different suite of challenges and impediments to the fishing industry. Both financial compensation and compensatory mitigation should be developed specific to floating OSW installations and impacts.

We appreciate the inclusion of language addressing Gear Loss and Damage (pages 7 & 8). As worded, this section recommends reimbursement for gear loss/damage resulting from lessee's actions and/or non-marked/non-charted obstructions the lessee owns. We suggest this be expanded to cover any gear loss and/or damage provided the damaged was not the result of gross negligence or an intentional act of the fisherman. Sudden changes in wind direction, current changes, mechanical issues, etc. can occur which impact a vessel's maneuverability, particularly if gear is deployed. A well-intentioned fisherman should not go uncompensated for damage or loss of gear which would not have occurred in the absence of OSW-related infrastructure.

The guidance assumes commercial and recreational fisheries and shoreside support businesses will generally adapt and learn to co-exist with OSW projects within five years and suggests a specific rate at which compensation can be phased out. It is important to acknowledge that some aspects of the fisheries, including some individual fishermen, processors, and individual businesses will not adapt, or not be able to adapt, as easily or as quickly as others. Downstream effects, such as those to processors and related businesses, may extend beyond five years due to delayed reactions to fishing changes. The guidance clearly does not reflect how shoreside businesses could be affected by changes to fishing activity in the affected areas. The five-year time frame and proposed rate of phase-out may not sufficiently address all fisheries impacts and we are concerned that it is somewhat arbitrary. This is one aspect of the guidance which may warrant review and revision as needed after actual adaptation rates can be assessed as projects are built.

For example, some fishermen may choose not to fish within OSW project areas due to operational logistics, safety, and navigation concerns. Other fishermen may be functionally barred from those areas based on gear types used, insurance policy restrictions, etc. Furthermore, cumulative effects from multiple OSW projects will likely result in compounded impacts not identified in individual project EIS. The final guidance should include guidelines for how the impacts to commercial and recreational fishing industries will be mitigated/compensated if fishermen are not able to adapt within the specified timeframe, or if they choose to no longer fish (or are unable to fish) within lease areas. The final guidance should also include a longer adaptation/transition period.

Regarding the Fisheries Contingency Fund claims process, fishermen should be able to file a claim for income loss after more than the two years, given the lengthy data quality assurance/quality control process for fisheries data. The guidance references public availability of state and Federal landings records. We suggest clarifying this section. While summary data are generally available, data for individual fishing vessels are only available to certain analysts or to the vessel owners on request, and not to the general public. At this time, it is difficult to forecast the number of claims that will be filed, and therefore the number of data requests NMFS or the states may be asked to fulfill. There may be delays in obtaining data required to submit a claim, such that a longer period may be needed, especially in the early years of this process. We also note that waiting two years

for compensation may be too long for some impacted people who could easily suffer severe financial hardship (e.g., loan default) while waiting.

The final guidance should consider the appropriate steps that will be taken if insufficient funds are set aside to compensate for all valid claims or if valid claims are not paid due to other reasons. To this end, the final guidance should outline an appeals process for disputes between the seafood industry and the offshore wind developers, or if the guidance measures are not met.

We appreciate that the guidance acknowledges shoreside commercial and recreational fishery support, but businesses may be negatively impacted and could be eligible for compensation. However, the multipliers to evaluate impacts to shoreside businesses appear modest (~1-2 percent to be used in the revenue exposure calculation) and are lacking in thorough justification. Shoreside multipliers may vary by fishery. Some seafood industry members have strenuously objected to these numbers, although we acknowledge this is an area without a commonly agreed upon methodology for estimation. This could benefit from future research and evaluation by credible fishery economists at NMFS or other Federal or state agencies. BOEM could consider models used in fishery disaster declarations to calculate compensation for economic losses due to fisheries displacement or other impacts.

Similarly, for fishing activity where revenue exposure data are not available, more explicit guidance should be provided and backed by credible analysis on how compensation funds will be determined, beyond recommending “working collaboratively with state and Federal fisheries management agencies regarding all revenue exposure data” (page 5). Impacts to data-poor fisheries must also be considered and compensated for.

Conclusion

We appreciate the opportunity to provide comments on the Draft Fisheries Mitigation Guidance. We look forward to working with BOEM to ensure that wind development minimizes impacts on the marine environment and can be developed in a manner that ensures coexistence with our fisheries. Please contact Kerry Griffin on Council staff (Kerry.griffin@noaa.gov) if you have any questions.

Sincerely,



Chairman

KFG:acl

Cc: Council Members
Mike Conroy
Susan Chambers
Correigh Greene
Scott Heppell



August 22, 2022

Ms. Amanda Lefton
Bureau of Ocean Energy Management
Office of Renewable Energy Programs
45600 Woodland Road (VAM-OREP)
Sterling, Virginia 20166

Re: Draft Fisheries Mitigation Guidance

Dear Ms. Lefton,

Please accept these comments from the New England Fishery Management Council (New England Council), the Mid-Atlantic Fishery Management Council (Mid-Atlantic Council), and the South Atlantic Fishery Management Council (South Atlantic Council) on the Draft Guidance for Mitigating Impacts to Commercial and Recreational Fisheries from Offshore Wind Energy Development.

The New England Council has primary management jurisdiction over 28 marine fishery species in federal waters and is composed of members from Maine to Connecticut. The Mid-Atlantic Council manages more than 65¹ marine species in federal waters and is composed of members from the coastal states of New York to North Carolina (including Pennsylvania). The South Atlantic Council manages 64 marine species in federal waters and is composed of members from North Carolina through Florida. In addition to managing these fisheries, the three Councils have enacted measures to identify and conserve essential fish habitats (EFH), protect corals and other important habitats, and sustainably manage forage fisheries². The Councils support efforts to mitigate the effects of climate change, including the development of renewable energy projects, provided risks to the health of marine ecosystems, ecologically and economically sustainable fisheries, and ocean habitats are avoided.

While the Councils recognize the importance of domestic energy development to U.S. economic security, it is important to note that marine fisheries are profoundly important to the social and economic well-being of communities throughout the U.S. and provide numerous benefits to the nation, including domestic food security.

¹ Fifteen 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.

² Two of the South Atlantic Council's Fishery Management Plans are habitat-based plans with over 400 coral species and associated habitat conserved under the Coral, Coral Reefs and Live Hard Bottom Habitat FMP, and two species of the only structural pelagic habitat under the Pelagic Sargassum Habitat FMP.

General comments

Our comments build off our Councils' policies regarding offshore wind energy.³ We are pleased that many recommendations in BOEM's draft guidance align with our offshore wind energy policies and with recommendations we have made in many previous comment letters to BOEM.⁴

We support development of this guidance as it provides clarity on BOEM's recommendations for considering and addressing impacts to fisheries. This guidance also represents a step towards greater consistency across projects, which is very much needed.

While the draft guidance represents an important first step, many details should be further developed, especially regarding financial compensation. It is essential that BOEM work with affected industries and federal and state fisheries agencies to develop these methods. A working group approach may be an effective method for further development. Absent detailed guidance from BOEM, the responsibility for developing methods for estimating compensation falls on the fishing industry and fishing-related agencies and/or wind developers.

BOEM should clarify the objective of the guidance regarding which types of impacts may be compensated. For example, the final guidance should clarify if compensation will be focused only on revenue exposure or if other impacts, such as changes in the value of vessels and limited access permits, will also be eligible for compensation.

BOEM has made it very clear that this guidance does not establish binding requirements for offshore wind energy projects. For example, the draft guidance document states: "This guidance does not have the force and effect of law and does not bind the public or BOEM in any way." With this in mind, we recommend removal or modification of language which weakens BOEM's recommendations. For example, terms such as "in some cases" (page 4), "if necessary" (page 5), "make reasonable efforts" (page 5), "where feasible" (page 5), and "consider" (pages 7, 8, and 9) are unnecessary as the document does not establish any binding requirements. The guidance would be improved by greater use of terms such as "should."

The final guidance will be applied on a project-by-project basis during BOEM's development of terms and conditions in the Record of Decision for individual projects. We recommend that the guidelines be applied to all projects. We understand that BOEM cannot require regional mitigation or mitigation for cumulative impacts unless an individual project's contribution to a regional or cumulative impact can be estimated. We are unaware of any attempts to estimate an individual project's contributions to cumulative effects. We recommend that BOEM provide additional recommendations on how this could be estimated, including how it could be addressed in National Environmental Policy Act (NEPA) documents which analyze the impacts of

³ The New England and Mid-Atlantic Councils worked together on their offshore wind energy policy and adopted the same policy language, which can be found at <https://s3.us-east-1.amazonaws.com/nefmc.org/NEFMC-Offshore-Wind-Energy-Policy-December-2021.pdf> and https://www.mafmc.org/s/MAFMC_wind_policy_Dec2021.pdf. The South Atlantic Council has a standing [Energy Policy Statement](#) which will be reviewed and revised to better address renewable energy development in 2023.

⁴ Recent comment letters from the New England and Mid-Atlantic Councils are available at <https://www.mafmc.org/northeast-offshore-wind>.

individual projects. Cumulative effects will increase in magnitude as more projects are built and our understanding of those impacts will increase over time. These factors will pose challenges for estimating the contribution of early projects to cumulative effects and planning for appropriate mitigation.

The inability to address regional mitigation and cumulative impacts is a serious shortcoming of the guidance. As we have stated in several past comment letters to BOEM, we are very concerned about the cumulative impacts of multiple wind energy projects on the fisheries we manage. The multiple wind energy projects planned along the east coast will have cumulative and compounding effects on our fisheries. The synergistic effects of multiple projects may be more than additive and this may not be sufficiently identified in project-specific documents; therefore, losses may be undercompensated by taking a project-by-project approach.

The guidance should differentiate between commercial and recreational fishing and between fixed and floating wind project installations when discussing expected impacts and mitigation and compensation measures. Inclusion of the for-hire industry for compensation should also be clearly stated throughout the document and not implied when discussing recreational fishing.

Offshore wind technology is evolving, as is our understanding impacts to the fisheries and the need for mitigation. It will be important to update this guidance periodically to ensure continued relevance.

We request that BOEM share publicly the comments received on the draft guidance, including from state and federal agencies. This will help the fishing community reach a common understanding about shared concerns and issues and how to address them.

Project siting, design, navigation, and access

The first step in mitigation is to site projects where fishery interactions are minimized. Overall, we support the recommended cable and facility design elements as they are similar to recommendations in the Councils' offshore wind energy policies. We appreciate use of the phrase "maximize access to fisheries" when describing recommended facility design elements on page 5 of the draft guidance. As stated in multiple previous comment letters, we support use of "larger turbine sizes to reduce total project footprint and meet energy production commitments" (page 6).

The guidance refers to static vs. dynamic cables. We are not familiar with these terms from our review of previous BOEM documents. Additional clarity could be provided by indicating if these terms refer to export cables, interarray cables for fixed foundations, or floating wind interarray cables.

The draft guidance states that dynamic cables "should share corridors and minimize the total cable footprint," where feasible (page 5). It is unclear how this approach could apply to interarray cables as each turbine must be connected to an adjacent turbine. Overall, we support the concept of shared corridors and minimizing overall footprint. This should apply to all cables to the extent possible.

We support the recommendation that “all static cables should be buried to a minimum depth of 6 feet below the seabed where technically feasible” (page 5). The Councils have not endorsed a specific burial depth, but rather have recommended depths that are adequate “to reduce conflicts with other ocean uses, including fishing operations and fishery surveys, and to minimize effects of heat and electromagnetic field emissions.” Assuming a depth of 6 feet is sufficient to address these objectives, we note that several COPs for projects off the Atlantic coast include depths of less than 6 feet within the proposed range. We recommend that all COPs be updated to reflect a minimum cable burial depth of 6 feet based on this guidance. In addition, we suggest clarifying the expectations for burial of interarray floating cables, or at least leaving a placeholder in the guidance that indicates this issue will be addressed as floating projects are designed. Floating cables present specific concerns and their impacts on both fishing operations and seafloor structures should be carefully evaluated.

We strongly support the language in the draft guidance that states “If needed, cable protection measures should reflect the pre-existing conditions at the site. This mitigation measure chiefly ensures that seafloor cable protection does not introduce new obstructions for mobile fishing gear. Thus, the cable protection measures should be trawl-friendly with tapered or sloped edges. If cable protection is necessary in ‘non-trawlable’ habitat, such as rocky habitat, then the lessee should consider using materials that mirror the benthic environment” (page 5). In addition, BOEM is recommending that “facility planning should use nature inclusive designs, where applicable, to maximize available habitat for fish” (page 6). Our Council policies on offshore wind include similar recommendations.

Safety measures

We support the measures in this section of the guidance, many of which are consistent with Council policies.

The final guidance should clarify that all offshore wind energy cables be monitored throughout the life of the project to ensure they remain sufficiently buried or covered to minimize safety risks. Exposed cables should be reported immediately to the Coast Guard and to all mariners.

The draft guidance recommends identifying structures which may be most appropriate for Automatic Information System (AIS) transponders. AIS will be an important tool for safe navigation within wind arrays. Individual transponders for all structures is preferred, but a redundant virtual system should be a minimum requirement in the event of a system failure or service upgrade. The guidance also recommends consideration of lessee-funded radar system upgrades for commercial and for-hire recreational fishing vessels (page 11). Private recreational fishing vessels should have access to the same safety upgrades. In addition, we recommend provision of AIS transceivers for commercial, for-hire, and private recreational vessels, funded by wind energy lease holders.

Environmental monitoring

The Mid-Atlantic and New England Council policies on wind energy provide detailed recommendations on research and monitoring. These recommendations should be incorporated

into the final mitigation guidelines. For example, monitoring should occur for the life of the project and efforts should be coordinated across developers to ensure development of datasets that can be compared across projects. We also recommend that developer-funded data be made publicly available on a timely and regular basis.

Also, NOAA Fisheries and Council staff are currently collaborating to develop benthic monitoring recommendations. Once finalized, these recommendations should be referenced in future versions of the guidance.

The final guidance document should further specify the objectives and the frequency of environmental monitoring. Offshore wind developers should be required to monitor changes in composition and abundance of aquatic species, habitats, and ecosystems at the project and regional scales to understand project-specific and cumulative effects. Monitoring should analyze the duration, intensity, and magnitude of potential impacts to the fishery, the affected community, and to habitats upon which managed fish species depend. Baseline assessments should begin at least 2-3 years prior to construction and operation and continue without interruption throughout the life of the project, including decommissioning. Monitoring plans should be sufficiently detailed to inform short term and cumulative effects to habitats, ecosystems, fishing activities, and marine species. Monitoring plans should be developed in coordination with state and federal agencies with the expertise to develop attainable plans with sufficient scientific rigor. Habitat data should be classified using a standardized system such as the Coastal and Marine Ecological Classification Standard to ensure scientific rigor, coordination and consistency between projects, and data sharing.

Much additional work is needed to develop guidelines for monitoring related to socioeconomic impacts. We recommend convening work groups of state and federal fisheries agencies, BOEM, the fishing industry, and wind developers to further develop this topic. Based on the limitations of available data, it will be challenging to fully assess socioeconomic impacts for all impacted individuals, including commercial and recreational fishery permit holders, captains, crew, and private anglers, as well as employees of shore-side commercial and recreational fishery support businesses related to processing, packing, shipping, bait and tackle shops, and others. Offshore wind impacts could include changes in revenues, costs, travel times, and the value of permits and vessels, as well as many downstream impacts to shoreside businesses and communities, and other impacts. It will be challenging to assess these impacts based on available data and it is not a simple process to change requirements related to socioeconomic data collection. For example, many impacted fisheries, including commercial, for-hire, and private recreational fisheries, do not require precise reporting of catch locations, which will pose challenges for demonstrating impacts from specific wind projects. It will also be challenging to associate impacts with offshore wind energy projects as opposed to other factors such as changes in species distributions, management measures, prices, market demand, environmental conditions, and other factors. We recommend that BOEM consider community vulnerability indices as one aspect of assessing impacts at the community level.

Financial compensation

A compensation fund and process should be established for all wind projects. The draft guidance suggests compensation funds should be “considered” if income losses are “likely.” However, it is impossible to fully estimate the extent of losses before construction. Compensation should be thoroughly planned for given that it will not be possible to avoid all negative impacts to commercial and recreational fisheries, shoreside support businesses, and communities.

Compensation should address all relevant impacts to commercial, for-hire, and private recreational fishing, as well as shoreside commercial and recreational fishery support businesses. Relevant impacts include, but are not limited to, adverse impacts on revenues, costs, travel times, and the value of permits and vessels. It is also important to consider that many individuals other than captains, permit holders, and business owners will be impacted (e.g., crew members, processing plant employees); however, not all individuals will have the documentation necessary to demonstrate the degree of income impacted by specific wind projects.

The draft guidance states “the scope of impacts or losses addressed by compensatory mitigation should be based on the impacts identified in various environmental documents analyzing the potential effects of the action proposed in the lessee’s submitted plans.” The final guidance should clarify which environmental documents may be used (e.g., the Final Environmental Impact Statement for an individual project, or some other documents) and how to address discrepancies in information provided in different documents. We are concerned that reliance on specific documents would preclude compensation that would be supported by a more detailed evaluation (e.g., at the individual vessel or business level) or based on updated information. It is also important to consider that some fisheries information, including information for individual vessels, permits, or businesses, cannot be presented in public documents due to confidentiality requirements.

In addition, environmental analysis documents completed to date have not thoroughly examined all impacts that are relevant for compensation. For example, export cable corridors are not always analyzed with the same level of detail as turbine and substation locations. Different fisheries may be impacted by export cables compared to turbine and substation locations.

Financial planning for vessel owners and limited access permit holders can include the eventual sale of the vessel and/or permits. This represents a separate revenue source than that from landings. If offshore wind energy development results in a loss of access for some fisheries, that will likely reduce the value of fishing vessels and limited access permits. Therefore, it is important to consider how to compensate for these impacts. These impacts will be difficult to quantify as vessels and permits are sold through private entities and data on revenues from these sales are not publicly available. In addition, it is important to consider that individuals with permits in multiple fisheries must sell their permits as a bundle. Therefore, each unique combination of permits may be impacted differently. In some cases, if a vessel’s permit is transferred to a new owner, then the new owner would not have a permit history, and thus, could not be compensated given compensation is based on the owner’s permit history.

The final guidance should describe approaches that will be used to address unexpected impacts. EIS documents generally predict future fisheries conditions based on data from recent years; however, the marine environment is changing, and independent of offshore wind energy development, the value of fishing areas will change over time. Future conditions, especially conditions beyond a few years into the future, are challenging to accurately predict.

The guidance assumes commercial and recreational fisheries and shoreside support businesses will generally adapt and learn to co-exist with offshore wind projects within five years after construction and furthermore suggests a specific rate at which compensation can be phased out. It is important to acknowledge that some aspects of the fisheries, including some individual fishermen and individual businesses, will not adapt as easily or as quickly as others. The five-year time frame and proposed rate of phase-out may not sufficiently address all fisheries impacts and we are concerned that they are not sufficiently justified. This aspect of the guidance will benefit from review and revision as needed after projects are built and actual adaptation rates can be assessed. For example, some fishermen may choose not to fish within wind project areas due to operational logistics, safety, and navigation concerns, and may not be able to make up for these losses by fishing elsewhere given fish distribution, additional costs associated with transit, etc. The final guidance should include guidelines for how the impacts will be mitigated/compensated for if commercial or recreational fishermen are not able to adapt within the specified timeframe or if they choose to no longer fish within the lease areas.

We appreciate that the draft guidance acknowledges that shoreside commercial and recreational fishery support businesses may be negatively impacted and could be eligible for compensation. However, the multipliers to evaluate impacts to shoreside businesses appear modest (~1-2% to be used in the revenue exposure calculation) and are lacking a thorough justification. Shoreside multipliers may vary by fishery and we acknowledge that this is an area without a commonly agreed upon methodology for estimation. This section of the guidance could benefit from future research and evaluation.

In regard to the Fisheries Contingency Fund claims process, fishermen should be able to file a claim for income loss after more than two years, given the lengthy data QA/QC process for fisheries data. The guidance references the public availability of state and federal landings records but we suggest clarifying this section. Although summary data are generally available, data for individual fishing vessels are only available to certain analysts or to the vessel owners on request, and not to the general public. At this time, it is difficult to predict the number of claims that will be filed, and therefore the number of data requests NOAA Fisheries or the states may be asked to fulfill. There may be delays in obtaining data required to submit a claim, such that a longer period than two years may be needed, especially in the early years of this process.

For fishing activity where revenue exposure data are not available, more explicit guidance should be provided on how compensation funds will be determined. Recommending “working collaboratively with state and Federal fisheries management agencies regarding all revenue exposure data” in Attachment 1 (page 5) is insufficient. Impacts and compensation to data-poor fisheries must also be considered.

The final guidance should also consider the appropriate steps that will be taken if the guidance is not followed, if sufficient funds are not set aside to compensate for all valid claims, or if valid claims are not paid for any other reasons. To this end, the final guidance should outline an appeals process for disputes between the fishing industry and the offshore wind developers.

Finally, we support creation of one centralized compensation fund managed by a third-party entity to be used by developers for all wind energy projects. This will create efficiencies for affected individuals who wish to file a claim and for partner agencies involved in providing relevant data.

Conclusion

We appreciate the opportunity to provide comments on the Draft Fisheries Mitigation Guidance and look forward to working with BOEM to ensure that wind development minimizes impacts on the marine environment and is developed in a manner that ensures coexistence with our fisheries. 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



John Carmichael
Executive Director, South Atlantic Fishery Management Council

cc: M. Luisi, W. Townsend



New England Fishery Management Council

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Eric Reid., *Chair* | Thomas A. Nies, *Executive Director*

August 22, 2022

Mr. Michael Pentony
Regional Administrator
Greater Atlantic Regional Fisheries Office
National Marine Fisheries Service
55 Great Republic Drive
Gloucester, MA 01930

Dear Mike:

Today, my staff electronically sent a preliminary submission of the Southern New England Habitat Area of Particular Concern Framework. The framework proposes to designate a Habitat Area of Particular Concern within and around wind lease areas in Southern New England, including around Cox Ledge, to focus conservation recommendations on cod spawning habitats and complex benthic habitats. This framework will amend the Northeast Multispecies, Scallop, Skate Complex, Atlantic Herring, and Monkfish Fishery Management Plans (FMP).

Upon review of the document, please communicate any comments and/or need for further revisions directly to me in writing. To help expedite the review process, my staff would appreciate if requested changes could be listed and categorized as 'required' or 'suggested.' Please contact me if you have any questions.

Based on conversations with your staff, we anticipate that this action will qualify for a Categorical Exclusion under the requirements of the National Environmental Policy Act. I understand that your staff will prepare a memo to this effect, using information in the framework document as needed. Please let me know if you require our assistance as you prepare this memo.

Sincerely,

Thomas A. Nies
Executive Director



August 19, 2022

Amanda Lefton, Director
Bureau of Ocean Energy Management
45600 Woodland Road
Sterling, VA 20166

Karen Baker, Chief
Office of Renewable Energy Programs
Bureau of Ocean Energy Management
45600 Woodland Road
Sterling, VA 20166

Re: Draft Guidance for Mitigating Impacts to Commercial and Recreational Fisheries from Offshore Wind Energy Development

Dear Director Lefton and Chief Baker:

Thank you for the opportunity to comment on the Bureau of Ocean Energy Management's (BOEM) Draft Fisheries Mitigation Guidance (Guidance).

The American Saltwater Guides Association (ASGA) represents fishing guides, small fishing-related businesses, and conservation-minded anglers who believe that long-term fishery and ecosystem health are the core foundation of a strong recreational fishing economy. Broadly, we are supportive of efforts to combat climate change through the development of renewable energy sources such as offshore wind (OSW), but continue to insist that these projects are developed in a manner that minimizes impacts to both marine ecosystems and fisheries.¹ Confronting this challenge has only become more urgent as the OSW siting and permitting process continues to, in many cases, outpace our scientific understanding of OSW's impacts on the Atlantic coast and elsewhere in U.S. waters.

This past January, during the Request for Information (RFI) phase on this issue, we submitted comments which focused on the need to: collect better baseline data, especially surrounding recreational fishing effort; improve the project siting and design processes; and standardize monitoring efforts across projects.² The draft Guidance presents much-needed clarity and direction from BOEM to the rapidly growing OSW industry, and we generally support its provisions. However, we believe that BOEM could and should go further in its recommendations to ensure that as this nascent industry develops in U.S. waters, BOEM promotes a future where recreational fishing opportunities and healthy fisheries continue to thrive.

We were disappointed to learn that BOEM does not have the authority to require regional mitigation, especially given the likelihood of cumulative ecological and fishery impacts emerging from the development of windfarms in adjacent lease areas. In finalizing its guidance, we urge BOEM to consider next-best solutions to, at the very least, ensure a degree of coordination and uniformity across lease areas when it comes to the five major categories of mitigation described in the Guidance.

A second broad recommendation is for the Guidance to acknowledge that, given the emergence of this new industry in U.S. waters, best practices for mitigating impacts of OSW development may change as lessons are learned. As a result, the Guidance should include a timeline for revisiting and revising the Guidance as needed based on the experiences of BOEM, developers, fishermen, and others.

General Approach to Developing Mitigation Measures

Pre-development engagement with stakeholders is the cornerstone for cooperatively and responsibly developing OSW projects while minimizing impacts to fisheries and marine ecosystems. It is encouraging to see this concept, highlighted in our RFI comment, elevated in the Guidance. However, we continue to observe challenges associated with project-specific communication. Many of ASGA's members that utilize BOEM's wind energy areas (WEAs) are deeply concerned about OSW but do not have the time to learn the details of or share their input on the dozens of projects currently under consideration or already in development. The need for such engagement is particularly acute for the recreational community due to the dearth of spatially explicit baseline data on for-hire and private vessel fishing effort and catch/harvest data in and around WEAs. Without input from fishermen, the recreational value of a given area might not become known to BOEM or developers.

Broadly, BOEM should assume a more substantial role to lessen the burden on stakeholders and improve the overall engagement processes. The region-wide approach being employed in the development of the New York Bight programmatic environmental impact statement serves as a good example.³ While we understand that BOEM cannot require regional mitigation, BOEM should recommend that developers leasing adjacent and nearby areas better coordinate and consolidate their engagement to members of the recreational community. To do so, developers should continue to leverage existing communications channels developed by NOAA Fisheries and the regional fishery management councils.

Project Siting, Design, Navigation, and Access

We support the siting, design, navigation, and access recommendations included in the Guidance and believe they represent a good starting point.

ASGA is particularly supportive of the "Recommended facility design elements" section in the Guidance, including: consideration of larger turbine sizes to minimize the windfarm "footprint"; incorporating safe transit considerations; and leveraging nature-inclusive designs.⁴ Ensuring that recreational anglers have access to fish in and transit through WEAs—outside of minimal temporary exclusionary zones such as during construction—is imperative. In addition, efforts to complement OSW structures with nature-inclusive designs should be substantially increased and/or be made a permitting requirement.

Finally, the issue of decommissioning OSW projects and structures must be addressed. It is our understanding that projects undergoing permitting now (or that have already been approved) will be required to remove all structures permanently or temporarily attached to the seabed on the outer continental shelf to a depth of 15 feet below the mudline.⁵ These structures will presumably become inhabited by many forms of marine life due to the artificial reef effect.

Therefore, removing these structures will negatively impact marine ecosystems and the recreational angling opportunities that emerged as a result of OSW development. Decommissioning guidelines should be revised to allow and encourage OSW developers to leave in place structures that provide complex habitat—as long as they do not pose navigation or safety risks.

Safety

We are widely supportive of the Guidance’s safety measures. It is imperative that boaters know where OSW structures will be as they are planning their trip and are in transit. BOEM and developers need to start planning with marine electronics manufacturers, map designers, and offshore smartphone applications immediately (safety measure #1). With today’s technology, there may be opportunities for OSW developers to include construction activities on these electronics. We also support other navigation aids physically attached to structures that will make their locations abundantly clear.

There is concern among fishery stakeholders about the disruptive effect that WTGs will have on radar devices, per a February National Academies of Sciences study.⁶ BOEM and developers should continue researching this topic and develop methods to reduce this impact to the fishing community. Toward that end, we are encouraged by Recommendation #10 to consider lessee-funded radar system upgrades, if deemed necessary.

Environmental Monitoring

ASGA supports BOEM’s recommendations for environmental monitoring as well as the recommendations provided by the New England Fishery Management Council,⁷ Mid-Atlantic Fishery Management Council,⁸ and Responsible Offshore Science Alliance.⁹ Implementing the strategies discussed by those entities would be a huge step in the right direction for BOEM and the OSW industry. Marine ecosystems are going to change as a result of erecting hundreds, if not thousands, of turbines across the eastern seaboard; a standardized process to monitor these impacts across different projects and regions will be essential to understand potential cumulative impacts. Additionally, the wording in the Guidance should be modified to, “...monitor changes in fishing activity *and productivity* as a result of proposed offshore wind energy development.”

Financial Compensation

At this stage, ASGA is more concerned with how these projects are permitted, designed, and impactful to marine ecosystems rather than on matters of compensation to the recreational community. Therefore, we will not provide comment on this section outside of one point: Financial compensation is viable for commercial fisheries because of the spatially high-resolution data collected by that sector; the dearth and coarseness of spatial data for the for-hire and private recreational sector,¹⁰ meanwhile, all but precludes any meaningful financial compensation for lost income/displacement as a result of OSW development. Moving forward, BOEM and NOAA Fisheries should make every effort to develop improved estimates of recreational effort/catch data at a spatial scale of utility to compensation discussions. We at ASGA are able and willing to serve as a partner in this regard if of interest.

Many thanks for your consideration of our comments.

Sincerely,



Willy Goldsmith, Ph.D.
Executive Director
American Saltwater Guides Association
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(617) 763-3340



Will Poston
Policy Associate
American Saltwater Guides Association
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CC: Mike Pentony, Regional Administrator, Greater Atlantic Regional Fisheries Office,
NOAA Fisheries;
Tom Nies, Executive Director, New England Fishery Management Council;
Christopher Moore, Executive Director, Mid-Atlantic Fishery Management Council

¹ American Saltwater Guides Association. Offshore Wind Development Policy Platform. May 2021.
https://saltwaterguidesassociation.com/wp-content/uploads/2021/05/ASGA-Wind-Policy-Platform_May-2021.pdf.

² American Saltwater Guides Association. Public comment submitted to BOEM regarding the Request for Information on Guidance for Mitigating Impacts to Commercial and Recreational Fisheries from Offshore Wind Energy Development. January 7, 2022. https://saltwaterguidesassociation.com/wp-content/uploads/2022/01/ASGA_BOEM_Fisheries_Mitigation_Comment_Jan-2022.pdf.

³ Bureau of Ocean Energy Management 2022. Notice of Intent To Prepare a Programmatic Environmental Impact Statement for Future Wind Energy Development in the New York Bight. Federal Register 87(135)(15 July 2022):42495- 42498.

⁴ The Nature Conservancy and INSPIRE Environmental. Turbine Reefs: Nature-Based Designs for Augmenting Offshore Wind Structures in the United States. November 2021.
https://www.nature.org/content/dam/tnc/nature/en/documents/TurbineReefReport_Nature-BasedDesignsOffshoreWindStructures.pdf.

⁵ Bureau of Ocean Management. February 2022. Supporting National Environmental Policy Act Documentation for Offshore Wind Energy Development Related to Decommissioning Offshore Wind Facilities.
<https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/Decommissioning%20White%20Paper.pdf>.

⁶ National Academies of Sciences, Engineering, and Medicine. 2022. *Wind Turbine Generator Impacts to Marine Vessel Radar*. <https://doi.org/10.17226/26430>.

⁷ New England Fishery Management Council, December 7, 2021. Offshore Wind Energy Policy: <https://s3.us-east-1.amazonaws.com/nefmc.org/NEFMC-Offshore-Wind-Energy-Policy-December-2021.pdf>.

⁸ Mid-Atlantic Fishery Management Council. December 13, 2021. Wind Energy Policy.
https://static1.squarespace.com/static/511cdc7fe4b00307a2628ac6/t/61c35269697ee00378af403c/1640190570052/MAFMC_wind_policy_Dec2021.pdf.

⁹ Responsible Offshore Science Alliance. Offshore Wind Project Monitoring Framework and Guidelines. March 2021. https://e9f0eb5f-7fec-4e41-9395-960128956e6f.filesusr.com/ugd/99421e_b8932042e6e140ee84c5f8531c2530ab.pdf.

¹⁰ NOAA Fisheries. May 24, 2021. Socioeconomic Impacts of Atlantic Offshore Wind Development.
<https://www.fisheries.noaa.gov/resource/data/socioeconomic-impacts-atlantic-offshore-wind-development>.

Chair: Eric Reid
Executive Director: Tom Nies.
To the Habitat Committee.

My name is Louis Lagace. My company is LNA Inc. dba Fishing Vessel "Mariette". My boat is one of the few "independent" vessels still dredging for surf clams on and about the Nantucket Shoals. Vessels I have captained and/or owned have been fishing in this area since 1981. This is over 40 years. Due to the closure of the GSC HMA, on flimsy data at best I will be losing what I have worked for for virtually my entire adult life. My projected gross income for this year, 2022, will be 44% of an average of the last 6 years, if that. This is unsurvivable. Being that I am now 71, I've always planned to retire at some point after transferring full operation of the LNA Inc. to my son who has captained F/V Mariette for over 10 years. This used to be traditional in the commercial fishing industry: fathers to sons and/or daughters for multiple generations as opposed to large corporations controlling everything. This is not a knock on large companies but there needs to be room for smaller operations also working in harmony together. As a result of this closure, there really doesn't seem to be a whole lot for me to pass on. I whole heartedly support continued research of the HMA and offer my vessel in continuing this effort. Thank you. Louis Lagace [Sent from the all new AOL app for iOS](#)

Nantucket Sound Seafood
350 S. Front St
New Bedford, MA 02740

Lang, Xifaras & Bullard
115 Orchard St
New Bedford, MA 02740

To the Habitat Committee,

My name is Allen Rencurrel. I own and operate Nantucket Sound Seafood in New Bedford, MA which specializes in producing locally caught shellfish, including ocean quahogs and surfclams. My company employs 35 people who are involved in harvesting the shellfish, transporting them to my plant and processing the product for distribution. In 2018, prior to the HMA closure we had 37 workers at 5 days per week with a \$28,000.00 weekly payroll. After closure, we are struggling to keep 35 employees at 3 days per week with a \$20,000.00 payroll. I am only one operator that used to fish in the HMA; there are 4 others including Intershell Inc, Sea Watch International, Galilean Seafood, Lamonica Fine Foods and approximately 4 independent vessels who are facing similar economic problems.

A research project conducted with our partner Coonamessett Farm Foundation (CFF) under EFP #19066 took videos with a camera system mounted on the dredge. During the project, we harvested 42,000 bushels with an ex-vessel value of \$883,000, a portion of which funded the research. This was accomplished by sweeping only 3 square km (out of the 2,566 in the HMA) in 104 fishing trips over a 15-month period between June 2020 and February 2022. This surfclam product went to local distributors in Massachusetts. The finished product was worth approximately \$3.5 million. The final retail value generated closer to \$4.2 million in economic stimulation; all from one vessel fishing in 1% of the HMA. We know the whole area cannot be as densely packed with clams, but we do not know enough about where they or the “complex bottom” of pebbles and cobbles may be located and how these two factors interact.

On June 15, 2022, CFF submitted a final report to the Habitat Plan Development Team. This report summarized the research done in the small area granted under the EFP #19066 and their general conclusions for “Phase I” of the research plan agreed upon by the New England Fisheries Management Council. They offered models that explained the relationship of surfclam catch and fish species seen in the videos collected to substrate. They showed how the substrates are distributed with maps and how the coverage of the substrates changes between seasons. We feel as though we have shown that we can gather useful information for managers. But this area cannot be extended to the whole HMA; we need another area to sample to see how the habitats are alike or differ. In cooperation with CFF, we would like to continue with “Phase II” by moving to a new area in Davis Bank East exemption area, and we will conduct our fishing operations in order to more evenly sample the area.

One last point I’d like to make, we are being told that in order to fish this productive area even in a limited capacity, we have to prove a negative; i.e. that we do not have an adverse impact on the seafloor. However, multi-billion-dollar wind companies do not need to do this to build hundreds of turbines on scour pads that will not only disturb the seafloor, but will remain there permanently. These wind companies do not have to comply with NOAA rules like commercial fishermen do. Under the Magnuson-Stevens Fishery Conservation and Management

Act, fisheries should be governed by measures of productivity, not the possibility of “complex” habitat. In the future, we believe that Rose and Crown and Davis Bank East should be designated as distinct surfclam fishing areas that would be open to clamming under a monitoring program similar to the monitoring done under the EFP. Like the surveys used by wind companies, monitoring would take place during fishing activity to identify any adverse impacts and mitigation would then be applied.

Thank you,

Allen Rencurrel

Scott Lang



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

August 15, 2022

Lt. Colonel Ramon Brigantti
District Commander
Philadelphia District
U.S. Army Corps of Engineers
Wanamaker Building
100 Penn Square East
Philadelphia, PA 19107-3390

RE: Public Notice NAP-2019-00174-86; Borough of Seaside Park

Dear Lt. Col. Brigantti:

We reviewed Public Notice (PN) NAP-2019-00174-86, dated June 17, 2022, which describes an application by the Borough of Seaside Park, New Jersey, for the installation of a living shoreline consisting of a vegetated dune and beach complex and an oyster reef breakwater in Barnegat Bay, Ocean County, New Jersey. The project also includes the construction of walkovers for public access and the removal, replacement, and extension of six stormwater outfalls fitted with in-line tide valves. According to the PN, the sand beach that currently exists above mean high water (MHW) is proposed to be extended into the bay an additional 30 feet with a 1:10 slope to the existing bay floor. Over 25,000 cubic yards (cy) of sand will be placed across more than 4 acres of combined intertidal (0.04 acre) and subtidal (4.11 acres) habitat that supports a wide variety of NOAA trust resources. Reef structures will also be placed over an unknown total area of subtidal shallows. In addition, the fill associated with the proposed beach complex and reef structures will result in the loss of more than 3.6 acres of submerged aquatic vegetation (SAV) habitat, for which no compensatory mitigation is currently proposed.

Based upon the available information, we must conclude that the project as currently proposed will have substantial and unacceptable impacts to aquatic resources of national importance including winter flounder (*Pseudopleuronectes americanus*) and SAV, which is a Mid-Atlantic Fishery Management Council designated habitat area of particular concern (HAPC) for summer flounder (*Paralichthys dentatus*). Because the applicant has not clearly demonstrated that less environmentally damaging alternatives that avoid, minimize, or otherwise offset impacts to winter flounder and SAV are not practicable, in accordance with Part IV, Paragraph 3(b) of the Clean Water Act Section 404 Memorandum of Agreement (MOA) between our agencies we recommend that the project not be authorized as currently proposed.

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) and Fish and Wildlife Coordination Act require federal agencies to consult with us on projects such as this that may adversely affect essential fish habitat (EFH) and/or result in modifications to a natural stream or body of water. In turn, we must provide recommendations to conserve EFH and other NOAA trust resources. 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. The proposed placement of fill along the shoreline will adversely affect EFH through the direct loss of subtidal shallows and SAV habitat used by federally managed species of fish including winter flounder and summer flounder.

As discussed in detail in the attached document, there are several significant outstanding issues associated with this project that need to be addressed before the full nature and scope of the project's impacts can be evaluated and an EFH consultation under the MSA can be initiated. These issues include a full evaluation of the short- and long-term direct, indirect, synergistic, and cumulative effects of the proposed project on NOAA trust resources including SAV and winter flounder; measures to avoid and minimize these impacts; and what compensatory mitigation is needed to offset unavoidable impacts to aquatic habitats, especially SAV. Additionally, the extent to which the applicant intends to monitor the site following construction to evaluate potential changes to environmental conditions as a result of the project is unclear, as monitoring and adaptive management plans have not been provided for review. Information on the project impacts and site conditions provided in the PN, EFH assessment worksheet, and other supplemental documents also appear to be incomplete. A more clearly defined description of all components of the project, the exact acreages of aquatic habitats to be affected, the types of impacts (e.g., loss due to fill placement, habitat conversion, damage due to scouring), an analysis of the alternatives considered for each project component to minimize these impacts, and compensatory mitigation to offset any unavoidable loss of winter flounder EFH and SAV are also needed. The compensatory mitigation plan should be prepared in accordance with the 2008 Compensatory Mitigation for Losses of Aquatic Resources under CWA Section 404 Final Rule and [NOAA's Mitigation Policy for Trust Resources](#).

We appreciate efforts the applicant and your staff have made regarding their shared commitment for continued coordination with us and other agencies and we look forward to working with your staff, the applicant, and the other federal and state agencies as we collectively work to resolve the outstanding issues regarding impacts to our resources, avoidance and minimization, and compensatory mitigation. After receiving the Public Notice for this project in June 2022, we requested an extension to the review period, which was granted on July 19, 2022. We received a cover letter and revised site plans from the applicant on August 1, 2022. We also requested an interagency site visit, which has been scheduled for August 18, 2022. While we remain committed to this continued coordination, we also recognize that the comment period on the proposed project is ending and your staff need our formal comments for the record. We will continue to coordinate with your staff so that this project can move forward efficiently and expeditiously as possible while still meeting our joint responsibilities to protect and conserve aquatic resources. If you have any questions or need additional information, please contact Jessie Murray in our Sandy Hook, New Jersey field office at (732) 872-3116 or jessie.murray@noaa.gov.

Sincerely,



Michael Pentony
Regional Administrator

cc: USACE – T. Schailble, T. Hoernemann, R. Ward, G. Sarlo
HESD – K. Greene
PRD – D. Webb
FWS – R. Popowski, A. Poirier
EPA – R. Montgomerie, M. Finocchiaro
NJDEP – S. Biggins, K. Davis
MAFMC-C. Moore
NEFMC - T. Nies
ASMFC - L. Havel

**Attachment – NOAA Fisheries Comments
Borough of Seaside Park Living Shoreline; NAP-2019-00174-86**

Introduction

We have significant concerns about the proposed project, its impacts to NOAA-trust resources including winter flounder and submerged aquatic vegetation (SAV), the measures considered to avoid and minimize impacts to SAV and shallow water habitat, and the lack of compensatory mitigation needed to offset impacts to aquatic habitats. As a result, we must recommend that Department of the Army permit for this project not be issued at this time in accordance with Part IV, Paragraph 3(b) of the Clean Water Act Section 404 Memorandum of Agreement (MOA) between our agencies due to the substantial and unacceptable impacts that this project will have on aquatic resources of national importance including winter flounder, summer flounder and SAV.

Project Description

The proposed project includes the installation of a living shoreline consisting of a vegetated dune and beach complex and an oyster reef breakwater in Barnegat Bay, Ocean County, New Jersey. Additionally, the project includes the construction of walkovers for public access and the removal, replacement, and extension of six stormwater outfalls fitted with in-line tide valves. According to the public notice, the applicant's stated project purpose is to repair the damaged shoreline, to help mitigate flooding in the area, and to dissipate wave energy that could potentially damage the shoreline.

According to the PN, the sand beach that currently exists above MHW is proposed to be extended into the bay an additional 30-feet with a 1:10 slope to the existing bay floor. Revised site plans (provided on August 1, 2022), indicate more than 25,246 cubic yards (cy) of sand is proposed to be placed over 4.15 acres below MHW, filling over 0.04 acre of intertidal and 4.11 acres of subtidal shallows, which also includes over 3.63 acres of SAV habitat. Over 700-linear feet of outfall pipes are also proposed to be extended into subtidal areas containing SAV. Means, methods, and best management practices have not been provided for the construction of these project elements.

In the offshore subtidal waters, a series of eight HESCO steel basket reef structures are proposed to create a breakwater. Each individual HESCO basket is 10 feet wide by 30 feet long, filled with 4- to 6-inch stone, and encapsulated with shell. Each individual reef structure consists of two parallel rows of twelve staggered HESCO baskets surrounded by eight 8-inch diameter untreated timber piles. Rows are separated by an approximate 100-foot gap to allow for aquatic wildlife passage. From the revised project plans, it appears as though a total of 192 HESCO basket structures and 64 timber piles are proposed to be installed to construct the breakwater. Installation for the baskets is said to be from a barge using a small crane to fill and place each basket. It is unclear how the timber piles will be installed or if there are sufficient depths in the project area to support barge access. The PN also states that the breakwater structure will be

submerged at high tide and be exposed at low tide. However, cross sections provided in the revised site plans indicate that a majority of these baskets will be above MHW.

Information provided in the PN, EFH assessment worksheet, and site plans does not fully capture and quantify all proposed temporary and permanent disturbances to intertidal, subtidal, and open water habitats, which include SAV and EFH for winter flounder. For example, it is unclear how much subtidal habitat and SAV will be permanently disturbed by the placement of the breakwater structures and how much of this area will be permanently converted to uplands (i.e., the area of the breakwaters above MHW). It is also unclear how much SAV will be permanently disturbed by the proposed outfalls and any associated scour protection, and if these structures will result in scour or water quality impacts to SAV. In addition, information provided is also inconsistent between the various narratives and project plans. For example, the EFH assessment worksheet identifies a total area of impact to 2.25-acres of EFH and only mentions the permanent disturbance to 1,900 square feet of sandy substrate. Whereas the revised site plans indicate over 4.15 acres that will be permanently disturbed through the placement of sand below MHW.

An overall summary table which quantifies total, permanent, and temporary impacts to the different water areas and habitats was not included in the EFH assessment or project plans. Additionally, all of the temporary and permanent disturbances do not appear to be accounted for (i.e., breakwater structures, outfalls) in disturbance totals. A clear summary table that is consistent between the project plans and EFH assessment would assist in the evaluation of effects of this project on EFH and habitats used by NOAA trust species. The EFH assessment also lacks a discussion of the means and methods of construction of the project components and provides no discussion of the proposed outfalls and their effects to EFH, especially SAV.

According to the EFH assessment, it appears that the many impacts to aquatic resources will be permanent. A compensatory mitigation plan has not been provided to offset the loss of ecological functions from these permanently disturbed areas based upon the rationale that “the proposed project does not change an aquatic area to dry land; does not cumulatively increase the bottom elevation of a waterbody; does not change the use of a waterbody; and does not result in the loss of water of the United States.” No information has been provided to support this conclusion, and the EFH assessment does not address habitat trade-offs and their implications to federally managed species and other NOAA trust resources. It should not be assumed that one type of aquatic habitat provides equal ecological functions and services to another, especially when comparing the ecological functions of SAV to other aquatic habitats.

Finally, the public notice and EFH assessment worksheet reference the above as “Phase I” portion of the project, yet there is no discussion of the number of project phases or what the remaining phases entail. A revised EFH assessment should be provided that discusses all project phases, the project schedule and means methods, and materials used for project construction, clearly identifies both the temporary and permanent impacts to all habitat types, and explains measures taken to avoid and minimize those adverse effects. Compensatory mitigation should be provided to offset any unavoidable losses, particularly the loss or conversion of SAV habitat.

Magnuson-Stevens Fishery Conservation and Management Act

Barnegat Bay in the vicinity of the project area is designated essential fish habitat for a number of federally managed species of finfish including winter flounder, bluefish (*Pomatomus saltatrix*), summer flounder, and others. The project area also supports historically recurring SAV beds that have experienced declining spatial coverages/densities over the past several decades associated with watershed land cover change. SAV has been designated as a habitat area of particular concern (HAPC) for summer flounder by the Mid-Atlantic Fishery Management Council. HAPCs are subsets of EFH identified based on one or more of the following considerations: 1) the importance of the ecological function; 2) extent to which the habitat is sensitive to human-induced degradation; 3) whether and to what extent, development activities are stressing the habitat type; and/or 4) rarity of habitat type (50 CFR 600.815(a)(8)). In addition, the U.S. Environmental Protection Agency has designated SAV as a special aquatic site under Section 404(b)(1) of the federal Clean Water Act because of its important role in the marine ecosystem for nesting, spawning, nursery cover, and forage areas for fish and wildlife. It is a priority habitat for us for the same reasons.

The MSA requires federal agencies, such as the U.S. Army Corps of Engineers (Corps), 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.

Based on the information provided, the placement of fill along the shoreline will adversely affect EFH through the direct loss of subtidal shallows and SAV habitat used by a number of federally managed species of fish. According to the project plans, more than 4 acres of SAV will be filled for the construction of a living shoreline. The SAV, and subtidal shallows to be filled are spawning, nursery, and foraging habitat for a variety of NOAA trust resources including federally managed species and their prey. However, the EFH assessment provided to us does not fully identify and evaluate all of the direct, indirect, individual, cumulative, and synergistic effects of the proposed action. As a result, we cannot consider the EFH assessment to be complete and we cannot initiate the required consultation at this time.

Submerged Aquatic Vegetation

As stated above, SAV has been designated as a HAPC for summer flounder by the Mid-Atlantic Fisheries Management Council. SAV habitats are also among the most productive ecosystems in the world and perform a number of irreplaceable ecological functions which range from chemical cycling and physical modification of the water column and sediments to providing food and shelter for commercial, recreational, as well as, economically important organisms (Stephan and Bigford 1997). SAV and its associated epiphytes are highly productive, produce a structural matrix on which many other species depend, improve water quality and stabilize sediments (Fonseca et al 1998). Larvae and juveniles of many important commercial and sport fish such as bluefish, summer flounder, spot (*Leiostomus xanthurus*), Atlantic croaker (*Micropogonias undulatus*), herrings (Clupeidae) and many others appear in eelgrass beds in the spring and early summer (Fonseca et al 1992). Heckman and Thoman (1984) concluded that SAV beds are also important nursery habitats for blue crabs. According to Peterson (1982), in Kenworthy (1988), shallow dwelling hard clams may be protected from predation by the rhizome layer of seagrass beds. Rogers and Van Den Avyle (1983) suggest that SAV beds are important to summer flounder, and that any loss of these areas along the Atlantic Seaboard may affect summer flounder stocks.

Aside from its inherent ecological value, SAV meadows can perform functions that both align with stated project goals and improve water quality. For instance, robust SAV beds, such as those observed in the project area, can dampen wave energy (Lei and Nepf, 2019), reduce current velocities (Fonseca et al., 1982), and facilitate sediment deposition over large spatial scales (Zhang and Nepf, 2019). SAV can also improve water quality by assimilating excess dissolved nitrogen and phosphorus and promoting sediment denitrification (McGlathery et al., 2007). Reducing the amount of SAV in the project area by filling shallow water habitat could potentially reduce sediment accretion/stabilization in the project vicinity and reduce water quality.

A SAV survey conducted in June 2021 by Stockton University was provided for the project area. The survey area included the project area from the shoreline to 350-feet into the bay up to the Tidelands Claim line. The survey identified areas of *Zostera marina* and *Ruppia maritima* across the project area with coverages ranging from 0 to 35 percent as close as the shoreline. Coverages beyond the project area and Tidelands claim line were not surveyed but the area has been mapped as SAV habitat since 1979 according to the available New Jersey Department of Environmental Protection's SAV maps. Because SAV has the tendency to move year to year,

areas that are mapped as SAV or that were previously mapped and still hold the appropriate characteristics that would support SAV growth are considered SAV habitats.

Consistent with the Atlantic States Marine Fisheries Commission's (ASMFC) 2022 SAV policy (ASMFC 2022), avoidance and minimization measures should be demonstrated before unavoidable impacts to SAV are considered. This includes impacts to either present or historically present beds as well as a buffer between the proposed action and SAV habitat. Compensatory, in-kind mitigation should be used to offset the lost ecological functions only when unavoidable impacts to SAV are required to accomplish project goals without compromising the integrity of the design. This includes impacts to either present or historically present beds as well as a buffer between the proposed activities and SAV habitat. Based on the information provided, we are concerned the project has not demonstrated that the proposed activities have avoided and minimized adverse impacts to SAV to the furthest extent practicable. Additionally, we are concerned the project has not included compensatory mitigation for the loss of SAV.

The proposed project may affect SAV beds and EFH in several ways, including the direct loss of the habitat from the installation of the breakwaters and placement of fill along the shoreline, as well as the loss or degradation of the SAV due to hydrodynamic changes caused by the breakwaters including scouring around the structures, erosion of the proposed beach fill and resulting increases in suspended sediment in the water column. Vessels used during construction may also shade or scour SAV beds, particularly if the vessels bottom out in the shallow water, remain in place during the growing season or the anchors are dropped in SAV. Increases in suspended sediments and the subsequent reduction in water transparency caused by construction activities, such as the installation of breakwaters, placement of sand fill, and boating activities associated with construction can limit photosynthesis. Experiments by Short et al. (1991) with eelgrass have shown that reduction in light decreases growth, promotes a reduction in plant density and can ultimately eliminate an eelgrass population altogether.

To avoid impacting this ecologically valuable habitat, we generally recommend structure and fill such as the breakwaters, outfalls, and beach fill not be placed in SAV habitat. Waterborne equipment used during construction should not be moored in SAV and should only access work area during high tide and activities that generate suspended sediments should be avoided in and near SAV beds when the plants are actively growing and flowering to avoid affecting the plant's ability to photosynthesize and its growth and survival (between April 15 and October 15).

We agree that when properly designed, living shoreline projects have the ability to improve the habitat conditions to support SAV growth. However, this project will permanently fill existing SAV habitat thus reducing the overall area SAV has to grow. Additionally, the applicant claims that "the HESCO reef breakwaters encourage grass growth and increased plant density," yet there is no information to support this statement. While we know of other similar breakwater projects within the Barnegat Bay watershed, these projects are still in early stages and have not yet produced enough information to make such conclusions.

Because of the ecological importance of SAV habitat, once avoidance and minimization measures have been implemented, we recommend compensatory mitigation for all areas of SAV

that will be affected by this project. Because the compensatory process for seagrass is of questionable merit (Race and Fonseca 1996 in Fonseca et al. 1998), we recommend a ratio of at least 3:1 for mitigation to account for the difficulties in establishing a successful seagrass beds and the uncertainty associated with its long-term success. Fonseca et al. (1998) notes that the existence of techniques to transplant seagrass has often been used to justify the destruction of existing, productive habitat, and that this approach has consistently resulted in a net loss of habitat. This net loss occurs for a number of reasons including insufficient area for on-site planting to offset the habitat loss, and the selection of an inappropriate planting location off-site.

SAV monitoring should also occur within the entire project area and it should include both pre-construction and post-construction monitoring. Reference sites outside the potential zone of effects should also be monitored to help differentiate between construction effects and any regional changes that may affect SAV survival. This monitoring will be used to identify SAV losses that may occur post-construction due to scouring or sedimentation, as well as assessing the recovery of any areas impacted temporarily. Because SAV can be patchy and move from year to year, the intention is that post-construction, the same acreage and density of SAV will exist within the project area, but the locations of the beds may not be the same. As long as there is no net loss of acreage and density, additional compensatory mitigation will not be necessary.

Winter Flounder

EFH for winter flounder has been designated in the study area. Winter flounder ingress into spawning areas within mid-Atlantic estuaries when water temperatures begin to decline in late fall. Tagging studies show that most return repeatedly to the same spawning grounds (Lobell 1939, Saila 1961, Grove 1982 in Collette and Klein-MacPhee 2002). Winter flounder typically spawn in the winter and early spring, although the exact timing is temperature dependent and thus varies with latitude; however, movement into these spawning areas may occur earlier, generally from mid- to late November through December. Winter flounder have demersal eggs that sink and remain on the bottom until they hatch. After hatching, the larvae are initially planktonic, but following metamorphosis they assume an epibenthic existence. Winter flounder larvae are negatively buoyant and are typically more abundant near the bottom. Young-of-the-year flounder tend to burrow in the sand rather than swim away from threats.

Increased turbidity and the subsequent deposition of the suspended sediments can smother the winter flounder eggs and would adversely affect their EFH. Additionally, the construction of the breakwater structures, outfalls, and sand fill will permanently reduce the availability of habitat. Winter flounder stocks have not been making adequate rebuilding progress due to low productivity. Recruitment (i.e., survival of eggs to the juvenile and adult stages) has also been declining despite low fishing mortality rates for the past 10 years. Therefore, it is important to minimize impacts to spawning success and egg/larval survival to rebuild this stock and achieve a sustainable commercial and recreational fishery for this stock. For your planning purposes, we generally recommend sediment disturbing in-water work be avoided when winter flounder eggs and larvae may be present between January 1 and May 31. We also recommend avoiding the placement of breakwaters, outfalls, and fill in a manner that could result in the direct loss of these habitats.

Additional Required Information

As stated in our July 2022 extension request letter and above, the information provided was not sufficiently detailed to initiate consultation under the MSA. To initiate the required EFH consultation with us, a revised EFH assessment that fully evaluates all of the direct, indirect, individual and cumulative effects of the proposed project on EFH with a cover letter transmitting the assessment with your EFH effects determination should be provided to us.

The level of detail in an EFH assessment should be commensurate with the complexity and magnitude of the potential adverse effects of the action. In this instance, the EFH worksheet will not provide the level of detail needed to evaluate the effects of the proposed action. A revised, detailed EFH assessment should be developed and submitted to us once the information discussed above and data gaps identified in this technical assistance letter are filled including:

- A full and complete evaluation of all of the impacts of the proposed project on EFH.
 - Consider all of the direct, indirect, individual, and cumulative effects of the action on EFH, including HAPC, and federally managed species.
 - Include temporary and permanent changes to the habitat such as the loss or conversion of aquatic habitats and impacts to prey species from all of the activities associated with the implementation of the TSP.
- Project plans that clearly show all of the work proposed and the habitats affected.
- A clear and detailed description of all of the construction activities proposed including materials, methods, and timeframes for construction.
- A full and complete analysis of alternatives to the action which includes alternatives that could avoid or minimize adverse effects on EFH.
- Data information and analyses needed to support the project objectives.
 - This includes indirect impacts from scour and hydrologic changes due to the placement of the reef and outfalls.
- Compensatory mitigation for any unavoidable loss of SAV.

The EFH assessment should consider the full range of effects of the construction activities associated with the construction of the breakwater, placement of fill, and outfall deposition. It should be noted that the analysis of effects should focus on impacts that reduce the quality and/or quantity of the habitat or result in conversion to a different habitat type for all life stages of species with designated EFH within the study area. Simply stating that fish will move away or that the project will only affect a small percentage of the overall population is not a sufficient analysis of the effects of an action on EFH. Also, since the intent of the EFH consultation is to evaluate the direct, indirect, individual and cumulative effects of a particular federal action on EFH and to identify options to avoid, minimize or offset the adverse effects of that action, it is not appropriate to conclude that an impact is minimal just because the area affected is a small percentage of the total area of EFH designated. The focus of the consultation is to reduce impacts resulting from the activities evaluated in the assessment. Similarly, a large area of distribution or range of the fish species is also not an appropriate rationale for concluding the impacts of a particular project are minimal. For the purposes of this project, the effects of the proposed action on EFH for summer flounder HAPC and winter flounder early life stages are of particular concern.

Endangered Species Act

Federally listed species may be present in the project area. Consultation, pursuant to Section 7 of the Endangered Species Act (ESA) of 1973, may be necessary. We understand that you are currently working with our Protected Resources Division on submitting a request for ESA consultation. When project plans are complete, you should submit your determination of effects, along with justification for the determination, and a request for concurrence to nmfs.gar.esa.section7@noaa.gov. After reviewing this information, our Protected Resources Division would then be able to conduct a consultation under Section 7 of the ESA.

Conclusion

As discussed above and in our extension request letter dated July 15, 2022, there are a number of significant unresolved issues regarding the proposed project and the adverse effects to NOAA-trust resources have not been fully evaluated. The applicant also has yet to demonstrate that impacts are unavoidable or that alternatives do not exist that would avoid or minimize these impacts. A compensatory mitigation plan has also not yet been provided, nor has a post-construction monitoring/adaptive management plan. Therefore, we must conclude that the proposed project will have substantial and unacceptable impacts to aquatic resources of national importance in accordance with Part IV, Paragraph 3(b) of the MOA between our agencies. We recommend that the Corps hold its permit decision in abeyance until complete information and assessments of the potential impacts of the project are provided to us for review and the applicant provides additional information on efforts to avoid and minimize impacts, and a full and complete mitigation plan. We look forward to our continued coordination so that it can move forward efficiently and expeditiously as possible while still meeting our joint responsibilities to protect and conserve aquatic resources.

References

- Atlantic States Marine Fisheries Commission (ASMFC). 2022. Update to Habitat Management Series #15: Submerged Aquatic Vegetation Policy. Arlington, VA.
- Collette, B.B. and G. Klein-MacPhee. eds. 2002. Bigelow and Schroeder's fishes of the Gulf of Maine. Smithsonian Institution. Washington, D.C.
- Fonseca, M.S., W.J. Kenworthy and G.W. Thayer. 1998. Guidelines for the Conservation and Restoration of Seagrasses in the United States and Adjacent Waters. NOAA's Coastal Ocean Program. Decision Analysis Series No. 12.
- Fonseca, M.S., W.J. Kenworthy and G.W. Thayer. 1992. Seagrass beds: nursery for coastal species. In: R.H. Stroud (ed.). Stemming the side of coastal fish habitat loss. Proceedings of a symposium on conservation of coastal fish habitat, Baltimore, Maryland, March 7-9, 1991. p 141-146.
- Fonseca, M.S., J.S. Fisher, and J.C. Zieman. 1982. Influence of seagrass, *Zostera marina* L., on current flow. *Estuaries, Coastal and Shelf Science* 15:351-364.
- Grove, C.A. 1982. Population biology of the winter flounder, *Pseudopleuronectes americanus*, in a New England estuary. M.S. thesis, University of Rhode Island, Kingston, 95 pp.
- Heckman, K.L. and T.A. Thoman. 1984. The nursery role of seagrass meadows in the upper and lower reaches of the Chesapeake Bay. *Estuaries* 7:70-92
- Kenworthy, W.J., G.W. Thayer and M.S. Fonseca. 1988. Utilization of seagrass meadows by fishery organisms. In: Hook, D.D., W.H. McKee, Jr., H.K. Smith, J. Gregory, V.G. Burrell, Jr., M.R. DeVoe, R.E. Sojka, S. Gilbert, R. Banks, L.H. Stolzy, C. Brooks, T.D. Matthews and T.H. Shear (eds.). The ecology and management of wetlands. Vol 1, Ecology of wetlands. Timber Press. Oregon. 592 p.
- Lei, J., and H. Nepf. 2019. Wave dampening by flexible vegetation: Connecting individual blade dynamics to the meadow scale. *Coastal Engineering* 147:138-148.
- Lobell, M.J. 1939. A biological survey of the salt waters of Long Island. Report on certain fishes: Winter flounder (*Pseudopleuronectes americanus*). New York Conserv. Dept. 28th Ann. Rept. Suppl., Part I pp 63-96.
- McGlathery, K.J., K. Sundbäck, and I.C. Anderson. 2007. Eutrophication in shallow coastal bays and lagoons: the role of plants in the coastal filter. *Marine Ecology Progress Series* 348: 1-1-18.
- Peterson, C.H. 1982. Clam predation by whelks (*Busycon* spp.): Experimental tests on the importance of prey size, prey density, and seagrass cover. *Mar. Biol.* 66:159-70.

Race and Fonseca 1996 Race, M.S. M.S. Fonseca. 1996. Fixing compensatory mitigation: what will it take? *Ecological Applications*. 6:94-101.

Rogers, S.G. and M.J. Van Den Avyle. 1983. Species profiles: life histories and environmental requirements of coastal fishes and invertebrates (South Atlantic): summer flounder. U.S. Fish and Wildl. Serv. FWS/OBS-82/11.15. 14p.

Saila, S.B. 1961. The contribution of estuaries to the offshore winter flounder fishery in Rhode Island. *Proc. Gulf. Carib. Fish. Inst.* 14:95-109.

Short, F.T., G.E. Jones and D.M. Burdick. 1991. in Bolton, S.H. and O.T. Magoon. (eds.) Coastal wetlands, papers presented at Coastal Zone '91, the seventh symposium on Coastal and Ocean management. Long Beach, CA, July 8-12, 1991. p 439-453.

Stephan, C. D and T.E. Bigford. eds. 1997. Atlantic Coastal Submerged Aquatic Vegetation: a review of its ecological role, anthropogenic impacts, state regulation and value to Atlantic coast fish stocks. Atlantic States Marine Fisheries Commission. Habitat Management Series #1.

Zhang, Y. and H. Nepf. 2019. Wave-drive sediment resuspension within a model eelgrass meadow. *Journal of Geophysical Research -Earth Surface* 124. DOI: 10.1029/2018JFF004984.



SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

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Melvin Bell, Chair | Carolyn N. Belcher, Ph.D., Vice Chair
John Carmichael, Executive Director

July 28, 2022

Matt Brookhart
Eastern Regional Director
Office of National Marine Sanctuaries
NOAA's National Ocean Service

Dear Mr. Brookhart:

Thank you for your letter requesting input from the South Atlantic Fishery Management Council (Council) on the potential need for fishing regulations to implement the proposed designation of Hudson Canyon as a National Marine Sanctuary. Two of the Council's Fishery Management Plans (FMP) extend into the proposed designation area: the Dolphin Wahoo FMP and the FMP for Coastal Migratory Pelagic (CMP) resources. The former manages the stocks of dolphin (*Coryphaena hippurus*) and Wahoo (*Acanthocybium solandri*) along the U.S. Atlantic from Maine to Key West, Florida. King mackerel (*Scomberomous cavalla*) and Spanish mackerel (*S. maculatus*) are managed jointly with the Gulf of Mexico Fishery Management Council from New York to the Texas/Mexico border.

As suggested in your letter, the Council would benefit from a briefing from your office to better understand the potential implications of the designation process to fisheries under its jurisdiction and formulate recommendations. Please let us know if you can present to the Council at our December 5-9, 2022 meeting, which will be held in Wrightsville Beach, North Carolina. Additionally, the Council will request input from stakeholders through its advisory panels this Fall. Therefore, we request a presentation on the proposed sanctuary during our Coastal Migratory Pelagics Advisory Panel when it meets October 5 – 6, 2022. These meetings are broadcast over webinar so remote participation and presentation is an option. We also intend to coordinate with the Mid-Atlantic, New England, and Gulf of Mexico Fishery Management Councils on this matter. Therefore, on behalf of the Council, I respectfully request an extension to February 1, 2023 to allow adequate time to provide expert opinion and complete our response following our December Council meeting.

Sincerely,

Melvin Bell
SAFMC Chair

LN# 2022-20

cc: Council members & Staff
Monica Smit-Brunello, NOAA GC



New England Fishery Management Council

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Eric Reid, *Chair* | Thomas A. Nies, *Executive Director*

July 27, 2022

Ms. Karen J. Baker
Chief for the Office of Renewable Energy Programs (OREP)
Bureau of Ocean Energy Management
45600 Woodland Road (VAM-OREP)
Sterling, Virginia 20166

Dear Ms. Baker:

I would like to thank you for having your staff brief the Council on offshore wind development at our June 30, 2022 Council meeting. They gave clear explanations of pending activities, including the development of a Programmatic Environmental Impact Statement (PEIS) for the New York Bight as well as for the next steps in the Gulf of Maine. We request that BOEM also develop a PEIS for the Gulf of Maine, but earlier in the process to inform the identification of wind energy areas (WEAs) and eventually lease areas.

The New England Fishery Management Council (Council) has primary management jurisdiction for 28 marine fishery species under nine FMPs in federal waters and is composed of members from Connecticut to Maine. In addition to managing these fisheries, the Council has developed measures to identify and conserve essential fish habitats, protect deep sea corals, and manage forage fisheries sustainably. The Council supports policies for U.S. wind energy development and operations that will sustain the health of marine ecosystems and fisheries resources. While the Council recognizes the importance of domestic energy development to U.S. economic security, it also recognizes that the marine fisheries in the Gulf of Maine, the New Hampshire Seacoast, and the Massachusetts Bay are profoundly important to the social and economic well-being of coastal communities in the Northeast US and provide numerous benefits to the nation, including domestic food security.

The Council has repeatedly expressed concerns over the pace and number of offshore wind projects in development in our region. The speed of this process makes it difficult to conduct a thorough analysis of potential individual and cumulative impacts and provide informed public input. It also makes it nearly impossible to adopt lessons learned from each project. Many fishing businesses, fishery management organizations, and fisheries science and research organizations operate at regional scales. These organizations will be affected by and are trying to engage in the development of multiple offshore wind projects. We are collectively struggling to provide meaningful input on a diverse range of related issues including siting, project design, mitigating impacts to fisheries science, compensation for fishermen, appropriate monitoring strategies, navigational concerns, and possible effects on protected and endangered species. A timely PEIS

would allow for additional time for the public and other stakeholders to engage in offshore wind development in the Gulf of Maine including an additional comment opportunity under NEPA.

Wind Energy Area (WEA) identification in the Gulf of Maine is expected during Quarter 3 2023 and a proposed sale notice is expected during Quarter 4 2023. A PEIS for the Gulf of Maine Planning Area will better support an inclusive, collaborative, and transparent planning effort for wind development in the area. We believe that a PEIS would help BOEM and ocean users better understand the risks and cumulative effects of offshore wind development on important resources. This includes fishing communities and their cultural heritages, fishing and shoreside businesses with portfolios located entirely or largely within the Gulf of Maine, Council-managed commercial and recreational fishery species, deep-sea corals and other sensitive and vulnerable habitat, and endangered and protected species and their designated critical habitat (e.g., North Atlantic right whale, Atlantic salmon, Atlantic sturgeon, sea turtles).

The Council is concerned that the commercial leasing process for the Gulf of Maine will not be adequately informed by development of the state of Maine's research array. The timelines for these two efforts appear to overlap, making it difficult to understand how the research array experience will be considered in future leases. Learning from the research array will be important given that there is less experience worldwide with floating wind technology and its differential impacts on natural resources and other ocean users.

A PEIS prior to identifying WEAs also would provide increased transparency and more thorough review in how potential impacts are identified and evaluated when considering offshore wind development in the Gulf of Maine. This is especially important given the three-year gap between the first Gulf of Maine Intergovernmental Renewable Energy Task Force meeting held in December 2019 and the second task force meeting in May 2022. It is crucial for all stakeholders, especially those likely to be impacted by offshore wind development, to fully understand the types of projects that may be developed as well as any expected impacts.

Specifically, we expect the PEIS to accomplish the following:

- Provide a baseline assessment of important resources in the Gulf of Maine Planning Area, including an accounting of all data sources used to characterize these resources. This will allow all participants in the siting process to understand which data BOEM is using to understand the occurrence, distribution, and current condition of resources.
 - o Importantly, this assessment would allow participants to focus on providing additional or new information to BOEM that is not already being considered, avoiding duplication of efforts across individuals and organizations.
- Evaluate the potential impacts of wind energy development on these resources. This analysis can serve as a foundation for future NEPA analysis of specific leases, should leasing occur in the Gulf of Maine.
 - o The PEIS can identify the magnitude of expected impacts and can thus focus site-specific surveys and environmental reviews more thoroughly on the more moderate and/or major impacts and less on minor or negligible impacts on affected resources. This would frontload the analysis but should create efficiencies later.
- Develop a range of programmatic avoidance, minimization, mitigation, and monitoring measures that could be applied to all future leases, similar to the approach being undertaken for the New York Bight.

- More specifically, the PEIS could identify any significant issues, potential alternatives, and draft mitigation measures that should be considered during the NEPA and leasing process and analyze how those impacts would be avoided, minimized, or mitigated.
- Evaluate the benefits and costs of adopting programmatic avoidance, minimization, mitigation, and monitoring measures.
- Consider whether there are areas in the Gulf of Maine that should not be leased for offshore wind development.
- The PEIS should include a focused, regional cumulative analysis of offshore wind development within the Gulf of Maine (e.g., a regional analysis of potentially multiple lease areas for offshore renewable energy in the Gulf of Maine). A realistic discussion of the cumulative impacts of multiple projects needs to be provided to the public so there is an understanding of the scale of development that is anticipated in this area.

A deliberate, open, and information-driven process for commercial wind leasing and development in the Gulf of Maine is essential. The wind energy area siting phase for any region, including the Gulf of Maine, represents a critical early opportunity for avoiding impacts through scaling development appropriately and locating development areas in locations that will limit effects on resources and users. We expect that a PEIS would facilitate identification of areas that should not be leased. It would also improve the transparency of the BOEM decision-making process. Ideally this will result in more consistency in the decisions made for offshore wind in the Gulf of Maine and perhaps allay fishing industry concerns about the unpredictability of the process.

We will continue to provide our expertise in both the commercial and research leasing processes and look forward to continued partnerships with BOEM and other regional organizations as this work progresses.

Please contact me if you have any questions.

Sincerely,



Eric Reid
Chair

cc: Michael Pentony, GARFO
Dr. Chris Moore, MAFMC

July 22, 2022

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North Kingstown, R.I. 02852 U.S.A.
Tel: (401)295-2585

LeAnn Hogan,
NOAA Office of National Marine Sanctuaries
1305 East-West Highway,
SSMC4, Silver Spring, MD 20910

Re: Notice of Intent to Conduct Scoping and To Prepare a Draft Environmental Impact Statement for the Proposed Hudson Canyon National Marine Sanctuary; Docket No. NOAA-NOS-2022-0053

Dear Ms. Hogan,

We are writing to express our opposition to designation of Hudson Canyon as a National Marine Sanctuary. We participated in the previous 2016 nomination process for WCS's Hudson Canyon Sanctuary proposal, via the Mid Atlantic Fishery Management Council process,¹ and our concerns remain the same. What has changed since that time, however, is increased fishery management protection of sensitive habitat in our region, the implementation of the Northeast Marine Monument, and increased recognition of the sustainability of fisheries in this region, in addition to the significant growth of offshore wind energy leasing on the East Coast.

NOAA's June 8, 2022 email notification for public comment on the proposed sanctuary nomination highlights the Biden Administration's Executive Order on Tackling the Climate Crisis at Home and Abroad and its America the Beautiful Initiative (30x30) as key considerations for this nomination. It is important therefore to note that the Mid Atlantic and New England regions have been proactive in already attaining a goal greater than 30% ocean protection via the fishery management process.

As noted in the WCS sanctuary nomination letter, the Mid Atlantic Fishery Management Council has created the Frank R. Lautenberg Deep Sea Coral Protection Area encompassing more than 41,000 square miles off ocean off the Mid Atlantic Coast, including Hudson Canyon, protecting an area approximately the size of the state of Virginia.² Unlike the Sanctuary process, the MAFMC process for creating these coral zones included cooperative development by scientific research efforts, Council advisory panels, deep sea coral experts, fishing industry members, and other stakeholders,³ hailed by NOAA as a "great story of regional collaboration among the fishing industry, the Mid-Atlantic Council, the research community, and environmental organizations to protect what we all agree is a valuable

¹ See April 2017 MAFMC meeting agenda, Hudson Canyon Sanctuary Proposal briefing materials, and webinar recording at [April 2017 — Mid-Atlantic Fishery Management Council \(mafmc.org\)](https://www.mafmc.org/newsfeed/2016/noaa-fisheries-announces-final-rule-on-mid-atlantic-councils-frank-r-lautenberg-deep-sea-coral-protection-area).

² See <https://www.mafmc.org/newsfeed/2016/noaa-fisheries-announces-final-rule-on-mid-atlantic-councils-frank-r-lautenberg-deep-sea-coral-protection-area>.

³ See <https://www.mafmc.org/newsfeed/2016/noaa-fisheries-announces-final-rule-on-mid-atlantic-councils-frank-r-lautenberg-deep-sea-coral-protection-area>.

ecological resource”.⁴ Far more science, transparency, data, and collaboration by all stakeholders occurred during this environmental protection effort than would occur during the current proposed Sanctuary process. Notably, Hudson Canyon was included in that Coral Protection Area and the boundaries of that action are consistent with both scientific analysis and rigorous process. The WCS actively engaged in the MAFMC deep sea coral action, providing 13,000 letters, comments, petitions, and drawings to the Council supporting the Coral Zone designation.⁵

Similarly, the New England Fishery Management Council has continued these protections through its Omnibus Deep Sea Coral amendment to include over 25,000 square miles of ocean south of Georges Bank, encompassing 82% of the Northeast Canyons and Seamounts Marine National Monument.⁶ The Monument itself, now also in effect, consists of approximately 5,000 square miles and is roughly the size of the state of Connecticut.⁷

In response to the Biden Administration’s 30x30 America the Beautiful initiative, the Council Coordinating Committee- consisting of the chairs, vice chairs, executive directors and appropriate staff of the legislatively established Regional Fishery Management Councils- established an Area-Based Management Subcommittee which met from November 2021 through May 2022 to investigate and quantify the area-based fishery and environmental conservation protections currently in place in each federal U.S. ocean region.⁸ The draft report completed by the Subcommittee, entitled “An Evaluation of Conservation Areas in the U.S. EEZ” modeled its definition of conservation area after America the Beautiful and IUCN definitions and utilized standard methodology across the US for its analysis.⁹ The results demonstrated 55% conservation of the Mid Atlantic EEZ and 69% conservation of the New England EEZ,¹⁰ far exceeding the 30% target of the America the Beautiful initiative and minimizing any perceived necessity of further sanctuary designations.

Despite stating in its nomination letter that “WCS believes that fishing should continue in this economically valuable area”,¹¹ it makes clear an intent to use a potential sanctuary to implement or affect fishery management in the area. Although its nomination letter under “Consideration 3: Adverse impacts from current or future uses and activities threatening the area’s significance, Values, qualities

⁴ See <https://www.mafmc.org/newsfeed/2016/noaa-fisheries-announces-final-rule-on-mid-atlantic-councils-frank-r-lautenberg-deep-sea-coral-protection-area>.

⁵ [New York’s Little-Known Corals Get Much-Needed Public Support > Newsroom \(wcs.org\)](#).

⁶ See <https://www.seafoodsource.com/news/environment-sustainability/nefmc-deep-sea-coral-amendment-provides-sweeping-habitat-protections>.

⁷ See <https://www.fisheries.noaa.gov/new-england-mid-atlantic/habitat-conservation/northeast-canyons-and-seamounts-marine-national>.

⁸ See

https://static1.squarespace.com/static/56c65ea3f2b77e3a78d3441e/t/6272e64278679a29eb03e5bf/1651698562632/F4_MeetingMinutes_CCC_ABMSubcommittee.pdf.

⁹ See the Draft Report at

https://static1.squarespace.com/static/56c65ea3f2b77e3a78d3441e/t/6272ebae0d318014e42b96aa/1651698616717/F2_CCCSubCtte_ConservationAreaReport_FinalDraft_2022-05-04.pdf.

¹⁰ See [https://s3.us-east-](https://s3.us-east-1.amazonaws.com/nefmc.org/8a_F1_CCCABMSubcommittee_Talk_May2022_Revised.pdf)

[1.amazonaws.com/nefmc.org/8a_F1_CCCABMSubcommittee_Talk_May2022_Revised.pdf](https://s3.us-east-1.amazonaws.com/nefmc.org/8a_F1_CCCABMSubcommittee_Talk_May2022_Revised.pdf), slide 13, and Draft Report at

https://static1.squarespace.com/static/56c65ea3f2b77e3a78d3441e/t/6272ebae0d318014e42b96aa/1651698616717/F2_CCCSubCtte_ConservationAreaReport_FinalDraft_2022-05-04.pdf, p. 23.

¹¹ See [hudson-canyon_full.pdf \(squarespace.com\)](#), p. 19.

and resources” WCS highlights other potential future uses such as oil, gas or methane extraction, it singles out fishing as “the most immediate and direct threat to the living resources and habitats in submarine canyons including Hudson”.¹² This is inconsistent with fact. It cites “demand increases” and advancement in “deepwater fishing technologies” as its reasoning, completely ignoring the fact that the Magnuson Stevens Fishery Conservation and Management Act legally requires scientifically established fishing quotas regardless of demand, that deepwater fishing access and gear type are already restricted by the Mid Atlantic and New England Fishery Management Councils via their coral zones and the fishery management process, as well as the fact that fishing is more highly regulated than the oil and gas extraction industry in U.S. waters.¹³

Of significant concern to Seafreeze is WCS’ targeted attack on trawl fisheries in its nomination letter: “Not all fishing gears are equal: Trawling can be particularly damaging to benthic habitats”.¹⁴ Not only do we disagree with this mischaracterization of our vessels and their sustainable harvest methods, but point out that fisheries gears are managed by the Councils. These types of considerations are exactly what the federally established fishery management process is designed- successfully- to address. The allegation that trawl fisheries present a significant threat to the Hudson Canyon area is also inconsistent with fact, as is evidenced by the CCC report, many current fisheries regulations such as those contained in the Council’s coral actions, and even third party investigators.

Our vessels are trawl vessels and participate in three Marine Stewardship Council (MSC) certified trawl fisheries in and around the Hudson Canyon area- the longfin squid, illex squid, and scup fisheries.¹⁵ MSC is an internationally recognized third party certification for sustainably harvested seafood. This certification specifically considers harvest methods and gear type, current regulatory constraints, biological status of the stocks, and existing conservation and habitat measures for the fishery/stock. It is a thorough process conducted by fisheries science experts, through which Seafreeze achieved MSC certification for longfin and illex squid in 2020 and scup in 2022.

By casting aspersions on trawl fisheries as “particularly damaging” to the Hudson Canyon area, the WCS nomination ignores internationally and scientifically recognized sustainable harvest methods and fisheries, as well as signals clear intent to limit such fisheries via the sanctuary process should a sanctuary be established. The WCS also notably mentions a perceived sanctuary need to “address interdisciplinary and management issues, such as establishment of Habitat Areas of Particular Concern”,¹⁶ which is an action reserved for the Regional Fishery Management Councils as part of the federally established fishery management process.

Additionally, it is the three Seafreeze MSC certified fisheries- longfin squid, illex squid, and scup- that are most at risk by the proposed designation. In a recent NOAA Greater Atlantic Regional Office 13-year analysis of landings by species within the WCS proposal area, topping the list were longfin squid

¹² See [hudson-canyon_full.pdf \(squarespace.com\)](#), p. 19.

¹³ See “The McLaughlin-Sherouse List: The 10 Most Regulated Industries in 2014”, Mercatus Center, George Mason University, at [The McLaughlin-Sherouse List: The 10 Most-Regulated Industries of 2014 | Mercatus Center](#).

¹⁴ See [hudson-canyon_full.pdf \(squarespace.com\)](#), p. 13.

¹⁵ See [USA Continues to Be a Leader in Sustainable Squid | Marine Stewardship Council \(msc.org\)](#) and [US Atlantic Scup Fishery Achieves MSC Certification | Marine Stewardship Council](#).

¹⁶ See [hudson-canyon_full.pdf \(squarespace.com\)](#), p. 13.

and scup landings, at 38.5 million lbs and 15.4 million lbs, respectively.¹⁷ Illex squid was 7th, at 6.8 million lbs.¹⁸ However, taken altogether, these three fisheries comprise approximately 55% of all landings from the WCS proposed Hudson Canyon sanctuary.¹⁹ By far, the most impacted Fishery Management Plan is the Mackerel, Squid, Butterfish FMP.²⁰ Over 67% of all commercial fishery landings in the proposal area were from trawl fisheries, with bottom trawl revenue comprising the majority of fishery revenue by gear type.²¹ The trawl fisheries operating in the proposal area are already managed and constrained by the Frank R. Lautenberg Deep Sea Coral Protection Area in Hudson Canyon, as well as other fisheries regulations such as the scup GRAs. To put these fisheries, which are not only the most potentially impacted by a designation but also the fisheries our vessels and businesses engage in and rely on, at risk from future sanctuary restrictions is concerning to say the least.

One impact not analyzed by NOAA in this data is that to shoreside businesses from those landings. In particular, the fishery with the highest landings in the WCS proposal area- the longfin squid trawl fishery- supports considerable additional economic activity on shore. A 2020 study completed by the Science Center of Marine Fisheries, a National Science Foundation industry/university Cooperative Research Center, analyzed longfin squid revenue and economic impacts from 2013-2017.²² The fishery was estimated to have produced 2,539 full time jobs, and an economic output multiplier of 7.64 to every dollar of landings/ex-vessel revenue. That 7.64 multiplier is what accounts for the jobs and economic activity of our Seafreeze Ltd. and Seafreeze Shoreside facilities, our employees, and our commerce. Impacts that would result from a nomination restricting our fishing vessels range much further than simply landings, ex-vessel revenue, or FMP analysis.

We share the concerns of the Mid Atlantic Fishery Management Council as regards the Sanctuary process vs the Fishery Management Council process should designation occur. In its 2017 letter to NOAA's Office of Marine Sanctuaries on WCS's 2016 Hudson sanctuary proposal, the Council stated, "The Council's primary concern with sanctuary designation is uncertainty regarding whether the Council would retain management authority for fishery resources in the designated area, whether that authority could be overruled for particular actions, and what role or level of participation the Council would have in sanctuary activities. While the proposal includes the recommendation that the authority to manage fisheries within the sanctuary remain solely with the Council and the National Marine Fisheries Service (NMFS), the Council notes that this cannot be guaranteed until final designation, and even then, could potentially change in the long term. It remains unclear to the Council what degree of influence the Sanctuaries Program may or may not have over the Council's fisheries management activities. Council members have noted concerns that the National Marine Sanctuaries Act appears to explicitly allow for the Secretary of Commerce to disapprove Council-proposed regulations that the Secretary of Commerce deems inconsistent with the purpose and objectives of the sanctuary designation. Given some of the language regarding fishing impacts in the proposal, the Council is

¹⁷ See https://www.mafmc.org/s/Hudson-Sanctuary-WCS-proposal-area-MAFMC-June-2022_com.html.

¹⁸ See https://www.mafmc.org/s/Hudson-Sanctuary-WCS-proposal-area-MAFMC-June-2022_com.html.

¹⁹ See https://www.mafmc.org/s/Hudson-Sanctuary-WCS-proposal-area-MAFMC-June-2022_com.html.

²⁰ See https://www.mafmc.org/s/Hudson-Sanctuary-WCS-proposal-area-MAFMC-June-2022_com.html.

²¹ See https://www.mafmc.org/s/Hudson-Sanctuary-WCS-proposal-area-MAFMC-June-2022_com.html.

²² Scheld, A. "Economic Impacts Associated with the Commercial Fishery for Longfin Squid (*Doryteuthis pealeii*) in the Northeast US", Virginia Institute of Marine Science, SCEMFIS, 2020. See attached study, also available at <https://scemfis.org/finfish-publications/>.

concerned that there may be interest in regulating fishing activity under the sanctuaries program within this area in the future.”²³

The New England Fishery Management Council submitted comments highlighting similar concerns, given that Council’s experience with the Stellwagen Bank Marine Sanctuary, “New England has a national marine sanctuary located on Stellwagen Bank, and the Council is involved with the Sanctuary as an ex-officio member on the Sanctuary Advisory Council. While the designation letter for Stellwagen Bank National Marine Sanctuary does not grant it management authority over fisheries resources, the Sanctuary often takes positions that attempt to limit commercial and recreational fishing within its boundaries. The Sanctuary has also commented on proposed fishery management actions, causing confusion among our stakeholders as to the opinion of the ultimate reviewer of Council proposals, the Secretary of Commerce. At times, we received conflicting comments from the Sanctuary and our fishery management colleagues at NMFS Greater Atlantic Regional Fisheries Office. Many fishermen believe that the Sanctuary is actively trying to limit their activities in this historic area, despite promises that were made when the Sanctuary was designated.”²⁴

We share the same concerns as both Councils. A sanctuary designation could put our vessels and our three MSC certified fisheries at stake, both now and into the future. It is particularly concerning that the nomination letter acknowledges longfin squid in particular as a major fishery in and around the Hudson Canyon area, with 15% of all fishery landings in 2014 alone originating in the area, but later targets trawl fisheries as the allegedly most “damaging” type of commercial fishing, the allegedly most “immediate and direct threat” to species and habitat in the region.²⁵ All longfin squid commercially harvested in the Greater Atlantic Region is harvested with a trawl. Therefore, should the nomination be approved and management actions taken by the Sanctuary, which does not have the same level of fisheries knowledge or expertise as the Fishery Management Councils, our vessels could experience significant and unnecessary harm. Our home state of Rhode Island accounts for more longfin squid landings than all other East Coast states combined, and our shoreside facilities would also experience serious undue hardship as a result of potential future Sanctuary actions.²⁶

The WCS 2016 proposed Hudson sanctuary boundaries posed a particular problem for the longfin squid fishery. We have attached to our comments a chart of the proposed sanctuary boundaries from the WCS proposal found on page 5 of its nomination letter with the existing scup gear restricted areas, which are part of the Mid Atlantic Fishery Management Council’s fishery management regulations for the longfin squid fishery. The proposal connects two very large existing gear restricted areas, in effect forming one giant closure extending for a good portion of the Mid Atlantic coastline. This would be disastrous for our vessels. It also demonstrates the lack of a comprehensive picture presented by the nomination letter itself.

While the nomination mentions offshore wind development in the region, it also fails to connect the dots of what that development means for current ocean activity, particularly commercial fishing. For example, BOEM has already acknowledged that fisheries such as the squid trawl fishery will not be able to operate inside offshore wind farms, “some fisheries- like the squid trawl fishery- may not be able to

²³ See attached letter.

²⁴ See [New England Fishery Management Council \(s3.us-east-1.amazonaws.com\)](https://s3.us-east-1.amazonaws.com/).

²⁵ See [hudson-canyon_full.pdf \(squarespace.com\)](#), p. 9 and 19.

²⁶ See http://www.dem.ri.gov/programs/bnatres/fishwild/pdf/RIDEM_VMS_Report_2017.pdf.

safely operate and harvest the resource the resource in the WDA using status quo fishing techniques. In this situation, a large portion of annual income for vessels may be inaccessible during operations, resulting in major impacts on individual vessel owners...²⁷ and “it is likely that they entire...area will be abandoned by commercial fisheries due to difficulties with navigation.”²⁸

Since the 2016 WCS nomination, BOEM has leased 6 new areas in the NY Bight in close proximity to the Hudson Canyon, totaling nearly 500,000 acres.²⁹ It has also identified and put out to Call over 3.8 million acres in the Central Atlantic, which are located in the fishery management jurisdiction of the Mid Atlantic Fishery Management Council.³⁰ Not counting the Central Atlantic, there are already 27 projects existing and scheduled for construction in the Greater Atlantic Region.³¹

The cumulative impacts of a Hudson Canyon sanctuary designation cannot be looked at in a vacuum. It must be looked at in the whole, both with existing fishery regulations and restrictions such as the Coral Protection areas and those analyzed by the CCC, and the ongoing offshore wind development and continued leasing off our coasts. The cumulative impacts of current fisheries regulations, offshore wind development, and other ocean closures such as Monuments and Sanctuaries can be severe when taken altogether. One recent study completed in the UK to analyze the displacement specifically of trawl fisheries by combined current and future offshore wind and marine protected areas found that “The displacement of fishing activity under these future scenarios could be significant, and of a magnitude that cannot be absorbed by the remaining fishing grounds. This could lead to reductions in output and job losses for the fishing industry, and upstream and downstream impacts on associated land-based industries, with particular effects in coastal communities. The spatial displacement of fishing from existing fishing grounds will also have knock-on effects on the areas to which effort is displaced, leading to conflict with other fleet segments and greater environmental impacts at these locations.”³²

Commercial fisheries in the Greater Atlantic Region could easily find ourselves in this scenario with existing fisheries conservation areas and planned offshore projects. The immediacy of this reality stands in stark contrast to the WCS proposal, which states that one of its primary goals in nomination is to bring education of the Hudson Canyon to the general public through its New York Aquarium exhibits: “In particular, the New York Aquarium’s state of the art Ocean Wonders: Sharks! Exhibit...will act as a place where visitors can access the mysteries of the Canyon and be inspired by this unique habitat from hundreds of miles away”, since the Canyon itself is too far out to sea for the vast majority of the population to ever visit.³³ There is nothing restricting the WCS and New York Aquarium from engaging in this education and outreach absent Sanctuary designation. A designation will not impact its ability to educate the general NY public about the environment of Hudson Canyon. Its existing Canyon’s Edge Exhibit within the Ocean Wonders: Sharks! Exhibit is already accomplishing these goals and can continue to expand upon them.³⁴ The difference between the impact on WCS /New York Aquarium and ocean

²⁷ See Vineyard Wind DEIS at [Vineyard Wind Offshore Wind Energy Project Draft EIS \(boem.gov\)](#), p. 3-184.

²⁸ See Vineyard Wind ROD at [Record of Decision for Vineyard Wind 1 Signed \(boem.gov\)](#), p. 39.

²⁹ See [New York Bight | Bureau of Ocean Energy Management \(boem.gov\)](#).

³⁰ See [Central Atlantic Activities | Bureau of Ocean Energy Management \(boem.gov\)](#).

³¹ See [Lease Map Book July 2022 \(boem.gov\)](#).

³² ABPmer, (2022). Spatial Squeeze in Fisheries, Final Report, ABPmer Report No. R.3900. A report produced by ABPmer for NFFO & SFF, June 2022.

³³ See [hudson-canyon_full.pdf \(squarespace.com\)](#), p. 25.

³⁴ See [Ocean Wonders: Sharks! - New York Aquarium \(nyaquarium.com\)](#).

stakeholders such as commercial fisheries is that a Sanctuary designation *would* impact our ability to operate potentially now and into the future, undermining our extensive commitments to and investments in sustainable fisheries.

Therefore, we cannot support any further sanctuary nomination or designation at this time. Thank you for the opportunity to comment.

Sincerely,

Meghan Lapp, Fisheries Liaison
Seafreeze Shoreside and Seafreeze Ltd.



July 8, 2022

Brian Krevor
BOEM Office of Renewable Energy Programs
45600 Woodland Road
Sterling, Virginia 20166

Re: Notice of intent to prepare an environmental impact statement for US Wind project off Maryland

Dear Mr. Krevor,

Please accept these comments from the Mid-Atlantic Fishery Management Council (Mid-Atlantic Council) and the New England Fishery Management Council (New England Council) regarding the notice of intent (NOI) to prepare an environmental impact statement (EIS) for the review of a construction and operations plan (COP) submitted by US Wind, Inc., (US Wind). The COP proposes construction and operation of a wind energy facility offshore of Maryland with interconnection locations in Sussex County, Delaware. The project comprises as many as 121 wind turbine generators, up to 4 offshore substations, up to 4 offshore export cables, and 1 meteorological tower. A 0.77 NM east-west and 1.02 NM north-south grid array pattern is planned for the turbines and substations.

The Mid-Atlantic Council manages commercial and recreational fisheries for more than 65 marine species¹ in federal waters and is composed of members from the coastal states of New York to North Carolina (including Pennsylvania). The New England Council manages over 28 marine fishery species in federal waters and is composed of members from the coastal states of Maine to Connecticut. In addition to managing these fisheries, both Councils have enacted measures to identify and conserve essential fish habitats, protect deep sea corals, and sustainably manage forage fisheries. 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 marine fisheries throughout the Mid-Atlantic and New England, including within the US Wind project area and in surrounding areas, are profoundly important to the social and economic well-being of communities in this region and provide numerous benefits to the nation, including domestic food security.

This letter builds off the wind energy policies adopted by both Councils.² Our two Councils worked together on these policies and adopted the same policy language. Given the current pace of offshore wind energy development in this region, we are unable to provide a thorough and detailed review of each individual project. Therefore, it is especially important that BOEM consider the many recommendations in our wind energy policy which apply across projects.

General process concerns

Consistency in approaches, while adopting lessons learned from one project to the next will benefit stakeholders who engage in the review process for these complex projects. As we have stated in

¹ Fifteen 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.

² Available at https://www.mafmc.org/s/MAFMC_wind_policy_Dec2021.pdf

several previous comment letters to BOEM, the pace and number of offshore wind projects in development in our region pose challenges for thorough analysis of potential impacts, informed public input, and adopting lessons learned from each project. As you are well aware, more than 25 offshore wind energy projects along the east coast are in various stages of planning and environmental review. Consulting and coordinating on these projects are already taxing available resources in the fishing, fishery management, and fishery science communities, and we expect within BOEM as well. We have found it challenging to effectively engage in this process at the current pace while fulfilling our existing fisheries management missions. We know many other stakeholders have also found it challenging to track recent developments and provide input into the process.

Purpose and need and alternatives in the EIS

The purpose and need as defined in the EIS for US Wind should be tied to realistic renewable energy goals, considering state targets, constraints of the onshore power grid, and other considerations. The purpose and need should include a specific MW capacity and should not be overly broad. This is necessary to inform development of alternatives to meet the purpose and need while minimizing negative impacts to the environment and human communities, including impacts to fisheries and fishery species.

The NOI states that the project to be analyzed in the EIS encompasses the full lease area, which may be built as at least three different projects: MarWin, Momentum Wind, and additional projects which may be planned for the remainder of the lease area. The state of Maryland has awarded offshore wind renewable energy credits (ORECs) to MarWin and Momentum Wind which, according to the NOI, could generate about 303 MW and 808 MW of energy, respectively. The COP suggests that the full lease area could generate up to 2,000 MW, which suggests that 889 MW, or about 44% of the potential full capacity of the lease, has not yet been procured or planned for. The distinction between the multiple projects within the lease area (i.e., MarWin, Momentum Wind, and additional future projects) should be clarified in the EIS and should inform development of alternatives to be analyzed. For example, which sections of the lease area are planned for MarWin, Momentum Wind, or potential future projects? Clarifying these differences will allow for consideration of how the scope of the project could be modified to reduce the potential for negative impacts to fisheries, fishery species, and marine habitats, for example, by using fewer turbine and offshore substation locations than the full 121 turbines suggested in the NOI, and/or by using one offshore export cable route rather than two.

The EIS should analyze alternatives that minimize negative impacts to fisheries, fishery species, and marine habitats. Negative impacts could be minimized by reducing the number of turbines and substations installed; using the shortest offshore cable corridor possible; maximizing cable burial depths; seasonal restrictions on construction activities; and excluding turbine, substation, and cable locations with the greatest overlap with fishing activity and sensitive habitats. These alternatives should include details on which locations may be removed, which other modifications are likely, and how these determinations were made.

For all alternatives, the EIS should be clear on which measures to avoid, minimize, or mitigate negative impacts will be required as opposed to discretionary. Only required measures should influence the impacts conclusions in the EIS. Monitoring studies should be described in the EIS and in the COP but should not be considered environmental protection measures as monitoring is not equivalent to mitigation. Avoidance, minimization, mitigation, and compensation for negative impacts

should all be considered, with compensation thoroughly planned for and used if avoidance, minimization, or mitigation are not possible or are not achieved. Avoidance should be the first priority.

We will provide an additional comment letter on the draft BOEM guidance for mitigating impacts of wind energy on commercial and recreational fisheries. The US Wind EIS should reflect the final version of this guidance. For example, the current US Wind project design envelope includes a target burial depth of 3.3 to 9.8 feet for inter-array cables, while the draft guidance recommends a minimum burial depth of 6 feet.

Fisheries and habitat data

The PDF “posters” in the online virtual page provide a useful summary of the project in a more easily accessible format than the 455-page COP (not including appendices). Posters on commercial and recreational fishing should also have been provided to allow the public to more easily understand and provide comments on the potential impacts of the project on commercial and recreational fisheries, as well as to comment on potential alternatives to reduce negative impacts to fisheries. As stated in multiple comment letters to BOEM in 2021, we recommend consistency in the information provided in these posters across projects and we recommend that posters on both commercial and recreational fishing be provided for all projects.

We defer to the National Marine Fisheries Service (NMFS) on the most appropriate data for considering overlap of the project area with commercial and recreational fisheries, EFH, and fishing vessel transit. The COP may require some updates based on this information (e.g., table 8-3 in Volume II of the COP is an incomplete list). BOEM should also rely on NMFS for guidance on how to analyze the potential impacts of the project on marine species (including species targeted by commercial and recreational fisheries and protected species), marine habitats, and socioeconomic impacts for commercial and recreational fisheries, fishery support businesses, and fishing communities. NMFS should also be consulted to ensure a thorough understanding of the limitations of each data set. Important data limitations should be supplemented with stakeholder input.

Provision of high-resolution benthic habitat maps early in the process is important for evaluating impacts and considering how to best minimize impacts. These data are needed for the essential fish habitat consultation process, which is designed to avoid impacts wherever possible and determine mitigation measures where impacts cannot be avoided.

Impacts to fisheries, fishery species, and habitat

Clear terminology will be important for readers to understand the complexity of the alternatives considered and the large number of impact-producing factors and environmental resources evaluated. Both magnitude and direction of impacts should be specified when characterizing impacts and the EIS should define short and long term in the context of impacts. The EIS should acknowledge the limitations of the current scientific knowledge on environmental effects and should provide justification, including supporting scientific studies, for all conclusions.

The EIS should describe how impacts may vary by target species, gear type, fishing location (e.g., from shore, mid-water, on different bottom types, near structures such as shipwrecks, other artificial reefs, or boulders) and commercial or recreational fishing (including recreational fishing from shore, private vessels, party/charter vessels, and tournaments).

The EIS should explain that the proposed 0.77 x 1.02 nm grid layout of the projects will not eliminate all concerns about safely fishing, maneuvering, drifting, or anchoring near turbines and offshore substations. Safety considerations will vary based on weather, gear type, vessel size, and specific fishing practices which can vary by target species. Although some fishermen may have experience fishing near the two CVOW pilot project turbines off Virginia, this may not prepare them for fishing safely within the US Wind project, which could include up to 121 turbines. In addition, if fishermen shift their effort outside the project area during construction or long-term operations, this could put them in areas of higher vessel traffic and gear conflict. The EIS should evaluate these safety considerations and their potential variations across different fisheries.

Fishermen choose where to fish based on many factors including the location of target species and species they wish to avoid, where regulations allow, where they can fish most efficiently, and where they plan to land their catch based on market and regulatory factors. For these reasons, fishermen cannot easily relocate to different areas to avoid a wind project without socioeconomic impacts. Fishermen who choose to fish outside this project area for safety, economic, or other reasons may not be able to recoup the loss of landings and revenue by shifting effort elsewhere.

As we have stated in past comment letters to BOEM, fisheries importance should not be measured solely based on dollar value or volume of landings. Other factors including, but not limited to, the number of participants, impacted communities, seasonal importance, and use (e.g., a lower value species harvested for bait in a higher value fishery) must also be considered.

The EIS should describe the amount and type of scour protection that may be needed for the turbine and offshore substation foundations, as well as the amount of external cable armoring that may be required if sufficient cable burial depth cannot be achieved and at crossings with other cables. Consideration should be given to materials that reduce the potential for interference with existing fisheries in the area. It should be noted that there are different considerations for different fisheries. For example, the commercial fishing industry is concerned about the use of concrete mattresses due to the potential for hanging/snagging mobile gears. Some recreational fishery stakeholders have noted improved fishing opportunities around the scour protection materials used for the Block Island wind farm off Rhode Island and CVOW pilot project off Virginia.

Turbine and substation foundations, as well as materials used for scour protection and external cable armoring will create substrates for fouling organisms and create artificial reefs. These artificial reefs are expected to attract certain fishery species (e.g., black sea bass). However, the addition of new structured habitat in this area will replace existing habitat types and could displace other species which prefer soft sediments (e.g., flatfish, bivalves). The EIS should acknowledge that although the artificial reef effect will be beneficial for some species, it will not be universally beneficial for all species. The impacts of such changes should be analyzed. In addition, the EIS should evaluate the extent to which impacts may vary based on the characteristics of the materials used. These materials should mimic natural, nearby habitats where possible.

Offshore export cable corridors will impact different habitats and different fisheries than the turbines themselves and warrant a thorough analysis. As we have commented to BOEM in the past, export cables and inter-array cables can damage marine habitats, raise concerns about electromagnetic fields (EMF), and pose a risk to fisheries using mobile bottom-tending gear. The amount of cabling placed in the ocean must be minimized. We support the offshore wind energy transmission planning initiative

undertaken by BOEM and the Department of Energy. However, we assume this work is unlikely inform the US Wind EIS given the expected timing for development of this EIS and the longer time frame for the transmission planning work.

Cables should be buried as much as possible to avoid the concerns listed above regarding external cable armoring materials. We are also concerned about the potential for the cables to become unburied given the dynamic seafloor. Burying the cables as deep as possible will help minimize these risks. For similar reasons, we recommend that, at this stage, all developers plan to remove project components, including cables, from the offshore environment to the extent possible. Abandoned, unmonitored cables could pose a significant safety risk for fisheries that use bottom-tending gear and the long-term risks to marine habitats are unknown.

Impacts of EMF on fishery species are a concern to the fishing community. For example, studies have suggested that EMF can result in changes in behavior, movement, and migration for some demersal and pelagic fish and shellfish species.³ The extent to which EMF may or may not impact marine species must be thoroughly described in the EIS.

Installation of cables and foundations for turbines and offshore substations will generate both noise and sediment plumes, which may affect biological processes for marine species. The EIS should acknowledge that both demersal and pelagic species may also be impacted by the noise and vibrations generated from construction activities and may change their behavior and/or feeding patterns to avoid the impacted area. This is not a negligible impact even if it may not be a population-scale impact, and it can impact fisheries. The impacts analysis, including the EFH assessment, should consider how installation during different seasons will affect particular species and life stages during spawning, juvenile settlement, etc.

Any place where bottom sediments will be disturbed must be evaluated for sediment contamination to understand the potential for environmental effects associated with contaminant release. Two obvious sources of contamination are dredged spoils from inshore, nearshore, or harbor maintenance and disposal of onshore materials (including waste). For many years, such disposal was not evaluated carefully and not regulated as it is today. As a result, sediments and other material with unacceptable levels of heavy metals and persistent organic pollutants were disposed in ocean waters and may remain in locations where they could be disturbed. These sources of contamination need to be assessed and managed as part of the offshore wind development process.

The turbine and substation foundations may also create a wake effect. This could increase the amount of suspended sediment in the immediate area which could negatively impact filter feeding organisms, including commercially important species such as sea scallops. It could also impact the dispersal of pelagic larvae in the area. These impacts must be thoroughly considered in the EIS.

Modeling work has suggested that the physical presence of turbines can alter near-surface and near-bottom temperatures, and thus, habitat conditions for marine species, as well as juvenile transport of commercially important species like sea scallop.⁴ Potential impacts to the Mid-Atlantic Cold Pool and

³ For example, see the fact sheet prepared by the Virginia Coastal Zone Management Program, available at: https://greenfinstudio.com/wp-content/uploads/2017/10/GreenFinStudio_EMF_MarineFishes.pdf

⁴ For example, see Chen et al. 2021, available at https://s3.us-east-1.amazonaws.com/nefmc.org/Doc.14.a-UMASSD_WHOI_short_report_05_6_12_2021_revison.pdf

resulting impacts on fishery species are also of concern to the Councils and other fishery stakeholders.⁵ The EIS should acknowledge both the individual project's potential to materially affect oceanographic and hydrodynamic conditions based on ongoing research efforts and the project's contribution to cumulative effects from development of several wind projects on a regional scale. The EIS should utilize findings from ongoing research, including research funded by BOEM, in its impact assessment to understand how wind energy facilities may affect local and regional physical oceanographic processes.

Secondary cascading ecosystem effects should also be evaluated as community composition could change within and beyond the project area. For example, the addition of structured habitat may attract bivalve predators such as sea stars and moon snails, which could have negative impacts on shellfish species (e.g., sea scallops) and could result in cascading ecological impacts. In addition, if construction of this project negatively impacts important prey species, this could have cascading impacts on marine food webs.

Cumulative impacts

The EIS must include a meaningful cumulative impacts assessment. We are very concerned about the cumulative impacts of the many planned offshore wind projects off our coast on fisheries, fishery species, and marine habitats. Each individual wind project cannot be considered in isolation. We supported the criteria used in the Vineyard Wind 1 and South Fork EIS for defining the scope of reasonably foreseeable future wind development; however, that scope should be expanded to include additional areas which have since been leased offshore of New York/New Jersey and the Carolinas, as well as Call Area development in the Central Atlantic. The cumulative effects of adjacent wind projects should be thoroughly evaluated.

As stated in previous comment letters to BOEM, we recommend the creation of information products to show the planned locations of export cables for all wind leases (e.g., through the Northeast and Mid-Atlantic Ocean Data Portals) to help stakeholders better understand potential cumulative impacts. We recognize that final precise cable routes have not been determined for most projects and this should be noted in the information products. Earlier dissemination of draft proposals via these platforms would promote better understanding of these projects in relation to each other and to other activities.

Cumulative impacts and risks should be evaluated for species that are widely distributed along the coast. Species such as bluefish, flounders, and others that migrate along the coast could be affected by multiple offshore wind projects, as well as other types of coastal development, at both the individual and population level. Climate change is also an essential consideration in the cumulative effects analysis as the distributions and abundance of many species are changing (some increasing, some decreasing) due to climate change and other factors. The EIS should acknowledge that impacts from the construction of wind projects will occur in this context.

⁵ For example, two recent reports on potential impacts of offshore wind energy development on the Cold Pool are available at the following links:

<https://scemfis.org/wp-content/uploads/2021/01/ColdPoolReview.pdf>

https://rucool.marine.rutgers.edu/wp-content/uploads/2020/10/PartnersWorkshop_WhitePaper_Final.pdf

We continue to have significant concerns about the cumulative impacts of offshore wind development on fishery independent surveys. Major negative impacts to these surveys would translate into greater uncertainty in stock assessments, the potential for more conservative fisheries management measures, and resulting negative impacts for fishery participants and communities. We strongly support efforts to understand and mitigate the negative impacts of offshore wind development on these surveys and provided detailed comments on this topic in May 2022.⁶

Conclusion

We appreciate the opportunity to provide comments to ensure that issues of social and ecological importance are considered in the EIS for US Wind. We look forward to working with BOEM to ensure that wind development in our region minimizes impacts on the marine environment and can be developed in a manner that ensures coexistence with our fisheries. Please contact us if you have any questions.

Sincerely,



Dr. Christopher M. Moore

Executive Director, Mid-Atlantic Fishery Management Council



Thomas A. Nies

Executive Director, New England Fishery Management Council

cc: J. Beaty, M. Luisi, W. Townsend, J. Bennett, A. Lefton

⁶ Available at <https://www.mafmc.org/s/220506-NEFMC-MAFMC-to-BOEM-re-Survey-Mitigation-zta6.pdf>



June 28, 2022

Bridgette Duplantis
Bureau of Ocean Energy Management
Office of Leasing and Plans
1201 Elmwood Park Boulevard
New Orleans, LA 70123

Re: Central Atlantic Call for Information and Nominations

Dear Ms. Duplantis,

Please accept these comments from the Mid-Atlantic Fishery Management Council (Mid-Atlantic Council) and the New England Fishery Management Council (New England Council) regarding the call for information and nominations on possible commercial wind energy leasing off the U.S. Central Atlantic coast (the Call). The Bureau of Ocean Energy Management (BOEM) will consider information received in response to this Call to determine whether to schedule a competitive lease sale or to issue a noncompetitive lease for any portion of the six Call Areas.

The New England Council has primary management jurisdiction over 28 marine fishery species in federal waters and is composed of members from the coastal states of Maine to Connecticut. The Mid-Atlantic Council manages more than 65 marine species¹ 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 sustainably manage forage fisheries. 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 Central Atlantic Call Areas 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. As described below, we are especially concerned about overlap of the Call Areas with locations of known and likely deep sea coral presence.

Overlap with Deep Sea Coral Habitat and Deep Sea Coral Protection Areas

Deep sea corals form important and sensitive habitats. Most deep sea corals are slow-growing and fragile; therefore, damage caused by the installation, maintenance, operations, and decommissioning of offshore wind energy projects must be avoided. As the Mid-Atlantic Council stated in a [letter to BOEM in December 2021](#) and during the February 2022 Central Atlantic Task Force meeting, all Frank R. Lautenberg Deep Sea Coral Protection Areas, including the discrete and broad zones, must be excluded from all stages of offshore wind energy planning and development. The entirety of Call Area E and part of Call Area F overlap with the Frank R. Lautenberg Deep Sea Coral Protection Area broad zone. Placing wind energy structures in these areas, which include known and likely coral presence

¹ Fifteen 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.

(Figure 1), would negate protections established by the Mid-Atlantic Council after a multi-year, thorough, transparent, and stakeholder driven process. The New England Council adopted a very similar deep sea coral protection area south of Georges Bank, implemented in 2021. Combined, these areas clearly indicate the high value the Councils place on conserving canyon and slope habitats over an extensive geographic area from the North Carolina/Virginia border to the Hague Line. In addition, placing wind energy structures in these protected sensitive habitats would run counter to the federal administration's goal to conserve 30 percent of America's lands and waters by 2030 through the America the Beautiful initiative.

In the Mid-Atlantic, the Frank R. Lautenberg Deep Sea Coral Protection Areas were defined based on a combination of records of coral presence² and habitat suitability modeling.³ This information is summarized in Figure 1. The Mid-Atlantic Council focused on structure-forming corals when defining these areas; however, the restrictions on fishing effort also benefit other corals and other habitat types within these areas.⁴ The fishing prohibitions in these areas became effective in January 2017 and include prohibitions on use of all bottom-tending commercial fishing gears (including, but not limited to bottom-tending otter trawls, bottom-tending beam trawls, hydraulic dredges, non-hydraulic dredges, bottom-tending seines, bottom longlines, pots/traps, and sink or anchored gillnets), with exemptions for transit, lobster trap gear, and red crab trap gear (81 Federal Register 90246, 12/14/2016; 50 CFR § 648.372). The prohibitions are not fishery-specific and the same restrictions apply to all discrete zones and in the broad zone.⁵

The Frank R. Lautenberg Deep Sea Coral Protection Areas extend as far south as the boundary between the Mid-Atlantic Council and the South Atlantic Council. Deep sea corals are present south of this boundary, as shown in Figure 1. We are also concerned that export cables connecting wind energy projects in Call Areas E and F to shore would cross the shelf break and would detrimentally impact sensitive habitats in those areas. Therefore, we recommend removal of the entirety of Call Areas E and F from further consideration for offshore wind energy development.

The Call announcement notes "BOEM recently funded a study that synthesized data and modeled deep-sea coral and hardbottom habitats on the OCS offshore the U.S. southeast Atlantic coast, including the deep-sea portions of the Call Area. BOEM will consider this study during Area Identification." No additional information is provided. No data, habitat information, or model results are provided. We are unaware of what information will be considered or how it will be used. It is

² NOAA National Database for Deep Sea Corals and Sponges (Database version: 20211110-0). <https://deepseacoraldata.noaa.gov/>. NOAA Deep Sea Coral Research & Technology Program.

³ Kinlan, B.; Poti, M.; Dorfman, D.; Caldow, C.; Drohan, A.; Packer, D.; Nizinski, M. (2016). Model output for deep-sea coral habitat suitability in the U.S. North and Mid-Atlantic from 2013 (NCEI Accession 0145923). Threshold Logistic Outputs for Alcyonacea. NOAA National Centers for Environmental Information (NCEI). <https://www.ncei.noaa.gov/archive/accession/0145923>.

A description of how this model was used to define the Frank R. Lautenberg Deep Sea Coral Protection Areas can be found in section 6.3.2.4 of the Environmental Assessment for the Deep Sea Corals Amendment, available at <https://www.mafmc.org/actions/msb-am16>.

⁴ For more information, see <https://www.mafmc.org/actions/msb-am16>.

⁵ Although these restrictions were implemented through Amendment 16 to the Mackerel, Squid, and Butterfish Fishery Management Plan, they apply to all bottom tending gear, not just for the mackerel, squid, and butterfish fisheries (with specific exclusions for American lobster, red crab, and transiting).

unclear if this information is different than that considered by the Mid-Atlantic Council when the Frank R. Lautenberg Deep Sea Coral Protection Areas were developed. The public should be given the opportunity to provide recommendations for the Call Areas based on the results of this study.

When considering currently available data on coral habitats, it is important to note that most historical coral records are presence-only and largely reflect areas that have been prioritized for deep sea coral and other benthic habitat surveys. Therefore, a lack of coral records and modeled suitable coral habitat should not necessarily be interpreted as a lack of coral presence. Many shelf and slope areas within the Call Areas and within the Frank R. Lautenberg Deep Sea Coral Protection Areas have not been adequately surveyed for the presence of deep sea corals. The habitat suitability model shown in Figure 1 relies heavily on historical records, thus a lack of modeled suitable habitat in a given area does not necessarily indicate the absence of corals or poor habitat suitability. In addition, this model does not extend as far south as the southern end of Call Area F and this should not be interpreted to mean that coral habitat is not present outside the modeled area. As previously stated, we have no knowledge of the BOEM-funded coral habitat study beyond the information provided in the Call; however, we suspect these same data limitations will impact BOEM's study. Therefore, we urge BOEM to take a precautionary approach to protecting sensitive coral habitats by excluding the entirety of Call Areas E and F from further consideration.

Overlap with Fisheries

Portions of all Call Areas overlap with important commercial and recreational fishing areas, including, but not limited to, commercial fishing for surf clams and *Illex* squid, commercial and recreational fisheries for highly migratory species, and the recreational fishing areas referred to as the [Prime Fishing Grounds of New Jersey](#). We defer to the National Marine Fisheries Service on the appropriate data for considering overlap with commercial and recreational fisheries.

As we have stated in past comment letters to BOEM, fisheries importance should not be measured solely based on dollar value or volume of landings. Other factors including, but not limited to, number of participants, impacted communities, seasonal importance, and use (e.g., a lower value species harvested for bait in a higher value fishery) must also be considered. Areas with notable fishery overlap must be excluded from leasing, especially considering that fisheries will be impacted by the many other wind energy projects already in development along the East Coast. We are very concerned about cumulative impacts from offshore wind energy development on commercial and recreational fisheries.

General Process Concerns

As we have stated in several previous comment letters to BOEM, we are concerned about the pace and scale of offshore wind energy development along the East Coast. We understand the desire by the federal administration, many states, and the public to replace fossil fuels with renewable energy. However, as you are well aware, more than 25 offshore wind energy projects along the east coast are already in various stages of planning and environmental review. We have been disappointed with the level of environmental review for these projects to date. In addition, we have found it challenging to effectively engage in the wind energy development process at the current pace while fulfilling our existing fisheries management missions. We know many other stakeholders have also found it challenging to track recent developments and provide input into the process.

Considering the scale of currently leased areas along the East Coast, it is concerning that BOEM has not demonstrated a specific goal for energy production to which these Call Areas will contribute. BOEM should seek input from states on expected demand and the realistic technical capabilities to meet that demand.

We are also concerned that this Call asks for public input on potential future wind projects which will require technology that does not currently exist. The Call notes “technoeconomic feasibility concerns with areas beyond 1,300 meters in water depth” and states that Call Areas E and F extend eastward to between the 2,500 and 2,600-meter bathymetric contour. Wind energy projects in these areas will likely require floating foundations, a technology which is in development but not currently in use. Lastly, it has also not been demonstrated that the onshore grid can accommodate this scale of energy input, which is an ongoing challenge for many existing East Coast leases.

In conclusion, we are concerned about the scale of these Call Areas, their technological feasibility, and in particular we are concerned about potential negative impacts on deep sea corals and cumulative impacts on commercial and recreational fisheries.

We look forward to further engaging with you on this issue. Please contact us if you have any questions.

Sincerely,



Dr. Christopher M. Moore

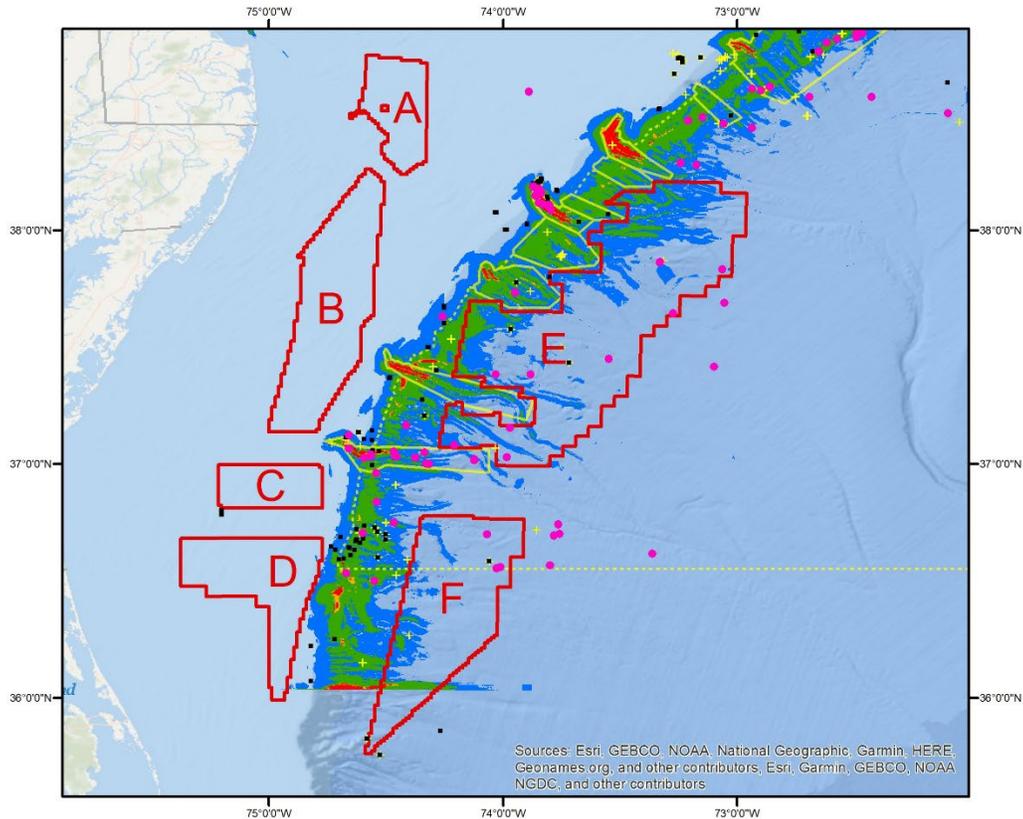
Executive Director, Mid-Atlantic Fishery Management Council



Thomas A. Nies

Executive Director, New England Fishery Management Council

cc: J. Beaty, M. Luisi, W. Townsend, J. Bennett, A. Lefton, T. Nies



Legend

- Central Atlantic Call Areas
- Frank R. Lautenberg Deep Sea Coral Protection Areas**
- Discrete Deep-Sea Coral Zones
- Broad Deep-Sea Coral Zone
- Deep-Sea Coral and Sponge Records**
- ▲ Black Coral
- Gorgonian and Alcyonacean Coral
- + Sea Pen
- Stony Coral
- Alcyonacea Coral Habitat Suitability Likelihood**
- Medium-Low
- Medium
- High
- Very High

Figure 1: BOEM Central Atlantic Call Areas, Frank R. Lautenberg Deep Sea Coral Protection Areas, modeled coral habitat suitability for Alcyonacean corals (gorgonian and non-gorgonian outputs combined; expected to be the best predictor of habitat suitability for structure-forming corals),⁶ and historical records of known coral presence with structure forming corals highlighted.⁷ “Gorgonian and Alcyonacean Coral” includes soft coral, gorgonian coral, and stoloniferan coral.

⁶ See footnote 3.

⁷ See footnote 2.



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

June 24, 2022

Michelle Morin
Chief, Environmental Branch for Renewable Energy
Bureau of Ocean Energy Management
45600 Woodland Road, VAM-OREP
Sterling, Virginia 20166-4281

Dear Ms. Morin:

We reviewed the Draft Essential Fish Habitat (EFH) Assessment, received April 25, 2022, for the proposed Revolution Wind, LLC offshore wind energy project. The project includes the construction, operation, maintenance, and decommissioning of a commercial scale offshore wind energy facility, known as the Revolution Wind Farm (RWF) within Lease Area OCS-A-0486, located 15 statute miles southeast of the Rhode Island within the Rhode Island/Massachusetts Wind Energy Area. The RWF project proposes construction of up to one hundred (100) wind turbine generators (WTGs) with a 8 to 12 MW generation capacity, and two (2) offshore substations (OSS) with a submarine cable network connecting the WTGs and the OSS to shore-side facilities. The project also includes the construction and installation of the Revolution Wind Export Cable (RWEC) using alternating current to export energy from the RWF to a new Interconnection Facility to link the RWEC to the electrical grid. RWEC includes an offshore component located in federal waters (RWEC–OCS) and a component located in Rhode Island State territorial waters (RWEC–RI). The two RWEC circuits will total 83.3 miles in length (23 and 18.6 miles for each RWEC-OCS and RWEC-RI segment per circuit, respectively). In addition to the EFH assessment, we reviewed the Fisheries and Benthic Habitat Monitoring Plan, preliminary Draft Environmental Impact Statement (DEIS) for cooperating agency review, and Construction and Operation plan (COP).

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) and Fish and Wildlife Coordination Act require federal agencies to consult with us on projects such as this that may adversely impact EFH, federally-managed species, their prey, or other resources under our purview. Because the project involves EFH, the consultation process is guided by the EFH regulatory requirements under 50 CFR 600.920, which mandates the preparation of EFH assessments and generally outlines your obligations.

At this time we do not have enough information to comment on the impacts of the proposed project on living marine resources or to provide recommendations to avoid, minimize and mitigate adverse effects on EFH and other marine resources. You have not yet provided a complete EFH assessment in accordance with the mandatory and additional information requirements for such assessments pursuant to 50 CFR 600.920(e). A complete EFH assessment is a prerequisite to begin the EFH consultation process as specified in 50 CFR 600.920(i)(2). For all projects, but especially for a project of this size and complexity, each individual project action and component must be specifically identified and described, and a rigorous evaluation of the potential impacts of those actions and components on EFH, federally-managed species, their prey, or other resources under our purview must be undertaken. While we appreciate the efforts



that you have made to have this draft EFH assessment mirror the EFH Assessment Template for Offshore Wind Energy Projects being developed by our staff with the assistance of the Volpe Institute, the current draft document does not fully describe the proposed action or evaluate fully the potential adverse effects of the proposed action on EFH. This letter outlines additional information we require to consult on this project.

EFH INFORMATION REQUESTED

Evaluation of Impacts to Essential Fish Habitat

Scope of EFH Impact Analysis: We understand you allow lessees to use a Project Design Envelope (PDE) in the preparation of their COP, and that in your National Environmental Policy Act (NEPA) documents you analyze the maximum impacts that would occur from the range of design parameters presented in the COP. As we have stated previously, this approach is not appropriate for the EFH consultation and is inconsistent with the EFH regulations because it does not allow for a clear description of the proposed action and its effects on EFH. However, the current document states that: “For this EFH consultation, BOEM assumes Revolution Wind would select the design alternative resulting in the greatest potential impact on EFH.”

CFR 600.920(e) lays out the requirements for the preparation of an EFH assessment, which includes the requirement for you to include in your assessment an analysis of the potential adverse effects on designated EFH and the site-specific effects of the project. In accordance with 50 CFR 600.910(a),

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

Further, CFR 600.920(d) requires that you use the best available scientific information in your assessment of the effects of an action on designated EFH and the measures you can take to avoid, minimize, or offset such effects. The use of the maximum impact analysis does not allow for an evaluation of potential adverse effects, nor measures that can be taken to avoid, minimize, or offset such effects, for the different design parameters that may actually be selected.

As we have discussed, for the EFH consultation, BOEM must assess the potential adverse impacts that would occur as a result of the range of design parameters under consideration. This is inclusive of both potential alternative layouts and various design parameters associated with project activities (e.g., scour protection). Without this assessment, it is not possible to provide appropriate, site-specific EFH conservation recommendations for the project. Any recommendations provided based on the analysis of a maximum impact design would then also be based upon the maximum potential adverse effects and may or may not ultimately be applicable to the final selected design parameters. This could lead to the need for reinitiation of

consultation once the final design is determined and/or precautionary EFH conservation recommendations. It would be most efficient for the process, and consistent with the EFH regulations, if the EFH assessment analyzed potential impacts from the range of proposed design parameters, rather than a maximum impact scenario.

Additionally, the EFH assessment does not address any mitigation measures to offset adverse effects to EFH, nor does it address any of the alternatives put forward in the NEPA process. Two of these alternatives, specifically the Habitat Impact Minimization Alternative (“Habitat Alternative”) and the Higher Capacity Turbine Alternative, would result in substantial reductions in habitat impacts and adverse effects to EFH. The EFH assessment should include an evaluation of mitigation to offset any unavoidable adverse effects to EFH, as well as alternatives that would avoid or minimize adverse effects. We welcome the opportunity to discuss this with you further, as it is an important issue with implications for future projects, as well as the Revolution Wind project.

Analysis Approach, Criteria and Methodology: The current assessment and evaluation uses methods and criteria that are not appropriate or applicable in the analysis of project impacts to designated EFH and other NOAA-trust resources. We appreciate that you have included the impact terminology and definitions (i.e., short-term, long-term, and permanent) we recommended. However, in many instances the terminology has not been appropriately applied, particularly considering the distribution of highly complex habitats that will be impacted by development of this lease area on Cox Ledge. For example, the document states that: “project construction and installation will generate short-term, and generally direct effects on EFH...” This statement does not acknowledge or consider that the habitat conversion that will occur during construction and installation of the proposed project will result in long-term to permanent effects on EFH. While the document does acknowledge the indirect effects of such long-term to permanent impacts during the operations and maintenance of the project and for the placement of cable protection, it does not fully address the direct, long-term to permanent effects of habitat conversion during the construction and installation of the wind turbines and sub-station.

Further, the analysis relies heavily on perceived beneficial effects that may occur as a result of the “reef effect” from the addition of artificial substrates and does not adequately address the adverse effects of such artificial substrates, particularly given the existing natural, highly complex habitats that occur in the project area. The EFH assessment should fully evaluate and assess the direct, indirect, individual, and cumulative adverse effects to EFH of each project component and activity. While it is appropriate to discuss the potential for any identified beneficial habitat effects that may be expected as a result of the proposed project, such effects should be assessed in context with the expected adverse effects to EFH for managed species.

It also appears that the EFH effects analysis for each species is based on the total calculated impact areas rather than designated EFH for the species within the project impact areas (i.e., the assessment does not appear to be refining mapped EFH by the habitat text descriptions). While we do not need the impacts to each species’ designated EFH to be individually calculated, the assessment should include an evaluation of how each identified project impact will affect different habitat types and species (including prey species). That evaluation is not included in the current draft of the EFH assessment. The impacts to each habitat type need to be quantified

and fully assessed for each component of the project. For example, deposition of suspended sediments will occur as a result of cable laying activities. Soft and hard sediment habitats will be affected differently by the sediment deposition, and the differences between the effects should be quantified and fully evaluated. Without information on the extent and location of impacts by habitat types, it is not possible to evaluate avoidance or minimization measures that could be employed to reduce adverse impacts to EFH.

Additionally, an analysis should be provided for each adverse effect to EFH that is identified. The current document presents the calculated impacts that are expected to occur for multiple project activities (e.g., pile driving, seabed preparation, etc.), however there is limited analysis of how such impacts would affect designated EFH, Habitat Areas of Particular Concern (HAPCs), or sensitive species and life history stages. For example, the document indicates the spatial extent of expected impacts that may result from pile driving for each type of hearing group (e.g., fish with swim bladder involved in hearing, eggs and larvae, invertebrates, etc.) and identifies the managed species and life history stages that belong to each hearing group. However, there is limited to no analysis of how such identified impacts would affect EFH or managed fish species. Of particular concern is the potential for adverse effects to Atlantic cod spawning aggregations which have been positively detected within the lease area as part of an ongoing study funded by your agency. The EFH assessment does not discuss the overlap of the proposed project with this known cod spawning activity or provide a meaningful assessment of how the identified impacts may affect this sensitive life history stage.

Effects to Cox Ledge and Site-Specific Fisheries Resources: The EFH assessment also does not fully consider the location of the proposed project in the region, particularly that the project overlaps with Cox Ledge. It appears that portions of the EFH assessment may have been copied from other assessments done for other projects without the evaluation being tailored to the actual project site. For example, there are multiple references to expected impacts to Mid-Atlantic resources, but there is no mention of the proposed project's overlap and proximity to Cox Ledge in Southern New England. Cox Ledge is an area of particularly complex and unique habitat conditions that support a wide range of marine resources. Also, while the document provides information on the habitat types that occur in the project area, the distribution and complexity of the habitats within the lease area is not well described. Because the intent of the EFH consultation is to evaluate the direct, indirect, individual and cumulative effects of a particular federal action on EFH and to identify options to avoid, minimize, or offset the adverse effects of that action, it is necessary to fully characterize and assess the effects of project activities to determine appropriate measures to protect and conserve EFH for managed species. The document should be revised to fully evaluate and analyze potential effects to designated managed fish species EFH and HAPCs, consistent with the requirements under the EFH regulations.

Additional Information Needed

As discussed above, the approach to the EFH assessment and evaluation of potential adverse effects of the project to EFH needs to be revised to align with the EFH regulations. The EFH assessment should clearly present the extent of habitat types within the project area and evaluate all potential project impacts that could occur to such habitats. This includes:

- the location of where impacts will occur for each impact type;
- the extent of each habitat type that will be impacted for each impact type;
- an evaluation of any potential avoidance and minimization measures to reduce the identified impacts, including an alternatives, and an assessment of the extent of habitat impacts that would be avoided or minimized; and
- discussion of mitigation.

As you develop the revised EFH assessment, include citations of relevant and currently accepted literature to support your determinations and to inform the evaluation of identified avoidance and minimization measures that may reduce adverse impacts to EFH. The revised EFH assessment should be an independent analysis of the best available information, and not simply reference analyses from the applicant's COP.

Furthermore, the effects of identified and calculated project impacts, by habitat type, should be fully assessed. This assessment should focus on vulnerable and sensitive: 1) habitats; 2) species; and 3) life history stages. The potential impact of the project to vulnerable and sensitive resources must be fully evaluated for the specific project area. For example, in the context of seafloor preparation activities, the potential adverse effects to EFH resulting from the disturbance of not just habitats, but also sensitive life history stages that occur within the project area should be fully evaluated (e.g., Atlantic cod spawning aggregations).

Below is a list of additional information needed for us to initiate consultation for this project. This list should assist you in revising the EFH assessment.

List of information necessary for a complete EFH assessment:

General Issues and Updated Analysis Needs:

- All necessary information related to impacts of the project on EFH, federally-managed species, their prey, or other resources under our purview needs to be included or extensively summarized in the document rather than referencing the COP or other documents.
- Information included in the EFH assessment should be consistent with the information in the NEPA document including the description of the proposed project and the associated actions such as surveys and other activities.
- All impacts should be rigorously evaluated, including individual, cumulative, and synergistic direct and indirect effects.
- Modeling results (or extensive summaries of modeling results) should be integrated in the EFH assessment to investigate potential impacts to EFH and species. For example, how will hydrodynamic changes, such as changes to velocities, temperatures, and stratification impact EFH and species.
- There is an inadequate discussion and analyses of sensitive habitats/life stages. Of particular concern is a lack of a comprehensive discussion of the potential impacts of the project on a known Atlantic cod spawning aggregation within the lease area. Potential impacts that may occur as a result of each project component and/or activity to this spawning aggregation area should be fully evaluated and described. This evaluation should consider both direct and indirect impacts.

- There is a lack of robust analysis of impacts of particle motion and vibrations on fish, invertebrates, and their habitat. Please see Roberts et al. (2015)¹, Roberts and Elliot (2017)², Hawkins et al. (2021)³, and others to update the analysis.
- All tables and figures cited in the Table of Contents should be included in the document.

Mapping and Habitat Information Needs:

- A figure depicting the multibeam backscatter and identified large boulders throughout the lease area should be included in the document.
- A figure detailing important habitat areas, such as areas where Atlantic cod spawning activity have been detected should be included. The proposed project WTG/OSS and inter-array cable layout should be included in this figure(s).
- A figure detailing known or delineated shellfish beds and/or shellfish leases located in the project area.

Project Design and Construction Methodology:

- The EFH assessment should evaluate the full range of potential alternatives to the proposed action.
- The scope and range of the PDE for each project component should be included in the updated assessment. The EFH assessment should evaluate the full range of the design parameters and assess the impacts to EFH for each project component.
- Detailed information on the proposed turbine locations and their proximity to complex habitats should be provided. Potential impacts to complex habitats from turbines, scour protection, and vessel anchoring should be fully assessed. Include an analysis of the impacts that would occur from cable routing to and from the turbine location.
- Detailed information on each method of cable installation proposed. An assessment of impacts to EFH for each method proposed should be included for all habitat types.
- Specific information related to how the cable will be laid through any identified HAPC and a full and complete assessment of the anticipated impacts. The EFH assessment should also describe in detail how impacts to HAPC will be avoided, minimized, and offset.
- Detailed information related to the proposed use of cable and scour protection. Specifically, the extent of area to be covered by the protection, the type of protection to be used, a description of habitats to be impacted, and all locations where cable protection is anticipated to be necessary.
- Information related to vessels proposed for construction and maintenance, including potential impacts to benthic habitat from vessel anchors or spuds. Proposed plans to avoid and minimize impacts to sensitive habitats from vessel anchoring should also be provided.
- Information related to the proposed dredging for the project, including plans for material disposal and dredging associated with any O&M port facilities and HDD activities.

¹ Roberts, L., Cheesman, S., Breithaupt, T. and Elliott, M., 2015. Sensitivity of the mussel *Mytilus edulis* to substrate-borne vibration in relation to anthropogenically generated noise. *Marine Ecology Progress Series*, 538, pp.185-195.

² Roberts, L. and Elliott, M., 2017. Good or bad vibrations? Impacts of anthropogenic vibration on the marine epibenthos. *Science of the total environment*, 595, pp.255-268.

³ Hawkins, A.D., Hazelwood, R.A., Popper, A.N. and Macey, P.C., 2021. Substrate vibrations and their potential effects upon fishes and invertebrates. *The Journal of the Acoustical Society of America*, 149(4), pp.2782-2790.

- Provide additional information related to the sediment dispersal modeling, including the grain sizes used for each modeling exercise, and how impacts to various habitats were considered.
- Provide additional information related to any hydrodynamic modeling and anticipated impacts to EFH and sensitive life stages. This should include an evaluation of WTGs/OSS as well as scour and cable protection.

Pile Driving and Noise Impacts (for each potential type of foundation/pile and installation method):

- A summary of proposed pile driving activities for this project, including an acoustic analysis for each pile installation method, which evaluates the timing, duration, and spatial extent of underwater sound, particle motion, and vibration during pile installation, and a threshold analysis which examines the thresholds of these impacts on physiological injury, mortality, and behavior for relevant life stages of EFH species (fish and invertebrates).
- A map with depth contours and habitat type with a delineation of the location, intensity, and areal extent of acoustic impacts (sound, particle motion, vibration) expected within and outside of the project area. This should include the radial distance from pile driving to threshold boundaries of physiological injury, mortality, and behavioral impacts for EFH species (fish and invertebrates). Detailed information on avoidance, minimization, and mitigation measures for pile driving impacts (for both sound and particle motion), and an adaptive monitoring plan to ensure target attenuation levels are met throughout the duration of the project.
- A schedule for the time of year proposed for pile driving activities and an analysis of the impacts of scheduled activities to relevant life stages of EFH species (fish and invertebrates). This should include a full review of the literature related to noise effects on Atlantic cod, and the best available information on the spatial and temporal distribution of cod aggregations within and adjacent to the project area.
- An evaluation of normal operational noise for one turbine and for the entire wind energy facility, including an acoustic analysis which evaluates the timing, duration, and spatial extent of underwater sound and particle motion, vibration, and a full threshold analysis which examines the thresholds of these impacts on physiological injury, mortality and behavior for relevant life stages of EFH species (fish and invertebrates). This should include a full review of the literature related to noise, particle motion, and vibration effects on species (and habitats) within and adjacent to the project area.
- Each element described in this section should also be applied to the evaluation of potential impacts on habitats and species outside of the project area, including HAPCs.

Fisheries and Benthic Monitoring Plan

We have also reviewed the fisheries and benthic monitoring plan for this project, dated October 2021. As currently proposed, we have significant concerns about the lack of monitoring of project impacts to existing, native complex habitats and the ability of the design to detect changes that may occur as a result of the proposed project. Specifically, the plan currently focuses the monitoring of “hard bottom” to WTGs and relocated boulders. There is no proposed monitoring to assess changes or impacts of the proposed project to the expanse of existing, natural complex habitats that are identified to occupy nearly half of the lease area. Further, it is

not clear that there is adequate sampling or replication to detect meaningful changes (i.e., the statistical power of the study to detect changes). A power analysis for each hypothesis to be tested should be included in the monitoring plan. The power analysis should specify the significance level, effect size, statistical power, and the minimum sample size estimated to be necessary to achieve that power. Further, while some of the proposed monitoring studies include a single year of baseline data collection, others are proposed to rely on previously obtained data. The proposed lack of multi-year, and seasonal, pre-construction data collection will place unnecessary constraints on the study's ability to distinguish between annual and seasonal variability and changes related to the project construction and operation. A further point is that all fisheries and habitat data should be stored in a publicly accessible database to facilitate data sharing and transparency rather than just being presented in a written summary report.

We also note that there is currently no incorporation of methods to evaluate changes in the distribution, abundance, composition of managed fish species, including sensitive life history stages, that may occur in response to the proposed impacts and changes to benthic habitats. The fisheries and benthic monitoring plan should address potential effects to managed fish species by habitat type, particularly for species and life history stages with specific benthic habitat associations. The monitoring plan should evaluate the changes in the community composition, and species distribution and abundance that may occur as a result of specific project components (e.g., WTGs, scour and cable protection, etc.) and construction development activities (e.g inter-array cable installation, WTG operation, etc.) effects on habitats, particularly for potential impacts that may occur as a result of the proposed development on the complex habitats of this lease are on Cox Ledge.

Further, while multiple monitoring surveys/hypotheses are focused on soft-sediment habitat changes, there is heavy reliance on SPI/PV imagery for evaluating the effects of the project to these benthic habitats. Although valuable information may be obtained by such a method, evaluating changes in the benthic community structure is critical to understanding the scope and effect of the proposed project for managed fish species. We recommend that infaunal grab sampling be included as a component to assess changes in the benthic community composition and structure for all soft bottom monitoring surveys.

We have included a spreadsheet of detailed comments as an attachment to this letter. The spreadsheet includes a separate sheet with comments we previously provided on the Fisheries Monitoring Plan submitted for our review in 2020. We have also included comments related to how the 2021 plan addresses the comments we provided on the 2020 plan, and additional comments related to the fisheries specific components of the October 2021 plan. Once you have reviewed our comments, a meeting with us should be scheduled to discuss our concerns so they can be addressed and incorporated into the fisheries and benthic monitoring plan prior to the initiation of our EFH consultation.

Conclusion

In summary, additional information related to the evaluation of adverse effects to EFH and the identification of sensitive and vulnerable habitats, species, and life history stages, comprehensive modeling (results and summaries of modeling) of changes to hydrodynamics, sediment movement, and the project design parameters and construction methodology is needed to

complete the EFH assessment. A completed EFH assessment that incorporates this information is necessary for us to be able to initiate consultation with you under 50 CFR 600.920(i)(2) and to provide appropriate EFH conservation recommendations for this project. Accordingly, we seek to extend the consultation process pursuant to 50 CFR 600.920(i)(5) so that you may provide us with better information for our evaluation of impacts and the development of EFH conservation recommendation.

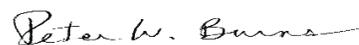
Upon receipt of a complete EFH assessment, our consultation can be initiated and we will review the assessment and develop EFH conservation recommendations. Consistent with the timeline under FAST 41, we expect you to provide us with an updated EFH assessment with the Notice of Availability of the DEIS and, provided this assessment has the information necessary to do so, we expect to initiate our consultation no later than November 1, 2022. We hope the information provided will help inform and guide you as the lead federal agency to ensure we receive the necessary information to complete our consultations in a timely and effective manner. If you have any questions regarding the EFH consultation process, please contact Alison Verkade at alison.verkade@noaa.gov.

Information Needs for the Biological Assessment

Staff from our Protected Resources Division (PRD) have reviewed the draft Biological Assessment (BA) received on April 25, 2022. The BA is incomplete and requires substantial revision before ESA consultation can be initiated. Detailed comments are being transmitted via e-mail; we note that many of the significant issues in the BA are similar to those highlighted above regarding the EFH assessment. For additional information regarding the ESA consultation and our comments on the BA, please contact Julie Crocker (Julie.Crocker@noaa.gov or 978-282-8480).

Thank you for the opportunity to comment on this important project and we look forward to working collaboratively with you to address these information needs.

Sincerely,



Peter Burns
Chief, Ecosystems Management Branch
Habitat and Ecosystem Services Division

Enclosure:

Revolution Wind Fisheries Research and Monitoring Plan Comments

cc:

Katherine Segarra, BOEM
Brian Krevor, BOEM
Brian Hooker, BOEM
Trevis Olivier, BOEM
Cheri Hunter, BSEE
Michele Desautels, USCG
Timothy Timmermann, USEPA
Christine Jacek, USACE
Naomi Handell, USACE
David Simmons, FWS
Lisa Engler, MACZM
Jeffrey Willis, RICRMC
Thomas Nies, NEFMC
Christopher Moore, MAFMC
Lisa Havel, ASMFC
Julie Crocker, NMFS
Andy Lipsky, NEFSC

Section Number	Section Name	Doc Page Number	NMFS Comment
General		General to Plan	Power analyses should be conducted for each response variable of interest, e.g., length, condition, diet.
General and Appendix 4		General to Plan and Appendix 4	Recommend adding additional years of post-construction monitoring for all studies. Results of power analysis for lobster and crab ventless crab survey (Appendix 4) indicate that power increases approximately 5% for each additional year of post-construction sampling.
4.0	Survey Methods	General to Section	A minimum of 3 years of baseline data are needed to assess interannual variability (Petruny-Parker et al. 2015). Recommend at least 3 years of pre-construction sampling. The benefit of this in terms of statistical power should be assessed with power analysis.
4.1, 4.2, 4.4	Trawl Survey, RWF Ventless Trap Survey, State Water Ventless Trap Survey	15-48; 55-61	Please provide evidence or a rationale to suggest that the reference or control sites identified will be outside the zone of influence of the wind farm. Current information suggests that wind wake effects and effects on hydrodynamics may extend 10s of kms from the boundary of wind farms (Christianset et al. 2022; Dorrell et al. 2022).
4.1.3	Trawl Survey Methods	23	Edit sentence: "The trawl survey will be executed using the trawl net that was designed by the Northeast Trawl Advisory Panel for the NEAMAP trawl survey." Should be edited to read "The trawl survey will be executed using the trawl net used for the VIMS NEAMAP trawl survey." If there are any modifications or deviations from that net, they must be identified.
4.1.3	Trawl Survey Methods	24	In section on biological sampling: For macroscopic maturity calls there is no physical sample that can be retained/ revisited/ used for QA/QC. Some level of QA/QC should be outlined (at least initially), either with photographic images or histological samples. Analysts will likely question use of such data without some sort of QA/QC.
4.1.3	Trawl Survey Methods	25	In section on stomach contents analysis: It's good to see they're planning to use a 2-stage cluster sampling estimator (%Wk) to derive the average mass/percent of prey relative to other prey. This is our standard given the sampling design of the Bottom Trawl Survey. The sample size of 200 stomachs should be per predator-season-area. Please describe how 200 stomachs were determined to be adequate for assessing BSB and summer flounder diet by season and area. Ensure the focus is on season-area differences in prey composition. Please describe how you will account for changes in diet that are attributable to normal seasonal changes vs those attributable to wind farm development. The multivariate tests chosen are commonly used for these purposes, but will need to follow a relatively balanced design which can be challenging when sampling fish diets. There are other tests to consider if planning to address diet differences such as principle coordinate analysis, canonical correspondence analysis, etc.
4.1.5	Data Management & Analysis	28	In first sentence please add: "that is compatible with NEFSC data storage. An objective of this project is to enable sharing and use of this data with NEFSC scientists and the wider public."
4.1.5	Data Management & Analysis	28	We need the data digitally, not just in a report form.
4.1.5	Data Management & Analysis	30	For the paragraph starting with "If desired, absolute abundances ..." If it's VIMS survey gear, the abundance estimation protocol would be the same as for VIMS NEAMAP
4.2.2	Gradient Study Design and Procedures	48-49	The rationale for conducting the ventless trap gradient study during the operational phase only should be provided. The rationale for excluding the collection of baseline data should also be provided.
4.4	State Water Ventless Trap Survey – Export Cable	65-71	A clear statement of the study objectives is needed in Section 4.4. The questions or hypotheses this study will address should be provided. These questions/hypotheses should be directly linked to Section 4.4.4 Data Management and Analysis where it should be clearly stated how each analysis will address each question/hypothesis.
4.5	Benthic Monitoring	General to Section	The limited focus of the hard bottom monitoring to WTGs and areas where boulders are relocated is not sufficient for a project that is located on Cox Ledge and in a lease area where nearly 50% of the lease area is characterized as complex. The plan should be revised to include monitoring the response of existing, natural complex habitat to project development. This should include monitoring complex habitats adjacent to project activities and areas of complex habitats that are/will be disturbed during project construction. This should be done in addition to the proposed monitoring of areas where boulders are relocated. However, the boulder relocation monitoring should be expanded to include monitoring of the impact of the complex habitats where boulders were relocated from and monitoring of the habitats where boulders were relocated to, rather than focus solely on monitoring the individual relocated boulders and individual "undisturbed" boulders located well outside of potential project impact areas.
4.5	Benthic Monitoring	General to Section	There are no power analyses are included for any of the proposed benthic monitoring surveys. A power analysis should be completed for each of the proposed surveys.
4.5	Benthic Monitoring	General to Section	The proposed benthic (hard and soft sediment) habitat monitoring does not include sufficient baseline data collection. A minimum of 2 to 3 years of baseline data should be collected to account for natural variation. The monitoring plan should be updated to include sufficient baseline data collection.
4.5	Benthic Monitoring	General to Section	In multiple instances the proposed benthic monitoring plan references "forthcoming" benthic habitat maps, "preliminary" habitat mapping results, and "in progress" habitat mapping. The monitoring plan should be updated to include the final benthic habitat mapping that is consistent with NMFS Recommendations for Mapping Fish Habitat.
4.5.1	Hard Bottom Monitoring	63-67	Monitoring of changes in natural hard bottom habitats is focused on epifaunal growth on >1 m diameter boulders that will be relocated from IA cable corridors during seabed preparation for cable laying and how that differs from changes in established growth on boulders that are not moved. Given the differences in the colonization of bare boulders (species comp, speed of recovery, etc) vs added growth on "control" boulders the objectives of this survey need to be clarified.
4.5.1	Hard Bottom Monitoring	63-67	The focus of the hard bottom monitoring survey is to compare habitat "quality" (rugosity, epifaunal growth) in disturbed areas where boulders are relocated to undisturbed areas where seabed preparation activities did not occur. However, it is not clear how the full potential of indirect effects to adjacent "undisturbed" habitats will be considered in the selection of undisturbed area. Further, the proposed sampling protocol and metrics will provide very little information on the effects of seabed preparation and boulder relocation to existing habitats. The monitoring plan should be revised to assess effects of the seabed preparation and boulder relocation activities within the existing, natural complex habitats the activities occur within and adjacent to, as well as the effects of relocated boulders the the existing habitats where they are placed.
4.5.1	Hard Bottom Monitoring	63-67	A secondary objective of the hard bottom monitoring survey is to "characterize overall changes to the physical attributes of the hard bottom habitat resulting from seabed preparation for cable installation." We agree that this is an important objective, however there are no clear sampling protocols provided beyond assessing relocated boulders. The monitoring plan should be revised to include the monitoring of existing, natural hard bottom habitats within, and adjacent to, project disturbance areas.
4.5.1	Hard Bottom Monitoring	63-67	Definition of what habitat types constitute the habitat strata would be helpful in this section. Figure 18 illustrates backscatter intensity, but the text refers to "hard" vs "soft" bottom. Please provide further clarification on the proposed methods for selection habitat strata.
4.5.1	Hard Bottom Monitoring	63-67	Please provide additional details on the proposed sampling approach for each of the proposed hard bottom monitoring surveys. Specifically, please clarify the study design, proposed stations, samples, replication, and metrics proposed to be used for each survey. It also appears that there may be discrepancies between this and subsequent sections of the document. Please ensure all sections use consistent terminology and address each component of the proposed monitoring plan.
4.5.2.1	Survey Design Overview	68	We also note that for soft bottom habitats the plan states: "The benthic habitats along the RWEC are already documented in sufficient detail, and no additional pre-construction benthic monitoring will be conducted." We are not aware of any data within the RWEC that would provide sufficient pre-construction baseline data collection to support a soft-bottom monitoring plan along the RWEC.

Section Number	Section Name	Doc Page Number	NMFS Comment
4.5.2.2	SPI/PV Approach	68	While we appreciate the information that can be obtained using SPI, the lack of incorporation of benthic grabs to allow for the assessment of community composition changes and/or recovery substantially limits the utility of the data collected and post-construction monitoring in evaluating the effects of the project for benthic species and NOAA-trust resources. We recommend grab samples be incorporated into the proposed monitoring.
4.5.3.2	Acoustic and Video Collection	75	We appreciate the use of both forward and down-facing paired video and still cameras for the ROV survey. Please further clarify the sampling protocol for the ROV surveys. In particular, it is not clear how the video and imagery will be used in the proposed analysis.
4.5.5.1	Hard Bottom Video and Acoustics	77	Additional information on the proposed metrics, and rationale for the metrics proposed, should be provided. For example, for the boulder relocation it is stated that "qualitative details of habitat characteristics and quality, including categorical levels for presence of fish and decapods, presence of refuge areas surrounding substrate, and percent cover of emergent fauna," will be completed in addition to the mapping and quantification of "rugosity, boulder height and the ratio of hard bottom to soft bottom habitat." The value of the listed "qualitative" metrics is not clear. For monitoring impacts, recovery, and assessing changes to benthic habitats evaluating changes in benthic community structure is an important element. How benthic communities will respond to large-scale OSW development in this region is currently unknown. While, it is expected that seafloor rugosity and changes in the distribution of hard and soft sediments will change during project development, it is the effects of those changes to benthic and demersal species that is not well understood and should be a primary focus of the benthic monitoring plan. This is particularly true for this project that is located on Cox Ledge and includes a significant amount of natural complex habitats. We recommend that the proposed monitoring be revised to focus on benthic and demersal community structure effects and recovery of complex habitats within and adjacent to project activities.
4.5.5.2	Soft Bottom SPI/PV	77-78	It is stated that the substrate and biotic components of CMECS will be used to characterize sediments and biota observed in the SPI/PV imagery. We recommend the modified substrate CMECS definitions we have included in the NMFS Recommendations for Mapping Fish Habitat be included and all species be identified to the lowest feasible taxonomic group and quantified.
4.5.5.2	Soft Bottom SPI/PV	78	It is stated that replicate images will be summarized into a single value per analytical metric per station. Additional information on how this will be achieved for substrates should be provided.
4.5.5.3	Summary of Statistical Analysis	79	This section states that "mean macrobenthic cover and relative abundance of native versus non-native species and species composition (identified to the LPIL)" would be analyzed for the hard bottom surveys. Section 4.5.5.1 does not mention any of these metrics with the exception of "percent cover of emergent fauna" for the boulder relocation survey, and the identification of "non-native organisms...key epifauna, and quantifying biomass of the dominant member of the epifaunal communities" for the WTG specific survey. Please clarify what metrics are proposed and the statistical analyses that are proposed.

Section Number	Section Name	Doc Page Number	NMFS Comment on 2020 Plan	NMFS Comment on 2022 Plan
Section 4.1.2	Sampling Stations	15	The document references the complex habitat found in this area and that sampling will not be possible by trawl in all areas of the lease. What are the plans for additional sampling methods in areas where trawling is not possible.	Not addressed by this version of the monitoring plan
General	General	General	Given that the European studies have demonstrated that effects are greatest closest to the turbines, we would recommend choosing a gear or method that allows you to sample as close to the turbine as possible and a sampling design such as before-after-gradient that incorporates distance as a factor in your study.	BAG used for ventless trap survey, but not finfish trawl survey.
Section 4.1.2	Sampling Stations	16	Please clarify what is meant by the "spatial scale of project impacts"	
Section 4.1.2	Sampling Stations	16	What criteria will you use to choose between simple stratified and stratified random? This should be decided before the start of the study.	Sampling will not be distributed throughout the RWF Project area, but rather a subset of the project area that is outside of the documented boulder areas. Therefore, the trawl survey is not spatially balanced or random, but is in fact biased and not representative of the entire project area.
Section 4.1.2	Sampling Stations	16	Please indicate the level of power and effect size that a sample size of 20 is able to detect.	Sampling is now reduced to 15 trawl tows/area/season/year. Indicates 80% power to detect a 33% temporal decrease for species with CV <= 1.2 and ~40% temporal decrease for species with CV <= 2.0
Section 4.1.5	Data Management and Analysis	19	Please clarify what is meant by a BACI statistical model. Does this refer to analysis of variance (ANOVA)?	Addressed. Edited to clarify statistic model. A GLM or GAM with a 90% CI calculated for the BACI contrast.
Section 4.1.5	Data Management and Analysis	19	Rather than "identical", suggest using the phrase "statistically indistinguishable".	Correction made
Section 4.1.5	Data Management and Analysis	19	The wording in the statistical analysis section is confusing. If you are planning to conduct analysis of variance (ANOVA) following a BACI design, then it should be stated that the main effects in your model are time period (before and after) and location (treatment and control). With this model, you will be primarily interested in the main effects and the interaction effect.	Clarification made. The contrast that will be considered is between the average temporal change at the wind farm compared to the average temporal change at the reference.
Section 4.1.5	Data Management and Analysis	20	Recommend conducting prospective power analysis using some of the data sets listed at the beginning of the document.	Addressed. Power analyses that used data from BIWF and NEFSC trawls were conducted and reported. The RW trawl study seeks to achieve a power of 0.8.
Section 4.1.5	Data Management and Analysis	20	In reference to the following text, if there is insufficient trawlable habitat to conduct a powerful enough study to detect effects, then I would suggest using a sampling method other than a bottom trawl. This should not be a reason to conduct a study of low power. Increasing frequency will not address the issue of statistical power at the level desired. "If greater sampling intensity is required, and it is not possible to increase the number of samples collected in a season (e.g., due to limited amounts of trawlable habitat), increasing the frequency of surveying (e.g., 6 rather than 4 surveys per year) may be considered."	Addressed. This text that this comment addressed is no longer in the document. An adaptive sampling strategy is proposed that will use data collected early on to assess statistical power. If needed, sampling will be adapted based on this assessment.
Section 4.2	Ventless Trap Survey - Lobster and Crabs	21	Please use either "control" or "reference" consistently throughout the document.	Not addressed. Control and Reference are both still used.
Section 4.2.1	Survey Design and Procedures	22	Please clarify what is meant by "direct effects"	Not addressed. The text still refers to "direct effects" but these are not specifically defined. This section provides some background on EMF and sediment plumes but a clear objective is not stated. It would be helpful to have a sentence clearly stating the objective of the study.
Section 4.2.1	Survey Design and Procedures	22	"We are currently conducting a power analysis". Please provide the results and interpretation for this power analysis.	Addressed. Power analysis that used data from the SNECVTS were conducted and reported. The RW ventless trap study seeks to achieve power of 0.8.
Section 4.2.2	Ventless Trap Trawl Methods	25	Please indicate how many grid cells will be sampled.	Addressed. 15 grid cells in the impact and 10 grid cells in the control will be sampled in the RW ventless trap study.
Section 4.2.4	Data Management and Analysis	28	The wording in the statistical analysis section is confusing. If you are planning to conduct analysis of variance (ANOVA) following a BACI design, then it should be stated that the main effects in your model are time period (before and after) and location (treatment and control). With this model, you will be primarily interested in the main effects and the interaction effect.	Addressed. The contrast that will be considered is between the average temporal change at the wind farm compared to the average temporal change at the reference.
Section 5	Data Sharing Plan	29	Is a fish pot survey part of this study?	
Section 5	Data Sharing Plan	29	The text indicates that data will be shared upon request. Recommend placing these data on an existing data portal or creating a data portal that stakeholders can access.	
Global			Recommend including all measures related to protected species from the South Fork FMP, including any additional measures from EFPs/LOAs.	
Global			The monitoring plan should include that information collected for any incidentally caught Atlantic sturgeon will follow the NEFOP Observer Program protocols, not the ASM protocols. ASM collects far less information on incidentally captured sturgeon than NEFOP Observers. Given that the fisheries monitoring for the project is being conducted as scientific research and not as fishing, the observer coverage for incidentally captured sturgeon during the research should follow the more rigorous information and sample collection (i.e. fin clip for genetics analysis) used by NEFOP Observers rather than the less rigorous information collection and no sample collection of the ASM program that was set up specifically for the Multispecies FMP.	
Section 4.1.3	Trawl Survey Methods	18	The FMP mentions that "...contracted scientists will follow the sampling protocols described for At-Sea Monitors (ASM) in the Observer On-Deck Reference Guide (Northeast Fisheries Science Center, 2016)..." - how will information be shared/communicated if sampling of a protected species occurs?	
Section 4.1.3	Trawl Survey Methods	18	The paragraph pertaining to reporting protected species interactions should apply to all sampling methods in the FMP.	
Section 4.2	Ventless Trap Survey	20	Add text on reporting protected species interactions, see comment above, with additional measures: Report if line and/or trawls are missing, mark buoy/endline per instructions from NOAA GARFO PRD, 1700lb breaking strength buoy/end lines should be used.	



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

June 8, 2022

Paul Maniccia
Chief, Regulatory Branch
U.S. Army Corps of Engineers
696 Virginia Road
Concord, MA 01742-2751

RE: Amitié Fiber Optic Submarine cable installation

Dear Mr. Maniccia:

We have reviewed the EFH Assessment and associated project information for the Amitié Fiber Optic Submarine Cable System (NAE-2019-01014). The applicant (Edge Cable Holdings, LLC) seeks to install a fiber optic cable between Lynn, Massachusetts, Bude (United Kingdom) and Gironde (France). The method of installation includes a combination of directional drilling, plow and jet burial technology. Approximately one month prior to cable burial, pre-lay grapnel runs (PLGR) and route clearance (RC) will be performed. Horizontal Directional Drilling (HDD) will be used to install the steel conduit and cable from the upland location in Lynn to the HDD exit point, 0.8 miles offshore. Seaward of the HDD section, the cable will be installed with a submarine plow (SMD Heavy Duty HD3 Plow) that is controlled from a surface cable ship. The plow burial process would displace a wedge of seabed approximately 0.7 ft wide x 6 ft deep and leave a track from the plow skids approximately 19.65 ft wide. After the cable is laid in the trench, the same submarine plow will replace the displaced soil over the cable. Jet burial will take place in areas where existing cables preclude the ability for the submarine plow to be used. Additional armoring may be required in areas where desired cable depths cannot be met due to substrate type or existing cable presence and if rock were to be used for hard armor, it would consist of freshly crushed granite in the grade size range between 2 to 8 inches (50 to 200 millimeters).

The applicant has selected a preferred alternative which avoids the Gerry E. Studds Stellwagen Bank National Marine Sanctuary, but traverses Stellwagen Bank Dedicated Habitat Research Area (DHRA). DHRA's are designated by the New England Fishery Management Council (NEFMC) and approved by the Secretary of Commerce, and are intended to facilitate coordinated research on gear impacts, habitat recovery, natural disturbance, and productivity. In addition, the proposed route traverses the Western Gulf of Maine Closure Area (WGoMCA), a habitat management protection area that was implemented in 1998, the juvenile Atlantic cod Habitat Area of Particular Concern (HAPC), GOM Cod Protection Closures (I,II,III and V) and two Massachusetts Cod Conservation Zones. In addition, winter flounder spawning habitat will be traversed by the nearshore cable burial activities. The EFH Assessment identified potential

project impacts on federally managed species and their required habitats located along the cable route and concludes that installation of the fiber optic cable would adversely affect EFH. We offer the following comments for your consideration.

Resources in the Project Area

The project area is designated as Essential Fish Habitat (EFH) by the New England Fishery Management Council (NEFMC), the Mid-Atlantic Fishery Management Council (MAFMC) and NOAA Fisheries, for multiple federally managed species. These species include Acadian redfish (*Sebastes fasciatus*), American plaice (*Hippoglossoides platessoides*), Atlantic butterfish (*Peprilus triacanthus*), Atlantic cod (*Gadus morhua*), Atlantic halibut (*Hippoglossus hippoglossus*), Atlantic herring (*Clupea harengus*), Atlantic mackerel (*Scomber scombrus*), Atlantic sea scallop (*Placopecten magellanicus*), Atlantic surfclam (*Spisula solidissima*), Atlantic wolffish (*Anarhichas lupus*), Barndoor skate (*Anarhichas lupus*), Basking shark (*Cetorhinus maximus*), Black sea bass (*Centropristis striata*), Bluefin tuna (*Thunnus thynnus*), Common thresher shark (*Alopias vulpinus*), Bluefish (*Pomatomus saltatrix*), Haddock (*Melanogrammus aeglefinus*), Little skate (*Leucoraja erinacea*), Longfin inshore squid (*Doryteuthis pealeii*), Monkfish (*Lophius americanus*), Northern shortfin squid (*Illex illecebrosus*), Ocean pout (*Zoarces americanus*), Ocean quahog (*Arctica islandica*), Pollock (*Pollachius virens*), Porbeagle shark (*Lamna nasus*), Red hake (*Urophycis chuss*), Sand tiger shark (*Carcharias taurus*), Scup (*Stenotomus chrysops*), Silver hake (*Merluccius bilinearis*), Smooth skate (*Malacoraja senta*), Spiny dogfish (*Squalus acanthias*), Summer Flounder (*Paralichthys dentatus*), Thorny skate (*Amblyraja radiata*), White hake (*Urophycis tenuis*), White shark (*Carcharodon carcharias*), Windowpane flounder (*Scophthalmus aquosus*), Winter flounder (*Pseudopleuronectes americanus*), Winter skate (*Leucoraja ocellata*), Witch flounder (*Glyptocephalus cynoglossus*), and Yellowtail flounder (*Pleuronectes ferruginea*).

Some species and life stages may be more vulnerable to effects of the project. Species with benthic life stages as designated EFH may be more vulnerable, particularly those such as Atlantic cod (*Gadus morhua*), Winter flounder (*Pseudopleuronectes americanus*), Atlantic sea scallop (*Placopecten magellanicus*), Atlantic surfclam (*Spisula solidissima*), little skate (*Leucoraja erinacea*), longfin inshore squid (*Doryteuthis pealeii*), ocean quahog (*Arctica islandica*), scup (*Stenotomus chrysops*), white hake (*Urophycis tenuis*), red hake (*Urophycis chuss*), and winter skate (*Leucoraja ocellata*). Species that are habitat limited, aggregate to spawn, or have benthic eggs and larvae may be more vulnerable to the effects from the project. Project effects are of particular concern for Atlantic cod, a species with benthic life history stages dependent upon complex structured habitats that are vulnerable to project related impacts. Atlantic sea scallop, Atlantic surfclam, and ocean quahog are also particularly vulnerable due to their benthic existence and limited mobility. Winter flounder, ocean pout, Atlantic wolffish and longfin squid are benthic spawners with demersal eggs, making reproduction for these species particularly vulnerable. Atlantic cod and longfin squid aggregate to spawn and may be more vulnerable to longer term impacts if spawning behavior is disrupted.

Atlantic cod

Atlantic cod are an iconic species in New England waters and a highly sought-after catch for recreational fishermen. In 2013, the recreational marine bait and tackle industry in New England

was estimated to contribute \$200 million in total sales, \$78.9 million in income, and 1,256 jobs to the local economy (Hutt et al. 2015). Atlantic cod was reported to be the fifth greatest generator of sales (Hutt et al. 2015). In the 2020 Fisheries of the United States report, commercial landings were valued at \$4.8 billion, with approximately \$1.5 billion of the landings from New England (NOAA, 2022). In the most recent Status of Stocks report, U.S. commercial and recreational fishing supported 1.8 million jobs and \$255 billion in sales across the broader economy in 2019, while landings from New England totaled approximately \$1.5 billion in 2019 and 1.2 billion in 2020 (NOAA, 2022). Atlantic cod remains one of the key recreational species in New England and is highly prized by recreational fishermen (NMFS, 2022); in 2020 recreational anglers landed 386,000 pounds of Atlantic cod (recreational fishing landings database). In 2020, commercial landings of Atlantic cod totaled 1.6 million pounds and were valued at more than \$3.5 million (commercial fishing landings database). However, Gulf of Maine Atlantic cod remains on the overfished and overfishing lists (NMFS, 2022). Despite recent emergency management actions and severe reductions in fishery resource allocations, cod stocks in the region remain at less than 10% of the target sustainable spawning stock biomass, with the latest stock status report for Atlantic cod GOM stocks estimate at 6-9 percent, respectively, of the target for maximum sustainable yield (National Marine Fisheries Service - 1st Quarter 2022 Update Table A. Summary of Stock Status for FSSI Stocks). The Atlantic cod stock most affected by the project area is the Gulf of Maine stock, which includes cod found in federally designated inshore juvenile Cod HAPC, GOM Cod Protection Closures, Massachusetts Cod Conservation Zones, on Tillies Bank and within the Western Gulf of Maine Closed Area.

Depletion of individual spawning groups of cod is being driven by overfishing and climate change (Mieszkowska et al. 2009), so further reductions in spawning habitat from development activities pose an additional, cumulative, threat to local cod resources. Unanticipated potential loss of recruitment due to coastal development projects, such as submarine cables, pose additional threats to cod stocks. Given the state of Atlantic cod stocks and the economic importance of the species to recreational and commercial fisheries, it is essential to minimize adverse impacts to habitats that can support and increase survivorship of critical life stages for cod identified as occurring within the project area.

Juvenile Atlantic Cod

Areas along the cable corridor are particularly important for the survival of newly settled juvenile cod, specifically the “gravel bar” and “focal point” southwest of Saturday Night Ledge, as well as the GOM Cod Protection Zones. Multiple studies have demonstrated that despite the potential that juvenile cod may initially settle to the substrate indiscriminately, age-0+ juveniles are more abundant in complex habitats (e.g. rocky or vegetated habitats) (Cote et al. 2004; Fraser et al. 1996; Gotceitas et al. 1997; Gotceitas and Brown 1993; Grant and Brown 1998; Keats et al. 1987; Lazzari and Stone 2006; Linehan et al. 2001; Lough et al., 1989). Tupper and Boutilier (1995) found settlement of cod did not differ between habitat types, but post settlement survival and juvenile densities were higher in more structurally complex habitats, with cod survival highest on rocky reefs and cobble bottoms. A mark-recapture study found a level of site fidelity exhibited by the age-0+ juvenile cod sampled indicating that once settled into complex habitat juvenile cod maintain a level of residency within that habitat (Grant and Brown 1998). Further, rocky habitats provide a substrate for epibenthic growth that provides additional complexity and serves as refuge for juvenile fish that has been shown to significantly increase survivorship of

juvenile cod (Lindholm et al. 1999 and 2001). These complex benthic habitats are vulnerable to disturbance that may range from long-term to permanent, with extended recovery times on the order of years to decades (Auster and Langton 1999; Collie et al. 2005; NRC 2002; Tamsett et al. 2010). Permanent losses of these complex habitats or disturbances that result in a reduction of structural complexity, either the physical or biological component of the habitat, during and just after settlement occurs, are likely to have substantial impacts on the recruitment of juvenile cod in the project area. The timing of benthic disturbances including boulder clearing, cable installation, armoring and anchoring could impact settlement of juvenile cod in this area through direct disturbance of habitat.

Winter Flounder

Winter flounder, a federally managed species with EFH designated in the project area, may be more vulnerable to project impacts, particularly inshore construction associated with the HDD punch-out point. Winter flounder typically spawn in the winter and early spring, although the exact timing is temperature dependent and thus varies with latitude (Able and Fahay 1998); however, movement into these spawning areas may occur earlier, generally from mid- to late November through December. Winter flounder have demersal eggs that sink and remain on the bottom until they hatch. After hatching, the larvae are initially planktonic, but following metamorphosis they assume an epibenthic existence. Winter flounder larvae are negatively buoyant (Pereira et al. 1999) and are typically more abundant near the bottom (Able and Fahay 1998). Young-of-the-year flounder tend to burrow in the sand rather than swim away from threats. Increased turbidity and the subsequent deposition of the suspended sediments can smother the winter flounder eggs and adversely affect their EFH.

Longfin Squid

Longfin squid also have EFH designated in the project area, including for sensitive early life stages. Squid egg mops are attached to the seabed and may be impacted by project construction through direct loss, dislodging, turbidity and sedimentation. Scientific literature indicates that jarring of egg masses that are near the late stages of embryonic development results in premature hatching and high mortality of the embryos. The egg masses require clear, well-oxygenated overlying water for normal embryonic development so sediment resuspension during cable laying is expected to impact squid eggs within the cable corridor (Boletzy and Hanlon, 1983; Vidal et al. 2002). Impacts to squid eggs will be dependent upon the time of year the project is constructed. Squid mop biomass is highest between May and August. Construction activities during this time, while not anticipated according to project documentation, would likely result in adverse effects to longfin squid eggs.

Protected Habitat in the Project Area

Juvenile Atlantic Cod HAPC

The project HDD exit point and the first approximately 2 miles of the cable route would be within the area and depths potentially exhibiting juvenile Atlantic cod HAPC. Juvenile Atlantic cod HAPC includes intertidal and sub-tidal benthic habitats consisting of gravel and cobble habitats and adjacent sandy habitats for young-of-the-year juveniles; and gravel, cobble, and boulder habitats for older juveniles.

Western Gulf of Maine Closure Area (WGoMCA)

The proposed cable route passes through the Western Gulf of Maine Closure Area (WGoMCA), a habitat management protection area that was implemented in 1998, and designated Atlantic cod spawning areas. The WGoMCA consists of complex and unique habitat conditions that support a wide range of marine resources. This area provides habitat for feeding, spawning, and development of federally managed species, and supports commercial and recreational fisheries and associated communities. On August 29, 2019, we provided early coordination comments through the MEPA process summarizing the necessary survey requirements for a complete EFH Assessment and concluded that “impacts to sensitive habitats, particularly hard-bottom habitats, within the Western Gulf of Maine Closure Area should be fully avoided. Work within the designated cod spawning areas should occur during periods when spawning is not actively occurring”. The Western GOM Habitat Management Area (HMA) is closed year-round to all bottom-tending mobile gears to minimize habitat disturbance. Bottom-tending mobile gear is defined as gear in contact with the ocean bottom, and towed from a vessel, which is moved through the water during fishing in order to capture fish, and includes otter trawls, beam trawls, hydraulic dredges, non-hydraulic dredges, and seines (with the exception of a purse seine). The Western Gulf of Maine (GOM) Groundfish Closure, which shares the same boundaries as the HMA, is closed year-round to all fishing vessels with exceptions for certain gear types, charter and party or recreational vessels; vessels fishing with exempted gears and vessels participating in the mid-water trawl exempted fishery. The listed exemptions are in place because they result in less demersal habitat impacts than bottom-tending gear types. Impacts to complex habitats are known to result in long recovery times and may take years to decades to recover from certain impacts. Such impacts may result in cascading long term to permanent effects to species that rely on this area and the fisheries and communities that target such species. Of particular concern, this area is known to support aggregations of adult Atlantic cod. Due to the protections afforded by the HMA and groundfish closure, the areas traversed by the cable route will experience greater benthic disturbance than currently is allowed within these regions.

Stellwagen Bank Dedicated Habitat Research Area (DHRA)

The Stellwagen Bank National Marine Sanctuary was designated to protect unique and ecologically important resources within the area, and has regulations and guidelines for activities occurring within its boundary. These include special use permits, fair market value calculations, guidance for long term monitoring and decommissioning plans. Sanctuary DHRA’s are intended to facilitate coordinated research on gear impacts, habitat recovery, natural disturbance, and productivity. Disruptions within this area may interfere with research being conducted.

Cod Conservation Zones

The proposed preferred cable route will traverse both the Massachusetts Bay winter and Cape Cod spring Cod Conservation zones (332 Code of Massachusetts Regulations [CMR] 8.06), as well as the GOM Cod Protection Closures which are closed to all fishing vessels during the time periods identified in Figures 1-4. Within the GOM, fisheries-based protection measures such as mortality and spawning protection closures, provide habitat benefits through protecting habitats during certain times of the year that are important for supporting specific life history functions. Habitat management areas typically do not have provisions included that apply to non-fishing activities. However, our regional fishery management councils have developed recommended

policies for non-fishing activities that do put forward recommendations for consideration when conducting activities in HMAs.

Spawning cod form dense aggregations (known as “haystacks”) prior to and during spawning that last for days to weeks. Cod spawning aggregations are easily disrupted and disturbances may result in the dispersion of spawning aggregations for extended periods. In the Gulf of Maine, subsequent to the dispersion of a spawning aggregation by bottom gillnet fishing, the dispersed cod did not return to the spawning site for the duration of the spawning season (Dean 2012). The “gravel bar” and “focal point” southwest of Saturday Night Ledge, off of Manchester-by-the-Sea, MA, represent juvenile Atlantic cod spawning areas which were avoided based on coordination with Massachusetts Division of Marine Fisheries. Within the Gulf of Maine, “winter” spawning peaks in November-December, while “spring” spawning peaks in May-June near the 50 m isobath in the western Gulf of Maine, primarily along the Massachusetts and New Hampshire coasts (Dean et al, in review). For Gulf of Maine Spring Spawners, the time between peak spawning (~June 1st) and when 3-5 cm juveniles are first observed (~September 1st) is 90 days; in contrast, the time between peak spawning (~December 1st) and first observed settlement (~May 1st) is approximately 150 days for GOM winter spawners (Dean et al., in review). Due to the presence of major cod spawning aggregations within the project locus, in-water work should not take place from November 1 to January 31 in the GOM Cod closure III (figure 1), from May 1 to June 30 in the GOM Cod Closure areas I and II (figure 2, figure 3), and from March 1 to March 30 within groundfish closure V (Figure 4) (NEFSC 2020).

Unique Habitats in the Project Area

Complex Rocky Habitats

The project area overlaps with structurally complex habitats, including natural rocky habitats that have been identified as occurring throughout most of the project area. Rocky habitats provide three-dimensional structure that plays an important ecological role for fish as shelter and refuge from predators (Auster 1998; Auster and Langton 1999; NRC 2002; Stevenson et al. 2004). The relationship between benthic habitat complexity and demersal fish community diversity has also been positively correlated (Malek et al. 2010). Rocky habitats are inherently complex, where their physical complexity provides crevices for species to seek shelter from predation and flow, these habitats also provide a substrate for macroalgal and epibenthic growth that can increase the functional value of these habitats as refuge for juvenile fish. Multiple managed fish species have life history stages that are dependent on, or mediated by, rocky habitats and their associated attributes (Gotceitas et al. 1995, Lindholm et al. 1999, Auster 2001, Auster 2005, Methratta and Link 2006). Rocky habitats are particularly sensitive to disturbances that reduce their fundamental complexity, with impacts ranging from long-term to permanent where extended recovery times of biological components are on the order of years to decades (Auster and Langton 1999; Bradshaw et al. 2000, Collie et al. 2005; NRC 2002; Tamsett et al. 2010). Physical habitat disturbance occurring during spawning may interfere with mating behavior and egg production (Dean et al 2014, Siceloff and Howell 2013). Due to their important role for multiple marine organisms and vulnerability to disturbances, impacts to rocky habitats should be avoided wherever feasible.

Soft Bottom Habitats

Sand and mud habitats serve important functions for the fish and invertebrate species that rely on them for refuge, feeding, and reproduction. These habitat types support distinct benthic communities that serve as EFH for managed fish species by directly providing prey and foraging habitat, or through emergent fauna providing increased structural complexity and shelter from predation. Habitat attributes within fine grained substrates also provide important functions for managed fish species including shelter, foraging, and prey. For example, biogenic depressions, shells, moon snail egg cases, anemone, and polychaete tubes within mud and sand habitats serve as shelter for red hake (Able and Fahay 1998; Wicklund 1966; Ogren et al. 1968; Stanley 1971; Shepard et al. 1986). In addition, spawning cod also congregate over specific substrate types, gravel during the day when resting and adjacent muddy areas at night (Siceloff and Howell 2013). Impacts to soft bottom habitats would affect EFH for multiple managed fish species, however these habitats are expected to recover more quickly than other more complex habitats.

Sand waves

In addition to complex habitats, sand waves provide structural complexity and are specified as components of EFH for multiple managed fish species. Sand ripples and sand waves are found in along the cable route. Sand waves (ripples and megaripples) found in sandy, high flow environments provide fish with shelter and opportunities for feeding and migration (Gerstner 1998). In addition to providing flow refugia, sand waves may also play an important role in mediating fish-prey interactions and providing shelter from predation (Auster et al. 2003). Disruptions of these features during sensitive life history stages may result in disproportionate impacts to the species that rely upon their mediating effects.

Adverse Effects from the Proposed Project

Habitat Conversion and Community Structure

According to the EFH assessment, “the movement of the ROV and plow skids over the seafloor could also displace cobbles and boulders from its path. Where surface cobbles and boulders are displaced, such changes may persist for years (Guarinello and Carey, 2020), although a gravelly substrate remaining in the disturbed area would still be considered a hard-bottom habitat”. Given that the 300Hz SSS resolution was 0.2m and the geotechnical campaign spacing was 10km for cores and only one core was taken within the WGoMCA, it is unclear how this conclusion is justified. The three-dimensional physical structure of rocky habitats creates a diversity of complex crevices within piled pebble, cobble and boulder habitats, as well as areas of refuge in the crevices between gravels in pavement habitats and along emergent rock surfaces for species that use the habitats for shelter from predation and flow. As noted above, these habitats provide a substrate for epibenthic growth that can increase the functional value of these habitats as refuge for juvenile fish. It also takes time to establish the epifauna and macroalgae that play an important role in mediating the spatial distribution and success of multiple managed fish species. In addition, turbidity in these habitats can limit or alter the complexity of the habitat present, thereby limiting their utility to managed species. Of particular concern are impacts to species such as Atlantic cod that use fine-scale features of natural rocky habitats as shelter from flow and to mediate predation risk.

The EFHA states that "because habitat impacts would primarily be temporary and rocks or boulders shifted during installation would remain available as habitat, and since the disturbance would occur over a relatively limited spatial extent relative to the available surrounding habitat

and compared to other offshore activities such as bottom trawling or large-scale dredging (OSPAR, 2012), impacts would be minor". This is an oversimplification of the impacts of the proposed work on habitats within the WGoMCA, which has been closed to bottom-tending fishing gear since 1998, thereby allowing recovery for the past 24 years.

According to Table 5-4 in the Expanded EFHA, there are 0 acres of substrate meeting the 'Rocky: Pebble/Gravel/Cobble (2 – 256 mm) size class' within the WGoMCA. However, research conducted by the University of New Hampshire, Center for Coastal and Ocean Mapping along Jeffries Ledge to the north of the cable route, reveals the sediment substrate group to be primarily gravel-mixes, within areas of similar backscatter to the cable route. This dataset includes bottom photos revealing pebble-gravel-cobble mixes throughout low reflectivity (light grey regions) of the study area. In contrast, the EFHA and associated documentation for the proposed project indicates that "generally, fine grained sediments like clay / silt are characterized by acoustic low reflectivity (light grey) in the side scan sonar images, while coarse sediments, such as gravel and cobbles, are imaged by high acoustic reflectivity (dark grey). Sand shows a medium reflectivity (medium grey). Exposed rock is generally imaged by significantly increased reflectivity with irregular relief and acoustic shadows". We disagree with the interpretation of the geotechnical campaign that there is no pebble/ gravel/ cobble habitat within the cable route in the WGoMCA.

Sedimentation & Turbidity Effects

Installation will result in the suspension and redeposition of fine-grained sediments. Sedimentation impacts will be most impactful for epibenthic invertebrate species and sensitive life stages of fish, such as demersal eggs. Sedimentation impacts vary by habitat type and the depth of deposition. Adverse impacts in soft bottom habitats typically occur as a result of substantial deposition events or burial of demersal eggs, whereas adverse sedimentation impacts in hard habitats may occur even with limited deposition of sediments. The deposition of fine-grained sediments within rocky habitats may result in adverse impacts ranging from the loss of attached epifauna due to smothering, to inhibiting the settlement of larvae resulting from even small depths of deposition on rock surfaces. Demersal eggs are sensitive to sedimentation impacts (Berry et al. 2011; Newcombe and Jensen 1996) and are expected to be impacted by grappling, cable laying and armoring. Species with designated EFH with demersal eggs include winter flounder, longfin squid, and ocean pout. Avoiding in-water construction activities when early life stages are present, would avoid and minimize adverse effects to winter flounder EFH for these early life stages.

Installation will result in both turbidity from the suspension of fine grain sediments and entrainment impacts to pelagic habitats. Elevated suspended sediments in the water column have been documented to result in adverse impacts to various life stages of fish. High turbidity can impact fish by requiring greater utilization of energy, gill tissue damage and mortality (Newcombe and Jensen 1996; Wilber and Clark 2001). The cable route is designated EFH for sensitive life history stages of multiple managed fish species, including Atlantic cod and several demersal shellfish species including surf clam, ocean quahog and sea scallops. Demersal eggs, larvae, and juveniles are also sensitive to turbidity and sedimentation (Berry et al. 2011, Newcombe and Jensen 1996) and are expected to be impacted by project construction with effects ranging from direct mortality to behavioral impacts. Shellfish are susceptible to elevated

levels of suspended sediments which can interfere with spawning success, feeding, and growth (Newcombe and MacDonald 1991; Wilber and Clark 2001).

The project is expected to result in up to 0.8 acres of habitat conversion due to armoring of surface laid cables and 64.9 acres of impact to winter flounder habitat, according to the EFHA. An additional 994.92 acres of habitat within the WGoMCA could be impacted by cable laying activities, which includes the impact due to turbidity, according to additional information provided by the applicant. Additional permanent impacts of the project will result from the addition of crushed granite for cable armoring, boulder clearing, and anchoring within complex habitats. The addition of crushed granite to armor cables in structurally complex rocky habitats will result in a loss of both physical and biological structural complexity provided previously by natural rocky habitats. The introduction of hard substrate into soft bottom habitats will provide more habitat within the project area for species such as black sea bass and red hake, but will result in habitat loss for other species, particularly bivalves such as ocean quahog and surf clams.

While it is unclear whether armoring will be used, the presence of artificial hard substrates for cable protection may also affect macrobenthic communities. Epibenthic colonization of installed artificial hard substrates may vary widely based on the structure and composition of the installed substrate. For example, benthic monitoring at the Block Island Wind Farm found that three years post-construction installed concrete mattress used as cable protection supported no epifaunal growth, indicating that deployment of these devices would have an overall negative effect on organisms that inhabit natural hard bottom substrates (HDR 2019). Further, impacts to benthic communities of adjacent natural rocky habitats during installation of artificial substrates are expected to be long-term, with recovery times of the biological components ranging from years to a decade or more.

Essential Fish Habitat Conservation Recommendations

Section 305(b)(2) of the MSA requires all federal agencies to consult with us on any action authorized, funded, or undertaken by that agency that may adversely affect EFH. We recommend, pursuant to Section 305(b)(a)(A) of the MSA, that you adopt the following EFH conservation recommendations:

1. The proposed cable route should be redirected to avoid the Western Gulf of Maine Closed Area. This area has been closed to bottom-tending fishing gear since 1998 and benthic habitat recovery is ongoing.

Should CR#1 not be met, please adopt the following conservation recommendations:

2. Fine scale resolution benthic surveys capable of detecting sediment with grain sizes 2 – 256mm should be conducted prior to any in-water activities (including PLGR/ RC) within the Western Gulf of Maine Closure Area. Specifically, sidescan sonar and multibeam backscatter data should be used to delineate areas of high, medium and low backscatter return for targeted benthic sampling using ROV video transects and still imagery (see Appendix A). The results of these surveys should be used to fully delineate and characterize natural rocky habitats (habitat with sediment grain sizes >2mm) within the WGoMCA. A benthic sampling plan should be provided to us for review and comment prior to planning field survey activities.

3. Results from CR#2 should be used to avoid impacts to sensitive habitats, particularly biogenic and natural rocky habitats, within the WGoMCA should be fully avoided.
4. Compensatory mitigation should be provided for any unavoidable impacts to hard-bottom / natural rocky habitat within the WGoMCA. Mitigation should be in the form of on-site, in-kind mitigation if possible, and plans should be submitted to us for review and comment. If pre-construction surveys completed in accordance with CR1 are not adequate to delineate and characterize natural rocky bottom habitat (sediment grain sizes >2mm), compensatory mitigation should be provided for the full area of impact within WGoMCA (994.92 acres of habitat).
5. Due to the presence of major cod spawning aggregations within the project locus, in-water work should not take place from November 1 to January 31 in the GOM Cod closure III (figure 1), from May 1 to June 30 in the GOM Cod Closure areas I and II (figure 2, figure 3), and from March 1 to March 30 within groundfish closure V (Figure 4). Coordinates for these areas may be accessed here: <https://www.fisheries.noaa.gov/new-england-mid-atlantic/commercial-fishing/northeast-multispecies-closed-area-regulations-gulf>
6. Work in Winter Flounder habitat should be minimized from February 15 to May 31 to minimize adverse effects to winter flounder eggs and larvae. In the event this CR cannot be fully met, sedimentation and turbidity at punch-out point of HDD should be minimized through the use of turbidity controls or other applicable Best Management Practices (BMP's).
7. Post deployment multibeam backscatter and bathymetric surveys, sidescan sonar, ROV video and still imagery should take place within 30 days following installation, as well as 1, 3, 5 years post burial to allow for pre and post-impact analysis (see appendix A). Pending the results of the post-deployment surveys, subsequent years may not be necessary once recovery is met.
8. Armored or surface-laid cable within EEZ should be overlaid with natural rounded stone
 - a) Armoring within complex habitats should use natural, rounded stone of consistent grain size to match existing conditions.
 - b) Armoring placed within soft-sediment habitats should incorporate natural, rounded cobble and boulders (2.5-10 inches in diameter for cobble or >10-inch diameter for boulder).
 - c) Engineered stone should be designed and selected to provide three-dimensional structural complexity that creates a diversity of crevice sizes. Descriptions and specifications for any proposed engineered stone should be provided to USACE for agency comment and review prior to final design selection.

Fish and Wildlife Coordination Act Comments

1. All cable burial should achieve a sufficient depth to avoid fisheries interactions within the United States EEZ. If sufficient depth cannot be achieved within the EEZ, over-lay armored or surface-laid cable with natural rounded stone to minimize fisheries interactions.
 - a) Armoring within complex habitats should use natural, rounded stone of consistent grain size to match existing conditions.

- b) Armoring placed within soft-sediment habitats should incorporate natural, rounded cobble and boulders (2.5-10 inches in diameter for cobble or >10-inch diameter for boulder).
 - c) Engineered stone should be designed and selected to provide three-dimensional structural complexity that creates a diversity of crevice sizes. Descriptions and specifications for any proposed engineered stone should be provided to USACE for agency comment and review prior to final design selection.
2. We recommend silt-producing activities associated with nearshore construction be minimized to the greatest extent practicable from June 1 to October 31 to minimize adverse effects to American lobster (*Homarus americanus*), Atlantic surf clam (*Spisula solidissima*), Sea Scallop (*Placopecten magellanicus*), Ocean quahog (*Arctica islandica*), and Blue Mussel (*Mytilus edulis*).

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 you have adopted that avoid, mitigate, or offset 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).

Please also note that a distinct and further EFH consultation must be reinitiated pursuant to 50 CFR 600.920(1) if new information becomes available or the project is revised in such a manner that affects the basis for the above EFH conservation recommendations.

Conclusion

We look forward to your response to our recommendations for this project. If you have any questions regarding EFH and FWCA comments and recommendations, please contact Kaitlyn Shaw at 978-282-8457 or at kaitlyn.shaw@noaa.gov.

Sincerely,



(for)
Louis A Chiarella
Assistant Regional Administrator
for Habitat and Ecosystem Services

cc: Jason Kahn, NOAA Endangered Species Act Interagency Cooperation Division
Ruthann Brien, ACOE
Tom Nies, NEFMC
Chris Moore, MAFMC
Lisa Havel, ASMFC

GOM Cod Protection Closure I

May 1 - May 31

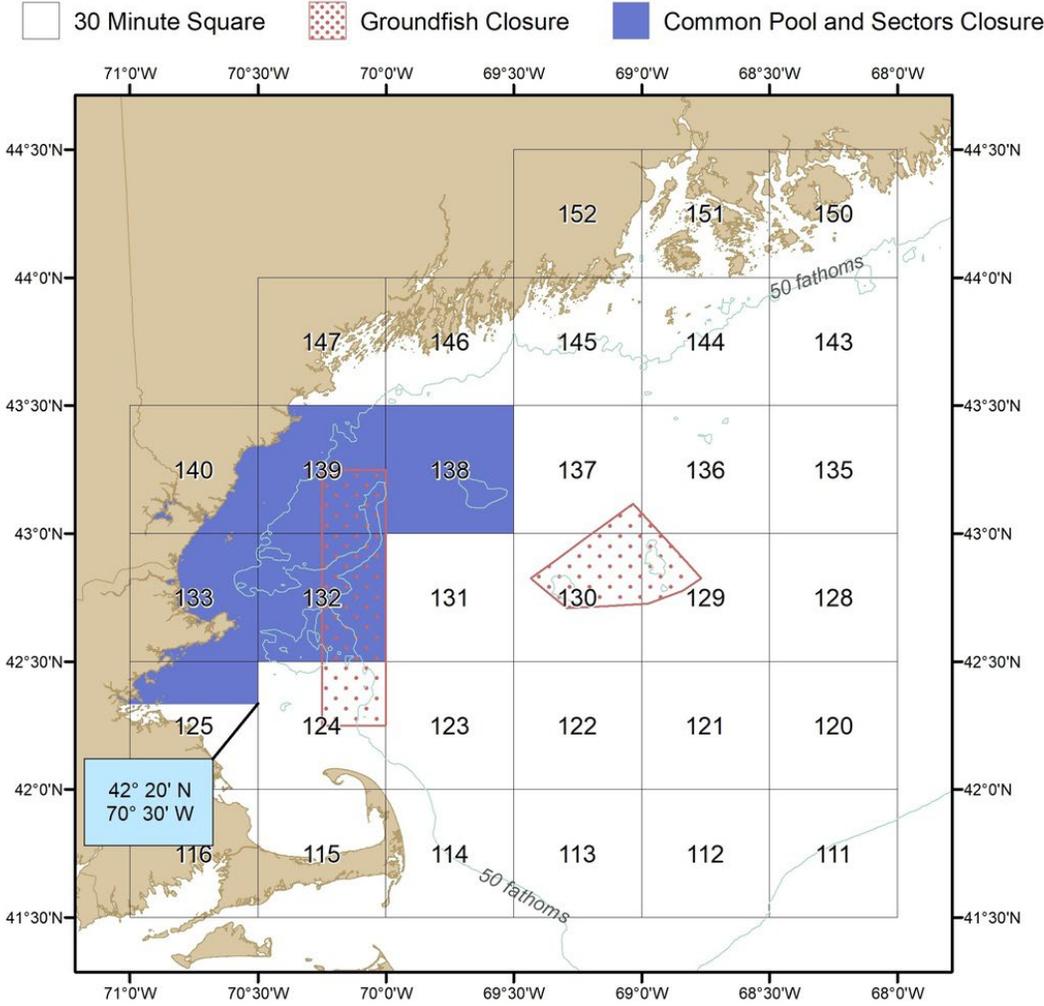


Figure 1. GOM Cod protection closure I

GOM Cod Protection Closure II

June 1 - June 30

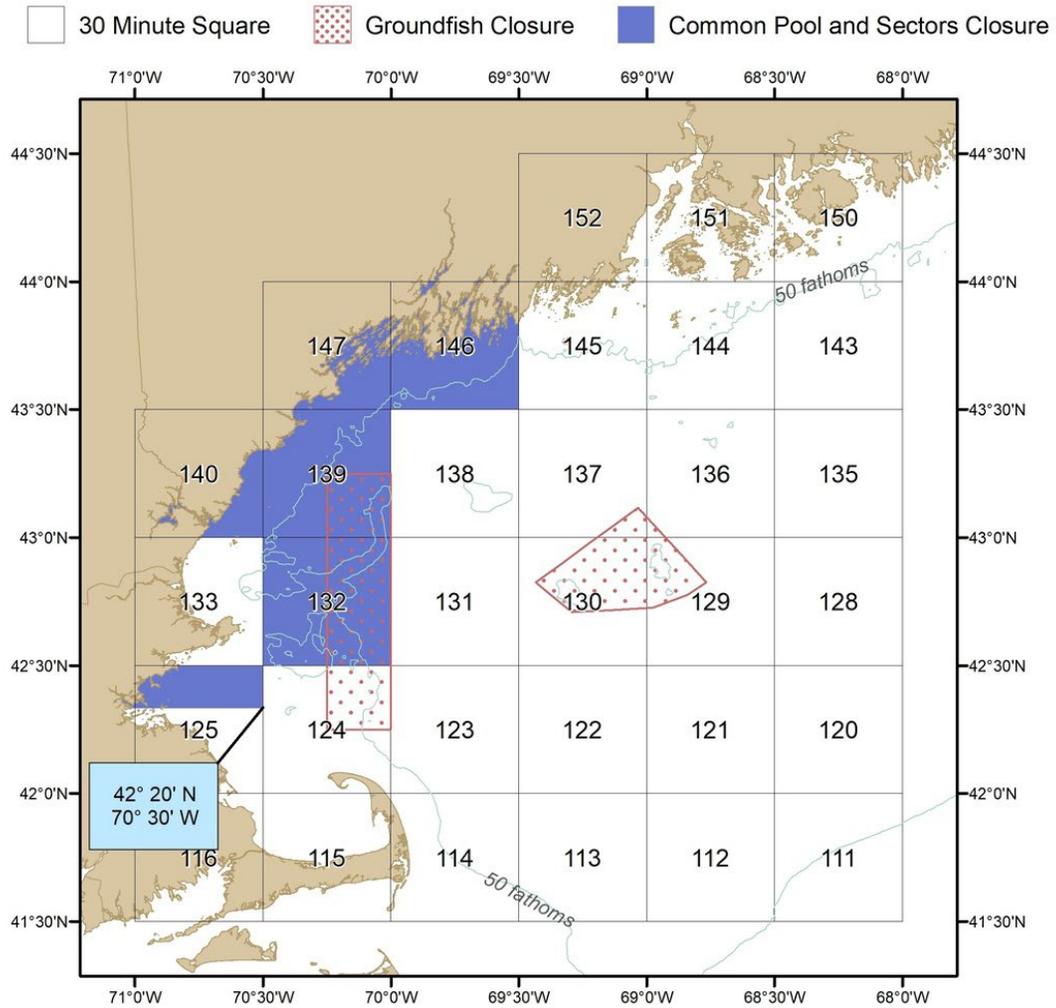


Figure 2. GOM Cod protection closure II

GOM Cod Protection Closure III

November 1 - January 31

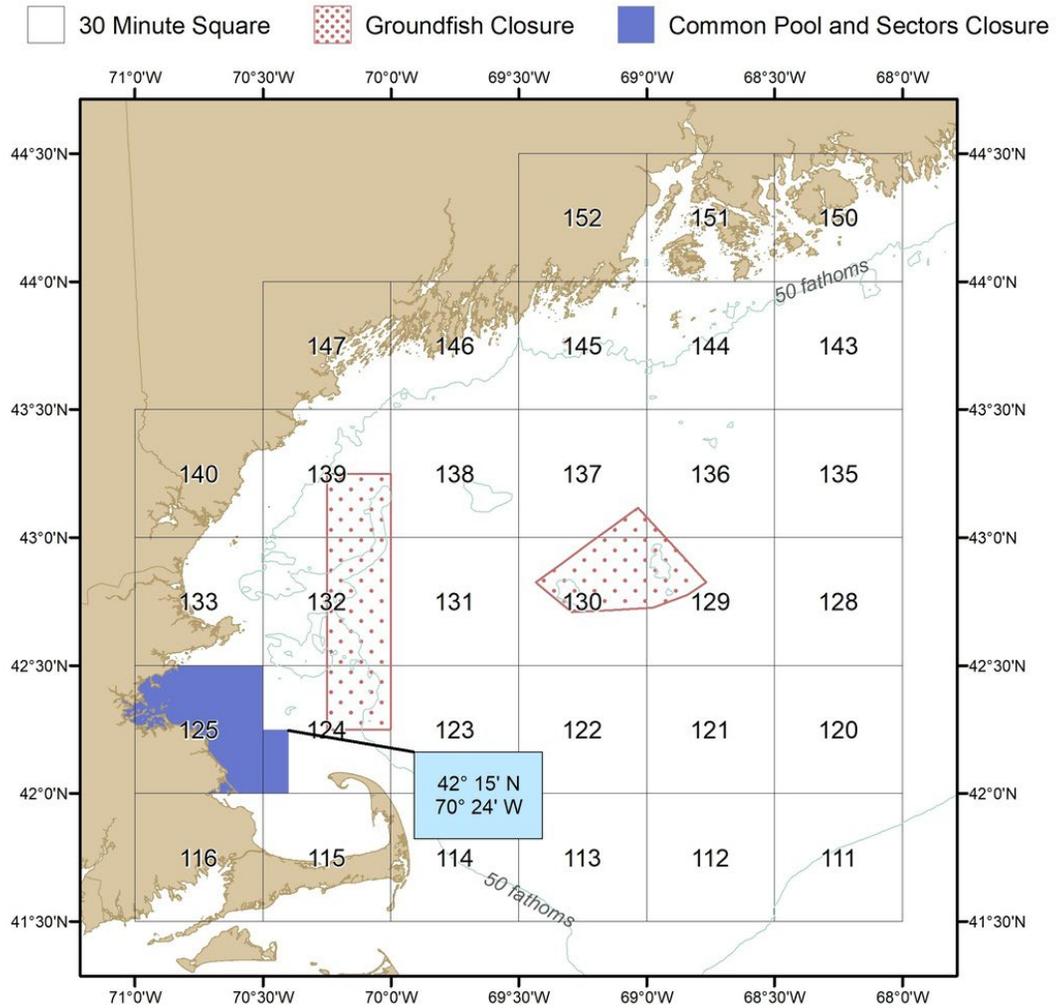


Figure 3. GOM Cod protection closure III

GOM Cod Protection Closure V

March 1 - March 31

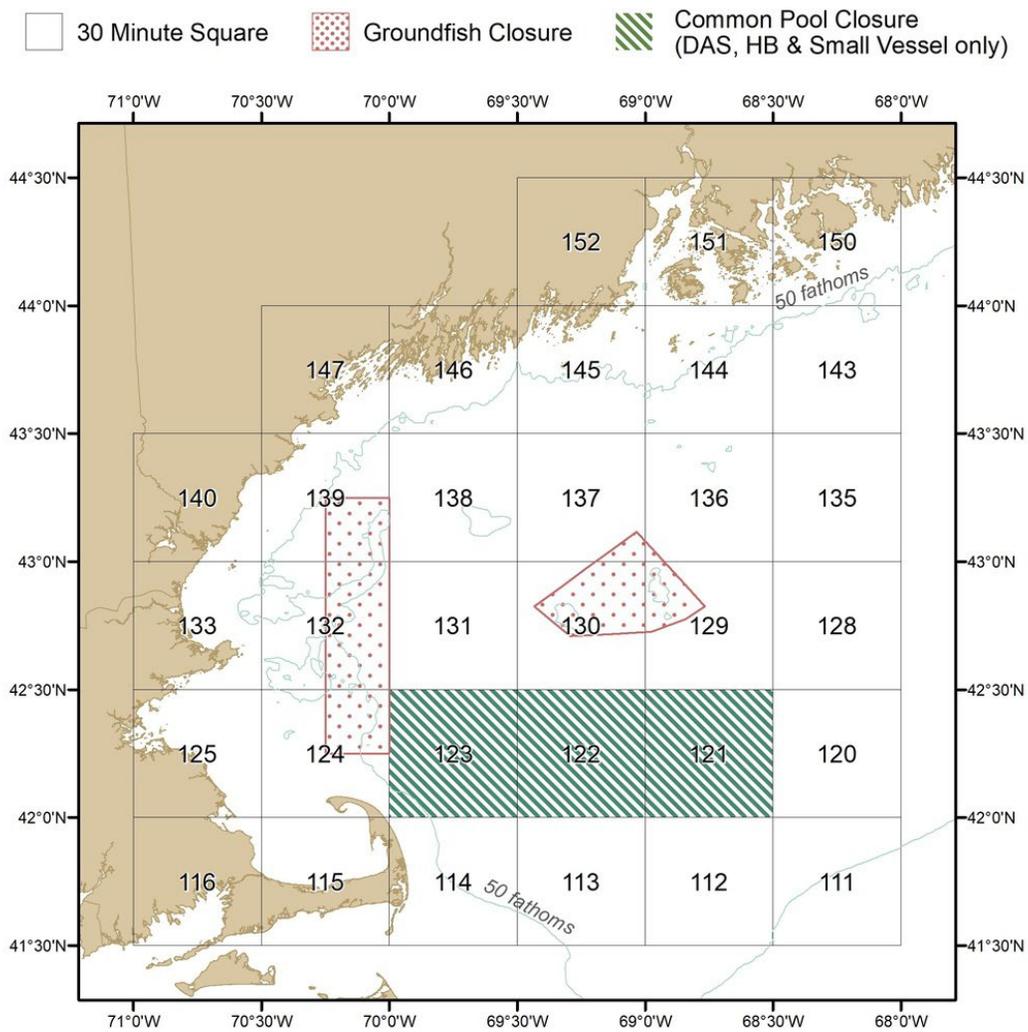


Figure 4. GOM Cod protection closure V.

Appendix A: Specifications for a survey of the proposed cable route located in the Western Gulf of Maine Closure Area (WGoMCA)

(Note: these specifications are pursuant to conservation recommendation #4)

Survey objectives:

1. Survey the entire length of the cable route within WGoMCA with side scan sonar
2. Conduct a visual survey of the cable route with a remotely operated vehicle to assess physical attributes of surrounding seafloor, fauna, flora.

Side scan survey specifications:

- Purpose: To confirm substrate types along the cable route.
- Resolution: 400kHz or higher
- Range: 50m swath width (both channels)
- Altitude: 10m maximum altitude
- Speed: 3.5-4 knots maximum towfish speed
- Data: The report should include the following data:
 - Copy of field log notes
 - Raw data in .XDF and .SDF formats

Other Considerations:

ROV survey specifications:

Purpose: To obtain video and photos of sufficient resolution to depict and characterize seafloor communities on or surrounding the cable route.

Resolution: 4k video and 3840 x 2160 or higher for still images (derived from 4K video or digital still camera)

Data:

Image data should be transmitted to surface support vessel via fiber optic cable to maximize resolution in the recorded files.

Frame captures in JPEG or TIFF format should be produced from the real-time video to ensure image clarity.

Excel spreadsheet of coordinates in decimal degrees for start and end of ROV transects

Copy of field log notes

The report should contain the above information, data and a summary of the findings. Additional conservation recommendations may be provided upon receipt of report.

Literature Cited

- Able, K. W. and M.P. Fahay. 1998. The first year in the life of estuarine fishes in the middle Atlantic Bight; Rutgers University Press. New Brunswick, NJ. 342 p.
- ASMFC, Atlantic States Marine Fisheries Commission. 2015. Interstate Fishery Management Plan for Jonah Crabs.
- Auster PJ. 1998. A conceptual model of the impacts of fishing gear on the integrity of fish habitats. *Conservation Biology* 12: 1198-1203.
- Auster, P.J., J. Lindholm, S. Schaub, G. Funnell, L.S. Kaufman, and P.C. Valentine. 2003. Use of sand wave habitats by silver hake. *Journal of Fish Biology* 62, 143-152.
- Auster, P.J. and R. Langton. 1999. The effects of fishing on fish habitat. *American Fisheries Society Symposium* 22:150-187.
- Berry, W.J., Rubenstein, N.I., Hinchey, E.K., Klein-Mac-Phee, G. and Clarke, D.G. 2011. Assessment of dredging-induced sedimentation effects on winter flounder (*Pseudopleuronectes americanus*) hatching success: results of laboratory investigations. Proceedings of the Western Dredging Association Technical Conference and Texas A&M Dredging Seminar. Nashville, TN June 5-8,2011.
- Berry, W.J., Hinchey, E.K., Rubenstein, N.I., Klein-MacPhee, G. 2004. Winter flounder, *Pseudopleuronectes americanus*, hatching success as a function of burial depth in the laboratory. Ninth flatfish biology conference- poster presentation; 2004 Dec 1-2; Westbrook, CT. Woods Hole, MA: Northeast Fisheries Science Center Reference Document 04-13.
- Boletzky Sv, Hanlon RT. 1983. A review of the laboratory maintenance, rearing and culture of cephalopod molluscs. *Mem Natl Mus Vic* 44:147-187
- Collie, J.S., Hermsen, J., Valentine, P.C., and Almeida, F. 2005. Effects of fishing on gravel habitats: assessment and recovery of benthic megafauna on Georges Bank: in P.W. Barnes and J.P. Thomas, editors, *Benthic habitats and the effects of fishing: American Fisheries Society Symposium* 41, Bethesda, Maryland , p. 325-343.
- Cote, D., Moulton, S., Frampton, P. C. 8., Scruton, D.A., and McKinley, R. S. 2004. Habitat use and early winter movements by juvenile Atlantic cod in a coastal area of Newfoundland. *Journal of Fish Biology* 64(3):665-679.
- Dean, M. J., Hoffman, W. S., and Armstrong, M. P. 2012. Disruption of an Atlantic Cod Spawning Aggregation Resulting from the Opening of a Directed Gill-Net Fishery. *North American Journal of Fisheries Management*, 32, 124-132. doi:DOI: 10.1080/02755947.2012.663457

- Deese, H. 2005. Atlantic Cod Spawning Aggregations within Southern New England, Georges Bank, and Gulf of Maine. Appendix A to “Utilizing Genetic Techniques to Discriminate Atlantic Cod Spawning Stocks in U.S. waters: a Pilot Project.
- Fraser, S., Gotceitas, V., and Brown, J. A. 1996. Interactions between age-classes of Atlantic cod and their distribution among bottom substrates. *Canadian Journal of Fisheries and Aquatic Sciences* 53 (2):305-314.
- Gotceitas, V., Fraser, S., and Brown, J. A. 1997. Use of eelgrass beds (*Zostera marina*) by juvenile Atlantic cod (*Gadus morhua*). *Canadian Journal of Fisheries and Aquatic Sciences* 54(6):1306-1319.
- Gotceitas, V., and Brown, J. A. 1993. Substrate selection by juvenile Atlantic cod (*Gadus morhua*): effects of predation risk. *Oecologia* 93(1): 31-31.
- Grant, S. M., and Brown, J. A. 1998. Nearshore settlement and localized populations of age 0 Atlantic cod (*Gadus morhua*) in shallow coastal waters of Newfoundland. *Canadian journal of fisheries and aquatic sciences* 55(6): 1317 -1327.
- Guarinello, M.L., and Carey, D.A. 2020. “Multi-modal Approach for Benthic Impact Assessments in Moraine Habitats: a Case Study at the Block Island Wind Farm”. *Estuaries and Coasts*.
- Hutt, C., Lovell, S., and Steinback, S. 2015. The Economics of Independent Marine Recreational Fishing Bait and Tackle Retail Stores in the United States, 2013. U.S. Department of Commerce, NOAA Tech. Memo. NMFS-F/SPO-151a, 123 p.
- ICES, International Council for the Exploration of the Sea. 2005. Spawning and life history information for North Atlantic cod stocks. ICES Cooperative Research Report, 274, 1-152.
- Jacobson LD. 2005. Essential fish habitat source document: Longfin inshore squid, *Loligo pealeii*, life history and habitat characteristics (2nd edition). NOAA Tech Memo NMFS NE 193;42p.
- Keats, D.W., Steele, D.H., and South, G.R. 1987. 'The role of fleshy macroalgae in the ecology of juvenile cod (*Gadus morhua* L.) in inshore waters off eastern Newfoundland', *Canadian Journal of Zoology*, 65: 49-53.
- Lazzari, M.A. and Stone, B.Z. 2006. Use of submerged aquatic vegetation as habitat by young-of-the-year epibenthic fishes in shallow Maine nearshore waters. *Estuarine Coastal and Shelf Science* 69: 591-606.
- Lindholm J., Auster P.J., and Kaufman L. 1999. Habitat-mediated survivorship of juvenile (0-year) Atlantic cod (*Gadus morhua*). *Marine Ecology Progress Series* 180:247-255.

- Lindholm, J., P.J. Auster, M. Ruth and L. Kaufman. 2001. Modeling the effects of fishing and implications for the design of marine protected areas: juvenile fish responses to variations in seafloor habitat. *Conservation Biology* 15: 424-437.
- Linehan, J. E., Gregory, R. S., and Schneider, D. C. 2001 Predation risk of age-0 cod (*Gadus*) relative to depth and substrate in coastal waters. *Journal of Experimental Marine Biology and Ecology* 263(1):25-44.
- Lough, R. G., P. C. Valentine, D. C. Potter, P. J. Auditoro, G. R. Bolz, J.D. Neilson, and Perry, R.I. 1989. Ecology and distribution of juvenile cod and haddock in relation to sediment type and bottom currents on eastern Georges Bank. *Mar. Ecol. Prog. Ser.* 56:1-12.
- MacKenzie, C., and Moring, J.R. 1985. Species profiles: life histories and environmental requirements of coastal fishes and invertebrates (North Atlantic) - American lobster. U.S. Fish Wildl Serv. Biol. Rep. 82(11.33). U.S. Army Corps of Engineers, RI EL-82-4. 19 pp.
- Methratta, E., and Dardick, W. 2019. Meta-Analysis of Finfish Abundance at Offshore Wind Farms. *Reviews in Fisheries Science and Aquaculture*, 27(2), 242-260.
- NMFS, National Marine Fisheries Service. 2017. Fisheries of the United States, 2016. U.S. Department of Commerce, NOAA Current Fishery Statistics No. 2016. Available at: <https://www.fisheries.noaa.gov/resource/document/fisheries-united-states-2016-report>
- NRC, Natural Research Council. 2002. Effects of trawling and dredging on seafloor habitat. National Academy Press, Washington, District of Columbia.
- NEFMC, New England Fishery Management Council. 2018. Omnibus Habitat Amendment 2. New England Fisheries Management Council. <https://s3.amazonaws.com/nefmc.org/OriginalOmnibusAmendment.PDF>
- Newcombe, C.P. and Jenson, O.T. 1996. Channel suspended sediment and fisheries: a synthesis for quantitative assessment of risk and impact. *North American Journal of Fisheries Management* 16: 693-727.
- Newcombe C.P. and MacDonald D.D. 1991. Effects of suspended sediments on aquatic ecosystems. *North American Journal of Fisheries Management* 11:72-82.
- Ogren L., Chess, J., Lindenberg, J. 1968. More notes on the behavior of young squirrel hake, *Urophycis chuss*. *Underwater Naturalist* 5(3):38-39.
- OSPAR. 2012. Guidelines on Best Environmental Practice (BEP) in Cable Laying and Operation. 2012. Available online at: https://www.gc.noaa.gov/documents/2017/12/02e_agreement_cables_guidelines.pdf.

- Shepard A.N., Theroux, R.B., Cooper, R.A., Uzmann, J.R. 1986. Ecology of Ceriantharia (Coelenterata, Anthozoa) of the northwest Atlantic from Cape Hatteras to Nova Scotia. *Fishery Bulletin* 84:625-646.
- SFWF Hydrodynamic & Sediment Transport Modeling, May 23, 2018. Appendix I. Available online: https://www.boem.gov/sites/default/files/renewable-energy-program/State-Activities/NY/App-I_SF WF_Sediment-Transport-Report_2018-06-21.pdf
- Stanley, DJ. 1971. Fish-produced markings on the outer continental margin east of the Middle Atlantic states. *Journal of Sedimentary Petrology* 41:159-170
- Stevenson, D.K., Tuxbury, S., Johnson, M.R., Boelke, C. 2014. Shallow Water Benthic Habitats in the Gulf of Maine: A Summary of Habitat Use by Common Fish and Shellfish Species in the Gulf of Maine. Greater Atlantic Region Policy Series 14-01. NOAA Fisheries Greater Atlantic Regional Fisheries Office. 77pp.
- Tamsett A, Heinonen KB, Auster PJ, Linholm J. 2010. Dynamics of hard substratum communities inside and outside of a fisheries habitat closed area in Stellwagen Bank National Marine Sanctuary (Gulf of Maine, NW Atlantic). *Marine Sanctuaries Conservation Series ONMS-10-05*. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Office of National Marine Sanctuaries, Silver Spring, MD.
- Tupper, M. and R.G. Boutilier. 1995. Effects of habitat on settlement, growth and postsettlement survival of Atlantic cod (*Gadus morhua*). *Can. J. Fish. Aquat. Sci.* 52: 1834-1841.
- Vidal, E.A.G., DiMarco, F.P., Wormuth, J.H., and Lee, P.G. 2002. Optimizing rearing conditions of hatchling loliginid squid. *Marine Biology* 140:117-127.
- Vineyard Wind COP Volume III Appendix III-A. Hydrodynamic and Sediment Dispersion Modeling Study. Available online: <https://www.boem.gov/sites/default/files/renewable-energy-program/State-Activities/MA/Vineyard-Wind/Vineyard-Wind-COP-Volume-III-Appendix-III-A.pdf>
- Wicklund R. 1966. Observations on the nursery grounds of young squirrel hake, *Urophycis chuss*. *Underwater Naturalist* 4(1):33-34.
- Wilber, D.H., and Clarke D.G. 2001. Biological effects of suspended sediments: a review of suspended sediment impacts on fish and shellfish with relation to dredging activities in estuaries. *North American Journal of Fisheries Management* 21:855-875.



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

June 6, 2022

Frank J. DelGuidice
Chief, Permits and Enforcement Branch
Regulatory Division
U.S. Army Corps of Engineers
New England District
696 Virginia Road Concord, MA 01742-2751

Re: Kingfish Maine, Inc. NAE-2020-1651

Dear Mr. DelGuidice,

We have reviewed your EFH worksheet and additional information for the proposed Kingfish Maine land-based aquaculture facility in Jonesport, Maine. Specifically, the proposed work involves construction, operation and maintenance of a land-based yellowtail amberjack (*Seriola lalandi*) aquaculture facility utilizing a recirculating aquaculture system (RAS). The goal of the proposed project is to produce 8000 metric tons of farm-raised yellowtail amberjack for market per year. The proposal also involves constructing a trench in the intertidal and shallow-subtidal zones to install two pipes to discharge treated facility water and two pipelines serving as saltwater intakes. At full operational capacity the facility will discharge 28.7 million gallons per day (mgd) of treated wastewater, which includes 6.5 mgd of fish culture or process water and 22.2 mgd of water used for heat recovery in the facility. The facility will withdraw 19,812 gallons per minute (gpm) of seawater, which equates to ~28.53 mgd. According to the information provided, the proposed project would impact wetlands, mud, gravel/cobble intertidal and subtidal habitats in order to install the seawater intake and discharge pipes. The project also will contribute to elevated nutrient levels within Chandler Bay and result in entrainment/impingement of resident larval and potentially juvenile fish from intake operations.

According to the information you provided, installation of the pipelines will necessitate excavating a trench through the intertidal and subtidal zones. The trenching and placement of the seawater pipelines would impact a total of 44,366 square feet (sf) of benthic habitat in the intertidal/ subtidal zones, including 8620 sf of intertidal and subtidal zones for trenching and back filling the intake/outfall pipes, 7136 sf of subtidal substrate for the install of precast E-concrete collars to hold the pipes in place and 28,610 sf from laying pipe on the bottom in subtidal mud, sand, and gravel/cobble habitat. A total of 7136 sf of subtidal mud, sand, and gravel/cobble habitat will be displaced by the concrete collars, which project proponents plan to monitor for recolonization.

As you are aware, the Magnuson-Stevens Fishery Conservation and Management Act (MSA) and the Fish and Wildlife Coordination Act require federal agencies to consult with one another on projects such as this. Insofar as a project involves essential fish habitat (EFH), as this project does, 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 appreciate your response to our information request and offer the following comments and recommendations on this project pursuant to the above referenced regulatory process.

Resources in the Project Area

Chandler Bay supports species and habitats that are critical to a healthy marine ecosystem. The area supports wetlands, intertidal mudflat and rocky bottom habitats, and subtidal habitats including eelgrass beds. Federally-managed species containing EFH in the project area include, but not limited to, all life stages of; winter flounder, Atlantic cod, windowpane flounder, red hake, and Atlantic wolfish, and at least one or more life stages of little skate, ocean pout, Atlantic herring, pollock, silver hake, ocean pout and Atlantic sea scallop. In addition, gravel, cobble, and structurally-complex rock bottom habitats with attached macroalgae and epifauna present in the project area are important habitats for a number of life stages of federally-managed species, including juvenile Atlantic cod and juvenile sea scallops (Packer et al. 1999). American lobster also use cobble substrate (ASMFC 1997) for shelter from predation and for feeding during early benthic phases (Barshaw and Bryant-Rich 1988; Wahle and Steneck 1991). The project area is considered a Habitat Area of Particular Concern (HAPC) for inshore juvenile cod in the Gulf of Maine, which is defined as structurally-complex, rocky-bottom habitat from mean high water to water depths of 20 meters (NEFMC 2018). This habitat type provides two key ecological functions for juvenile cod: protection from predation, and readily available prey. Based on our most current stock assessment, the Gulf of Maine Atlantic cod stock is overfished and below the target biomass level, and there were no indication of positive trends in recruitment of juveniles into the fishery (NMFS 2021). Given the poor condition of Gulf of Maine cod stock, we believe a risk averse approach to protecting spawning and juvenile cod EFH and HAPC related to this project is warranted.

The nearshore vegetated and unconsolidated bottom habitat in the project area are important habitat for adults and early life stages of federally-managed species. Larvae of species with demersal eggs are less likely to be transported away from nearshore nursery grounds than those species with pelagic eggs, suggesting that the shallow-water habitats of Chandler Bay play an important role in spawning and egg development, but also as nursery areas for a number of important recreational and commercial species. A study by Lazzari and Stone (2006) found direct evidence of shallow water habitat (<6 m depth) in the Gulf of Maine, as critical facultative nursery habitat for economically and ecologically important species. This study also reported larvae and young-of-year juveniles of species that also spawn in deeper, offshore areas, such as Atlantic cod, Atlantic herring, and windowpane flounder, utilize shallow water habitats as nursery areas.

Comments Related to Proposed Pipeline Installation

According to the information you provided, the trenching for the seawater pipelines would impact approximately 44,366 sf of mud, sand, and gravel/cobble habitats in the intertidal and subtidal transition zones. Furthermore, the applicant's agent indicated impacts from the pipeline trenching in the intertidal zone are temporary and the elevation of the intertidal zone will be restored to pre-project conditions. The applicant should provide a detailed monitoring plan of the gravel/cobble rocky habitat impacted by the pipeline installation, with a pre- and post-construction assessment and photo documentation. The assessment should include a comparison of the pre- and post-construction rocky bottom habitat area, grain size, and complexity. Compensatory mitigation for temporal losses and for any reduction in the area and the grain size and complexity of the rocky bottom habitats should be required.

According to the information provided, the four pipelines will emerge from the subsurface in the transition zone and will be supported by concrete collars over the remaining length in the subtidal zone. Depending on scour post installation, the additional fill (e.g., concrete mats, riprap) may be needed to protect the pipes from scour and erosion in areas where the pipelines emerge from the subsurface bottom and is only shallowly buried or resting close to the bottom. These areas may be subjected to scour and erosion, especially during storms and strong currents. Therefore, an assessment of potential scour and erosion should take place and if deemed necessary, mitigation should be provided for excess fill associated with pipe protection.

A geotechnical survey of this area was performed, showing basalt and granite rock at varying depths below the surface. The applicant anticipates that blasting will not be required for pipeline installation. However, should blasting be required for this project, a blasting plan should be developed by the applicant and the USACE should re-initiate EFH consultation in order for us to review and comment on the blasting plan. In addition, all surficial rocky bottom habitat that is removed from the pipeline corridor should be offset with compensatory mitigation.

Regarding turbidity and sedimentation control during trench excavation and backfilling, the EFH worksheet states that, "increased turbidity is expected during construction. This effect will rapidly diminish upon project completion". However, details regarding the use of turbidity controls, or when and how turbidity monitoring will be conducted, have not been provided. A detailed plan for how turbidity and sedimentation will be controlled should be prepared and employed during trenching, backfilling and all turbidity and sedimentation producing activities.

The proposed in-water work window for this project is from November 8 to April 30 of any year for trenching and backfilling, and between November 8 and May 7 of any given year for placement of pipes and concrete collars. Winter flounder adults spawn in the Gulf of Maine region from March to May. Demersal eggs could be directly affected by elevated suspended sediments, turbidity, and by mechanical impacts from dredging, including delayed hatching, developmental defects on larvae, and mortality (Klein-MacPhee 2004; Berry et al. 2004, 2011; Wilber et al. 2005). In addition, the proposed in-water work window could adversely affect spawning and egg development habitat for winter flounder. Therefore, the work window should be modified to end on March 14, rather than May 7.

Comments Related to Aquaculture Operations

Entrainment Impacts

The proposed seawater access piping includes two intake pipes that at full operational capacity will withdraw 28.53 mgd of seawater. The EFH assessment states that the intake is designed to minimize impingement of fish and invertebrates by installing wedgewire intake screens with a 1-inch slot size and a maximum through-screen velocity of less than 0.5 ft/sec. While this configuration may minimize impingement, it will not avoid entrainment of eggs and larvae. Ichthyoplankton studies have not been conducted for this project to quantify the numbers of eggs and larvae that will be entrained, or the species and life stages that will be impacted by the proposed project. In an attempt to assess the entrainment impacts to fish and bivalve eggs and larvae, we compared the entrainment data from the Seabrook Station Nuclear Power Plant (Seabrook Station) for 2019 (Nextera Energy 2019). With a volume of 592 mgd, the Seabrook Station cooling water intake system is approximately 20 times greater than the proposed Kingfish aquaculture facility. Assuming a linear relationship between water intake volume and incidents of egg and larvae entrainment, we calculated the projected annual entrainment impacts for the Kingfish aquaculture project, shown in the table below.

Taxa/Life Stage	Seabrook Station 2019 Entrainment Data	NMFS Estimated Annual Kingfish aquaculture Entrainment
Fish Eggs	575 million	20 million
Fish Larvae	253 million	8.87 million
Bivalve Larvae	1,435 x 10 ⁹	50 x 10 ⁹

While the fish and invertebrate populations offshore of Seabrook Station are arguably distinct from those in the Kingfish project area, this estimate provides a reasonable, although conservative estimate for Kingfish entrainment impacts, given that Chandler Bay is a highly diverse and productive estuary that supports large fish and invertebrate populations, as well as several species of diadromous fish that spawn in the Chandler River and nearby Machias River. Furthermore, the marine fish and invertebrate populations in Chandler Bay are likely of higher density and productivity than those in the offshore area where the Seabrook Station cooling water intake is located. As discussed above, Chandler Bay represents important spawning and nursery areas for species such as winter flounder, windowpane flounder and Atlantic herring. In addition, the larvae and young-of-year juveniles of species that also spawn in deeper, offshore areas utilize shallow water habitats in Chandler Bay as nursery areas (Lazzari and Stone 2006). These estimates for entrainment suggests the impacts are not trivial, and we believe the applicant should conduct an assessment of entrainment impacts based on the productivity of fish and invertebrate populations in the Chandler Bay. We are available to assist the applicant in providing relevant ichthyofauna information.

Discharge Outfall Impacts

We have remaining concerns regarding the potential impact to habitats from the proposed aquaculture wastewater discharge. The assumed background concentration of nitrogen is 0.26 mg/l per information provided by Maine Department of Environmental Protection (MEDEP). Given the critical water quality threshold protective of eelgrass is set at 0.32 mg/L, MEDEP has determined that the proposed nitrogen discharge from the Kingfish facility will result in a

lowering of water quality as it relates to eelgrass habitat.

According to the Maine Pollutant Discharge Elimination System Permit and Waste Discharge License Proposed Draft Fact Sheet, the projected nitrogen concentrations in the area of discharge is 6.6 mg/l. These projected nitrogen concentrations from the discharge effluent appear to be 25x higher than ambient levels. Higher nutrient levels in estuaries are associated with higher biological oxygen demands and lower dissolved oxygen concentrations (Kennish 1998), can trigger macroalgae blooms (Shaw et al. 2018), fish kills, reduced water clarity (O'Reilly 1994; Johnson et al. 2007), and can lead to eelgrass bed mortality and disease (Short and Burdick 1996; Goldsborough 1997). While the response to early coordination comments provided by Kingfish indicated that denitrification via upflow sludge bioreactors (USBs) will be employed, specifics on the quantitative nitrogen reductions achieved by this process were not provided.

The Maine Department of Environmental Protection's Pollutant Discharge Elimination System permit and Waste Discharge License requires the following monitoring requirements:

1. Technology-based numeric limitations for flow, biochemical oxygen demand (BOD), total suspended solids (TSS) and pH;
2. A requirement to seasonally (May – October) monitor the effluent for total phosphorus, total ammonia (as N), total kjeldahl nitrogen, nitrate + nitrite nitrogen;
3. A monthly average water quality-based mass limitation for total nitrogen;
4. A requirement for the permittee to conduct a dye study to more accurately determine the mixing characteristics of the treated effluent discharge from the facility with the receiving water;
5. A requirement to conduct seasonal (May – October) ambient water quality monitoring in Chandler Bay;
6. A requirement for the facility to develop and maintain an Operations & Maintenance (O&M) Plan for the production facility and the wastewater treatment facility;
7. Daily maximum concentration limits for formalin based off of 1-hour or 24-hour treatment types; and
8. A finding by the Department pursuant to the antidegradation provisions under Classification of Maine waters, 38 M.R.S. § 464(4)(F), for nitrogen as it pertains to eelgrass as an indicator.

Essential Fish Habitat Conservation Recommendations

Section 305(b)(2) of the MSA requires all federal agencies to consult with us on any action authorized, funded, or undertaken by that agency that may adversely affect EFH. The proposed project area in Belfast Bay and adjacent areas have been identified as EFH under the MSA for several federally-managed species. We recommend, pursuant to Section 305(b)(a)(A) of the MSA, that you adopt the following EFH conservation recommendations:

1. Compensatory mitigation should be provided for all temporary and permanent adverse effects resulting from the trenching and backfilling for the installation of the intake and

outfall pipes in the intertidal and subtidal zone (44,366 sf adverse effects to EFH and HAPC).

2. Monitoring plans that incorporate an undisturbed control and EConcrete sites should be developed and shared with resource agencies for review and comment. Compensatory mitigation should be provided for areas that do not meet established mitigation targets. The monitoring program should include an assessment of pre- and post-construction conditions to determine the effects of the pipeline on the marine ecosystem, including physical and biological effects. Data should be collected to characterize the benthic habitat(s) as it is now (e.g., predominant sediment grain size, bottom uniformity, vegetation, etc.) as well as the existing benthic biological community (epi and infaunal organisms). The organisms should be classified (by species, preferably, and also whether they're resident or non-resident/invasive) and quantified to understand changes in both absolute abundance and relative abundance as a result of the project. The monitoring plan should include an invasive species monitoring plan and contingencies for case-specific control of invasive species.
3. To estimate the entrainment impacts to eggs and larvae from the proposed project, an assessment should be conducted based on the ichthyofauna of Chandler Bay and the proposed recirculating aquaculture system. We are available to provide information on relevant fish and invertebrate ichthyofauna present in Chandler Bay, and request an opportunity to review the assessment prior to issuance of any permits.
4. To protect spawning and egg development habitat for winter flounder, the work window should be modified to end on March 14, rather than May 7 and a time-of-year restriction should be required for in-water work between March 15 and June 30.
5. An assessment of potential scour and erosion in the areas where the buried section of the pipeline transitions to the exposed and anchored section, and measures to mitigate scour and erosion should be required. Any areas of additional fill should require compensatory mitigation.
6. Should blasting be required for this project, a blasting plan should be developed by the applicant and the USACE should re-initiate EFH consultation in order for us to review and comment on the blasting plan.
7. A detailed plan for how turbidity and sedimentation will be controlled should be prepared and employed during trenching, backfilling and all turbidity and sedimentation producing activities.

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 you have adopted that avoid, mitigate, or offset 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). Please also note that a distinct and further EFH consultation must be reinitiated pursuant to 50 CFR 600.920(1) if new information becomes available or the project is revised in such a manner that affects the basis for the above EFH conservation recommendations.

Endangered Species Act

Threatened and endangered species under our jurisdiction may be present in the action area, and consultation pursuant to section 7 of the Endangered Species Act of 1973 is required. If you have any questions regarding the status of this consultation, please contact Roosevelt Mesa at 978-281-9186 or roosevelt.mesa@noaa.gov.

We appreciate the opportunity to provide these EFH conservation recommendations. If you have any questions regarding our conservation recommendations or information in this letter, please contact Kaitlyn Shaw at 978-282-8457 or at kaitlyn.shaw@noaa.gov.

Sincerely,



Louis A. Chiarella
Assistant Regional Administrator
for Habitat and Ecosystems Services

cc: Roosevelt Mesa, PRD
Shawn Mahaney, USACE
Mike Marsh, USEPA
Tom Nies, NEFMC

References

- Atlantic States Marine Fisheries Commission (ASMFC). 1997. Amendment 3 to the Interstate Fishery Management Plan for American lobster. Washington, DC.
- Barshaw DE, Bryant-Rich DR. 1988. A long-term study on the behavior and survival of early juvenile American lobster, *Homarus americanus*, in three naturalistic substrates: eelgrass, mud, and rocks. *Fisheries Bulletin* 86(4):789-796.
- Berry WJ, Hinchey EK, Rubinstein NI, Klein-MacPhee G. 2004. Winter flounder, *Pseudopleuronectes americanus*, hatching success as a function of burial depth in the laboratory. Ninth flatfish biology conference- poster presentation; 2004 Dec 1-2; Westbrook, CT, Woods Hole (MA): Northeast Fisheries Science Center Reference Document 04-13.
- Goldsborough WJ. 1997. Human impacts on SAV-a Chesapeake Bay case study. In: Stephan CD, Bigford TE, editors. Atlantic coastal submerged aquatic vegetation: a review of its ecological role, anthropogenic impacts, state regulation, and value to Atlantic coastal fisheries. Washington (DC): ASMFC Habitat Management Series #1. p 68 + appendices.
- Johnson MR, Boelke C, Chiarella LA, Colosi PD, Greene K, Lellis-Dibble K, Ludeman H, Ludwig M, McDermott S, Ortiz J, Rusanowsky D, Scott M, Smith J. 2008. Impacts to marine fisheries habitat from nonfishing activities in the northeastern United States. NOAA Technical Memorandum NMFS-NE-209. Woods Hole, MA. 328 p.
- Kennish MJ. 1998. Pollution impacts on marine biotic communities. Boca Raton (FL): CRC Press.
- Lazzari MA, Stone BZ. 2006. Use of submerged aquatic vegetation as habitat by young-of-the-year epibenthic fishes in shallow Maine nearshore waters. *Estuarine, Coastal, and Shelf Science* 69:591-606.
- National Marine Fisheries Service 2021. Atlantic cod: Overview (webpage). <https://www.fisheries.noaa.gov/species/atlantic-cod#overview>.
- New England Fishery Management Council (NEFMC). 2018. Final Omnibus Essential Fish Habitat Amendment 2. Volume 2: EFH and HAPC designation alternatives and environmental impacts. Prepared by the New England Fishery Management Council in cooperation with the National Marine Fisheries Service. Accessed online 04/ 17/2019. Available at: <https://s3.amazonaws.com/nefmc.org/OA2-FEIS Vol 2 FINAL 17 1025.pdf>.
- Nextera Energy 2019. Seabrook Station 2019 Environmental Monitoring Report. Dated August 28, 2020. NPDES Permit No. NH0020338, SBK-L-20113.

- O'Reilly JE. 1994. Nutrient loading and eutrophication. In: Langton RW, Pearce JB, Gibson JA, editors. Selected living resources, habitat conditions, and human perturbations of the Gulf of Maine: environmental and ecological considerations for fishery management. Woods Hole (MA): NOAA Technical Memorandum NMFS-NE-106. p 25-30.
- Packer DB, Cargnelli LM, Griesbach SJ, Shumway SE. 1999. NOAA Technical Memorandum NMFS-NE-134. Essential Fish Habitat Source Document: Sea scallop, *Placopecten magellanicus*, life history and habitat characteristics. National Marine Fisheries Service, Woods Hole, MA.
- Shaw KC, Howes BL, Schlezinger D. 2018. Macroalgal composition and accumulation in New England estuaries. *Journal of Environmental Management* 206:246-254.
- Short FT, Burdick DM. 1996. Quantifying, eelgrass habitat loss in relation to housing development and nitrogen loading in Waquoit Bay, Massachusetts. *Estuaries* 19(3):730-9.
- Wahle RA, Steneck RS. 1991. Recruitment habitats and nursery grounds of the American lobster: a demographic bottleneck? *Marine Ecological Progress Series* 69:231-243.
- Wilber D, Brostoff W, Clarke D, Ray G. 2005. Sedimentation: potential biological effects of dredging operations in estuarine and marine environments. DOER Technical Notes Collection. Vicksburg (MS): US Army Engineer Research and Development Center. ERDC TN-DOER-B2.14 p.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Office of National Marine Sanctuaries
1305 East West Highway
Silver Spring, MD 20910

Eric Reid, Chair
New England Fishery Management Council
50 Water Street
Newburyport, MA. 01950

Dear Chairperson Reid:

On June 8, 2022, the National Oceanic and Atmospheric Administration's (NOAA's) Office of National Marine Sanctuaries (ONMS) published a Notice of Intent (NOI) in the Federal Register to conduct scoping and prepare a draft Environmental Impact Statement for the proposed Hudson Canyon national marine sanctuary (87 FR 34853). As part of our scoping process, and pursuant to section 304(a)(5) of the National Marine Sanctuaries Act (NMSA, 16 U.S.C. § 1434(a)(5)), we are seeking input from the New England Fishery Management Council (Council) on whether the Council may deem it necessary to prepare draft regulations for fishing within the Exclusive Economic Zone to implement the proposed sanctuary designation.

The proposed sanctuary designation is based on a 2016 nomination submitted to NOAA by the Wildlife Conservation Society (WCS). In its nomination, WCS provides supporting analysis for its recommendation that recreational and commercial fisheries in the Hudson Canyon area should continue to be regulated by NOAA Fisheries and the New England and Mid-Atlantic Fishery Management Councils due to their "excellent record managing fisheries in the region." At this early stage in the sanctuary designation process, ONMS acknowledges WCS's analysis and believes that the current fishing regulations in the area (i.e., 50 CFR Part 648) promulgated under the Magnuson-Stevens Fishery Conservation and Management Act (MSA, 16 U.S.C. § 1801 *et seq.*) appear to support the goals and objectives of the proposed sanctuary. As such, we are seeking your expert opinion to help substantiate this analysis and make a recommendation to us in accordance with NMSA section 304(a)(5).

Under NMSA section 304(a)(5), the Council may take one of three actions: 1) recommend draft fishing regulations for the proposed sanctuary; 2) recommend that fishing regulations are not necessary; or 3) choose not to act on the matter. The full text of the NMSA is included as an attachment to this letter and provides the Council with additional guidance on the actions it may take with regard to section 304(a)(5), the proposed sanctuary and how any Council recommendation(s) will be evaluated by NOAA.



We greatly appreciate the time and effort of the Council on this matter and look forward to hearing back from you. If you have the opportunity to coordinate with the Mid-Atlantic and South Atlantic Fishery Management Councils, we encourage you to do so. We respectfully request that you share your expert opinion and recommendation for this section 304(a)(5) process by December 31, 2022. If you have any questions, or would like a briefing on the Hudson Canyon proposed sanctuary and/or the NMSA section 304(a)(5) process, please contact LeAnn Hogan at LeAnn.Hogan@noaa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'MJB', followed by a horizontal line extending to the right.

Matt Brookhart, Regional Director

Cc: Tom Nies, Executive Director, NEFMC
Michael Pentony, Regional Administrator, NMFS-GARFO

Attachments:

Notice of Intent to Conduct Public Scoping and Prepare a DEIS for the Proposed Hudson Canyon National Marine Sanctuary
National Marine Sanctuaries Act

does not involve extraordinary circumstances precluding the use of a categorical exclusion. Therefore, this action is categorically excluded from the requirement to prepare an environmental assessment or environmental impact statement, in accordance with NOAA Administrative Order 216–6A Environmental Review Procedures, and the NOAA NEPA Companion Manual. As defined in the NOAA NEPA Companion Manual, Appendix E, categorical exclusion category G7, the proposed action is a notice of administrative and legal nature and for which any environmental effects are too broad and speculative to lend themselves to meaningful analysis at this time and will be subject later to the NEPA process, as applicable. Should NOAA decide to propose the designation of a national marine sanctuary, each individual national marine sanctuary designation process will be subject to case-by-case analysis, as required under NEPA and as outlined in section 304(a)(2)(A) of the NMSA.

B. Paperwork Reduction Act

Notwithstanding any other provisions of the law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act (PRA), 44 U.S.C. 3501 *et seq.*, unless that collection of information displays a currently valid Office of Management and Budget (OMB) control number. Nominations for national marine sanctuaries discussed in this notice involve a collection-of-information requirement subject to the requirements of the PRA. OMB has approved this collection-of-information requirement under OMB control number 0648–0682.

Authority: 16 U.S.C. 1431 *et seq.*

John Armor,

Director, Office of National Marine Sanctuaries, National Ocean Service, National Oceanic and Atmospheric Administration.

[FR Doc. 2022–11954 Filed 6–7–22; 8:45 am]

BILLING CODE 3510–NK–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

Notice of Intent To Conduct Scoping and To Prepare a Draft Environmental Impact Statement for the Proposed Hudson Canyon National Marine Sanctuary

AGENCY: Office of National Marine Sanctuaries (ONMS), National Ocean Service (NOS), National Oceanic and Atmospheric Administration (NOAA), Department of Commerce (DOC).

ACTION: Notice of intent to hold public scoping meetings and prepare a draft environmental impact statement; request for comments.

SUMMARY: In accordance with the National Marine Sanctuaries Act (NMSA) and National Environmental Policy Act (NEPA), the National Oceanic and Atmospheric Administration (NOAA) is initiating a scoping process to consider designating a national marine sanctuary in the Hudson Canyon area approximately 100 miles offshore southeast of New York City. NOAA is initiating this scoping process based on the area’s diverse qualities, which are described in the Wildlife Conservation Society’s (WCS’s) November 2016 Hudson Canyon national marine sanctuary nomination. Specifically, WCS’s nomination provides important context and background regarding the natural and cultural resources in the region, the potential benefits of national marine sanctuary designation, recommendations for management of the sanctuary, and a proposed sanctuary boundary, which NOAA will take under consideration, but does not represent an official boundary proposal at this time. As a first step in this scoping process, NOAA invites comments on the factors that will contribute to its determination of whether to designate the area as a national marine sanctuary; designation would include preparation and release of a draft environmental impact statement (including national marine sanctuary boundary alternatives), proposed regulations, and a draft management plan. This scoping process will also inform the initiation of any consultations with Federal, State, or local agencies, Tribes, and other interested parties, as appropriate. In support of the scoping process, the nomination package and additional information regarding the qualities of the Hudson Canyon area can be found at <https://sanctuaries.cnoaa.gov/hudson-canyon/>.

DATES:

Comments due: August 8, 2022.

Public Meetings: NOAA will host four public meetings during the scoping process, two virtual and two in-person. The virtual public scoping meetings will occur at the following dates and times:

- Thursday, June 23, 2022, 3:00 p.m. to 5:00 p.m. Eastern Time.
- Wednesday, August 3, 2022, 5:00 p.m. to 7:00 p.m. Eastern Time.

The in-person scoping meetings will occur at the following dates and times:

- New York City, NY; *Date:* July 19, 2022; *Location:* Alexander Hamilton U.S. Customs House, Naval Officers Room; *Address:* 1 Bowling Green, New York, NY 10004; *Time:* 6:30–8:00 p.m.
- West Long Branch, NJ; *Date:* July 21, 2022; *Location:* Monmouth University, Urban Coast Institute, Edison Building Atrium-E201; *Address:* 400 Cedar Avenue, West Long Branch, NJ 07764; *Time:* 6:30–8:00 p.m.

Please check <https://sanctuaries.noaa.gov/hudson-canyon/> for meeting links and the most up-to-date information, should plans for these public meetings change. NOAA may end a virtual or in-person meeting before the time noted above if all participants have concluded their oral comments.

ADDRESSES: You may submit comments, identified by NOAA–NOS–2022–0053, by any of the following methods:

- *Federal eRulemaking Portal:* Go to <https://www.regulations.gov> and enter “NOAA–NOS–2022–0053” in the Search box. Click on the “Comment” icon, complete the required fields, and enter or attach your comment.

- *Mail:* Send any hard copy public comments by mail to: LeAnn Hogan, NOAA Office of National Marine Sanctuaries, 1305 East-West Highway, SSMC4, Silver Spring, MD 20910. Note the docket number (*i.e.*, NOAA–NOS–2022–0053) at the top of the comment.

- *Public Scoping Meetings:* Provide oral comments during public scoping meetings, as described under **DATES**.

Webinar registration details and additional information about how to participate in these virtual and in-person public scoping meetings is available at <https://sanctuaries.noaa.gov/hudson-canyon/>.

Instructions: Comments sent by any other method, to any other address or individual, or received after the end of the comment period, may not be considered by NOAA. All comments received are a part of the public record and will generally be posted for public viewing on <https://www.regulations.gov> without change. All personally identifiable information (for example,

name, address, etc.), confidential business information, or otherwise sensitive information submitted voluntarily by the commenter will be publicly accessible. NOAA will accept anonymous comments (enter "N/A" in the required fields if you wish to remain anonymous). Comments that are not responsive or contain profanity, vulgarity, threats, or other inappropriate language will not be considered.

FOR FURTHER INFORMATION CONTACT:

LeAnn Hogan, (202) 731-0678,
LeAnn.Hogan@noaa.gov.

SUPPLEMENTARY INFORMATION:

I. Background on the Area Under Consideration

The National Marine Sanctuaries Act (NMSA), 16 U.S.C. 1431 *et seq.*, authorizes the Secretary of Commerce (Secretary) to designate and protect as national marine sanctuaries areas of the marine environment that are of special national significance due to their conservation, recreational, ecological, historical, scientific, cultural, archeological, educational, or aesthetic qualities. The primary objective of the NMSA is to protect the resources of the National Marine Sanctuary System. Day-to-day management of national marine sanctuaries has been delegated by the Secretary to NOAA's Office of National Marine Sanctuaries (ONMS).

In November 2016, WCS submitted a nomination to NOAA through the Sanctuary Nomination Process (79 FR 33851), asking NOAA to consider designating the Hudson Canyon area as a national marine sanctuary to conserve its nationally significant ecological and biological resources and to expand upon existing local and state efforts to study, interpret, and promote the area's ecological and biological uniqueness. The nomination was endorsed by a diverse coalition of organizations and individuals at local, state, and national levels including elected officials, businesses, shipping industry representatives, recreational users, conservation and academic organizations, tourism companies, aquariums and zoos, historical societies, and education groups. NOAA added the area to the inventory of successful nominations that are eligible for designation in February 2017, and extended it on the inventory in February 2022 after its five-year review of the nomination (87 FR 11049).

The Hudson Canyon (Canyon) is the largest submarine canyon along the United States' Atlantic coast and is one of the largest in the world. Its presence is critical to the support of resident and migratory marine wildlife in the New

York Bight, as well as in the Mid-Atlantic region. Rivaling the depth and scale of the Grand Canyon, the Canyon extends about 560 km (350 mi) seaward, reaches depths of 3–4 km (2–2.5 mi), and is up to 12 km (7.5 mi) wide. Despite its size and proximity to one of the world's largest metropolitan centers in New York City, few know of this area that William Beebe described as a "stately, invisible gorge" when he first explored it during his 1925 expedition on the vessel *Arcturus*.

The Canyon's grand scale and diverse structure—steep slopes, firm outcrops, diverse sediments, flux of nutrients, and areas of upwelling—make it an ecological hotspot for a vast array and abundance of marine wildlife. The Canyon provides habitat for a range of endangered, protected, and sensitive species including the sperm whale, sea turtles, and unique and diverse seep communities. The Canyon also provides invaluable habitat for hundreds of species of bony and cartilaginous fishes and invertebrates. One unique aspect of the Canyon among marine habitats in the New York Bight is the presence of deep sea, cold-water coral communities. Rocky outcrops and boulders at the head of the Canyon and along its steep walls provide the hard substrate needed for attachment by hard and soft corals, sea pens, anemones, and sponges.

The robust biodiversity of the Canyon directly supports the local economy by providing productive waters and habitats for the fish and invertebrates on which commercial and recreational fisheries depend. Recreational divers explore some of the shallower areas in and around the Canyon, and the yearly migration of whales and seabirds through the Canyon attracts whale watchers and birders. In addition to supporting diverse fisheries and wildlife tourism, the waters surrounding the Canyon also hold historical and cultural importance to those living along its shores in New York and New Jersey. The types of shipwrecks found within the Hudson Canyon area vary from freighters to United States military radar platforms, some dating back to the mid-19th Century.

The area also supports a number of human activities. Commercial vessels regularly traverse the waters above the Canyon to enter New York City, one of the world's busiest ports. New York is also a critical trans-Atlantic telecommunications hub, connecting the east coast of the United States to the rest of the world. There are 26 submarine telecommunication cables and cable segments that make landfall in New York and New Jersey, with at least nine of these cables crossing, or

running adjacent to, the Canyon. Various types of commercial and recreational fishing occur in and around the Canyon.

There are nine federally and state-recognized Tribes and Tribal Nations in New York State (*i.e.*, Cayuga Nation, Oneida Nation of New York, Onondaga Nation, Saint Regis Mohawk Tribe, Seneca Nation, Shinnecock Nation, Tonawanda Band of Seneca, Tuscarora Nation of New York, and the Unkechaug Nation) and three Tribes acknowledged by the State of New Jersey, which serve on the New Jersey Commission of American Indian Affairs (*i.e.*, the Nanticoke Lenni-Lenape, Powhatan Renape, and the Ramapough Lenape Tribes). Past and current Indigenous communities have maintained strong oral traditions and cultural practices tied to the ocean and coastal waters in this region. They rely on a number of species that depend on the Canyon for part of their life cycle. In order to strengthen our knowledge of the historical and cultural significance of the Canyon, NOAA is requesting input on Tribal and Indigenous communities' connections to this area.

The Hudson Canyon begins approximately 100 miles southeast of New York City and extends 350 miles seaward, reaching depths of up to two and a half miles and expanding up to seven miles at its widest points. A visual of the Canyon and its adjacent waters, which may be considered for sanctuary designation, can be found at <https://sanctuaries.noaa.gov/hoodson-canyon/>. This visual is for reference purposes only during the scoping process; it does not constitute a proposed boundary for sanctuary designation. Instead, NOAA is seeking recommendations for the sanctuary boundary during the public scoping process, and based on this and other formal input, NOAA will release draft sanctuary boundary alternatives for public review and comment should it decide to move forward with the designation process.

Based on the WCS nomination and guided by the purposes and policies of the NMSA, NOAA has identified five overarching goals for the proposed sanctuary designation:

- Support conservation of the area's marine wildlife, habitats, and maritime cultural resources;
- Work closely with Tribal partners to identify and raise awareness of Indigenous connections to the area;
- Highlight and promote sustainable uses of the area;
- Expand ocean science and monitoring in, and education and awareness of the area; and

- Provide a platform for collaborative and diverse partnerships that support effective and inclusive long-term management of the area.

II. Items of Particular Interest During the Public Scoping Process

While the public may comment on all matters viewed as relevant to the potential designation of a national marine sanctuary in the Canyon, NOAA is requesting input on the following specific topics to help guide the scoping process:

- boundary alternatives for the proposed sanctuary that strive to meet the goals identified above;
- the location, nature, and value of natural and cultural resources in the area under consideration;
- specific threats to these resources;
- information on the Indigenous and Tribal heritage of the area;
- the non-regulatory actions NOAA should prioritize within its draft management plan for the proposed sanctuary;
- the regulatory framework most appropriate for management of the proposed sanctuary;
- the benefits to the “blue economy” of the region, including promoting sustainable tourism and recreation; and
- a permanent name for the proposed sanctuary.

Comments may be submitted to NOAA by August 8, 2022 using the methods described in **ADDRESSES**. NOAA will host public scoping meetings during the public comment period, as described under **DATES**.

III. Sanctuary Designation Process

The designation process includes the following well-established and highly participatory stages:

1. Public Scoping Process—Information collection and characterization, including the consideration of public comments received during scoping;
2. Preparation of Draft Documents—Preparation and release of draft designation documents, including: a draft environmental impact statement (DEIS), prepared pursuant to NEPA, that identifies boundary and/or regulatory alternatives; a draft management plan; and a notice of proposed rulemaking to define proposed sanctuary regulations. Draft documents would be used to initiate consultations with Federal, State, or local agencies, Tribes, and other interested parties, as appropriate;
3. Public Comment—Through public meetings and in writing, allow for public review and comment on a DEIS, draft management plan, and notice of proposed rulemaking;

4. Preparation of Final Documents—Preparation and release of a final environmental impact statement (FEIS), final management plan, including a response to public comments, and a final rule and regulations.

5. Review Period—The sanctuary designation and regulations would take effect after the end of a review period of forty-five days of a continuous session of Congress. During this same period, should the designation include State waters, the Governor of the State has the opportunity to concurrently review the terms of designation including boundaries within State waters.

IV. Development of a Draft Environmental Impact Statement

In accordance with the NMSA and NEPA, NOAA must draft an environmental impact statement when designating a new national marine sanctuary. The input gathered during the public scoping process is fundamental to NOAA’s development of a DEIS.

A. Purpose and Need for Sanctuary Designation

The purpose and need for a sanctuary designation in the Hudson Canyon area is to fulfill the purposes and policies outlined in section 301(b) of the NMSA, 16 U.S.C. 1431(b), including to identify and designate as national marine sanctuaries areas of the marine environment that are of special national significance, provide authority for comprehensive and coordinated conservation and management of these marine areas, and protect the resources of these areas. In particular, a sanctuary designation would:

- Develop coordinated and collaborative marine science, education and outreach, and cultural heritage programs to assist in promoting and managing the area’s nationally significant resources;
- Highlight the many diverse human activities, cultural connections and maritime heritage of the area, from the Indigenous communities to existing activities in the area;
- Respond to community interest in conserving the natural environments, wildlife and cultural resources of this area; and
- Provide additional conservation and comprehensive ecosystem-based management to address threats to the area’s nationally significant resources.

B. Preliminary Description of Proposed Action and Alternatives

NOAA’s proposed action is to consider designating the Hudson Canyon national marine sanctuary in

accordance with the sanctuary designation process described in section 304 of the NMSA (16 U.S.C. 1434). Through the public scoping process and as part of the sanctuary designation process, NOAA will develop draft designation documents including a draft sanctuary management plan, proposed sanctuary regulations, and proposed terms of designation. The NEPA process for sanctuary designation will include preparation of a DEIS to consider alternatives and describe potential effects of the sanctuary designation on the human environment. A DEIS will evaluate a reasonable range of action alternatives that could include different options for management plan goals, sanctuary regulations, and potential boundaries. A DEIS will also consider a No Action Alternative, wherein NOAA would not designate a national marine sanctuary.

C. Summary of Expected Impacts of Sanctuary Designation

A DEIS will identify and describe the potential effects of the proposed action and reasonable alternatives on the human environment. Potential impacts may include, but are not limited to, impacts on the area’s biological and physical resources, including habitats, plants, birds, sea turtles, marine mammals, and special status species; maritime, cultural, and historical resources; and human uses and socioeconomics of the area, including research, recreation, education, energy production, and fishing. Based on a preliminary evaluation of the resources listed above, NOAA expects potential positive impacts to the environment from enhanced protection of the area’s natural, cultural, and historical resources; improved planning and coordination of research, monitoring, and management actions; reduced harmful human activities and disturbance of special status species; reduced threats and stressors to resources; and minimal disturbance during research.

D. Schedule for the Decision-Making Process

NOAA expects to make a DEIS and other draft documents available to the public by spring 2023. NOAA expects to make a FEIS available to the public by spring 2024. A Record of Decision and the final management plan and final rule will be completed no sooner than 30 days after the FEIS is made available to the public, in accordance with 40 CFR 1506.11.

E. NEPA Lead and Cooperating Agency Roles

NOAA is the lead Federal agency for the NEPA process for the proposed action. NOAA may invite other Federal, Tribal, State, and local government agencies to become cooperating agencies in the preparation of the EIS for the proposed action. NEPA regulations specify that a cooperating agency means any Federal agency (and a State, Tribal, or local agency with agreement of the lead agency) that has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal (or a reasonable alternative) (40 CFR 1508.1(e)).

F. Anticipated Permits, Authorizations, and Consultations

Federal, state, and local permits, authorizations, or consultations may be required for the proposed action, including consultation or review under section 304(a)(5) of the NMSA, 16 U.S.C. 1434(a)(5), regarding consultation with appropriate Fishery Management Councils, Endangered Species Act, 16 U.S.C. 1531 *et seq.*, Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. 1801 *et seq.*, National Historic Preservation Act, 54 U.S.C. 300101 *et seq.*, and Executive Order 13175, consistency review under the Coastal Zone Management Act, 16 U.S.C. 1451 *et seq.*, and possibly reviews under other laws and regulations determined to be applicable to the proposed action. To the fullest extent possible, NOAA will prepare a DEIS concurrently and integrated with analyses required by other Federal environmental review requirements, and a DEIS will list all Federal permits, licenses, and other authorizations that must be obtained in implementing the proposed action. See 40 CFR 1502.24.

V. Consultation Under Section 106 of the National Historic Preservation Act and Executive Order 13175

This notice confirms that NOAA will coordinate its responsibilities under section 106 of the National Historic Preservation Act (NHPA) during the sanctuary designation process and is soliciting public and stakeholder input to meet section 106 compliance requirements. The NHPA section 106 consultation process specifically applies to any agency undertaking that may affect historic properties. Pursuant to 36 CFR 800.16(l)(1), historic properties include: “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the

Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian Tribe or Native Hawaiian organization that meet the National Register criteria.”

This notice also confirms that, with respect to the proposed sanctuary designation process, NOAA will fulfill its responsibilities under Executive Order 13175, “Consultation and Coordination with Indian Tribal Governments,” and NOAA’s implementing policies and procedures. Executive Order 13175 requires Federal agencies to establish procedures for meaningful consultation and coordination with tribal officials in the development of Federal policies that have Tribal implications. NOAA implements Executive Order 13175 through NOAA Administrative Order 218–8 (Policy on Government-to-Government Consultation with Federally-Recognized Indian Tribes and Alaska Native Corporations), and the NOAA Tribal Consultation Handbook. Under these policies and procedures, NOAA offers affected federally recognized Tribes government-to-government consultation at the earliest practicable time it can reasonably anticipate that a proposed policy or initiative may have Tribal implications.

Authority: 16 U.S.C. 1431 *et seq.*; 42 U.S.C. 4321 *et seq.*; 40 CFR 1500–1508 (NEPA Implementing Regulations); Companion Manual for NOAA Administrative Order 216–6A.

John Armor,

Director, Office of National Marine Sanctuaries, National Ocean Service, National Oceanic and Atmospheric Administration.

[FR Doc. 2022–12234 Filed 6–7–22; 8:45 am]

BILLING CODE 3510–NK–P

COMMODITY FUTURES TRADING COMMISSION

Request for Information on Climate-Related Financial Risk

AGENCY: Commodity Futures Trading Commission.

ACTION: Request for information.

SUMMARY: The Commodity Futures Trading Commission (“CFTC” or “Commission”) is seeking public responses to this Request for Information to better inform its understanding and oversight of climate-related financial risk as pertinent to the derivatives markets and underlying commodities markets. Public responses

to this request will help to inform the Commission’s next steps in furtherance of its purpose to, among other things, promote responsible innovation, ensure the financial integrity of all transactions subject to the Commodity Exchange Act, and avoid systemic risk. The information received will also inform the Commission’s response to the recommendations of the Financial Stability Oversight Council 2021 Report on Climate-Related Financial Risk and inform the ongoing work of the Commission’s Climate Risk Unit. The Commission may use this information to inform potential future actions including, but not limited to, issuing new or amended guidance, interpretations, policy statements, regulations, or other potential Commission action within its authority under the Commodity Exchange Act as well as its participation in any domestic or international fora.

DATES: Comments must be received on or before August 8, 2022.

ADDRESSES: You may submit comments, identified by the name of the release, “Climate-Related Financial Risk RFI”, by any of the following methods:

- *CFTC Comments Portal:* <https://comments.cftc.gov>. Select the “Submit Comments” link for this release and follow the instructions on the Public Comment Form.

- *Mail:* Send to Christopher Kirkpatrick, Secretary of the Commission, Commodity Futures Trading Commission, Three Lafayette Centre, 1155 21st Street NW, Washington, DC 20581.

- *Hand Delivery/Courier:* Follow the same instructions as for Mail, above. Please submit your comments using only one of these methods. Submissions through the CFTC Comments Portal are encouraged.

All comments must be submitted in English, or if not, accompanied by an English translation. Comments will be posted as received to <https://comments.cftc.gov>. You should submit only information that you wish to make available publicly. If you wish the Commission to consider information that you believe is exempt from disclosure under the Freedom of Information Act (“FOIA”), a petition for confidential treatment of the exempt information may be submitted according to the procedures established in § 145.9 of the Commission’s regulations.¹

The Commission reserves the right, but shall have no obligation, to review, pre-screen, filter, redact, refuse or remove any or all of your submission

¹ 17 CFR 145.9.



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

June 24, 2022

Ms. Bridgette Duplantis
Project Coordinator
Office of Leasing and Plans
Leasing and Financial Responsibility Section
Bureau of Ocean Energy Management
1202 Elmwood Park Boulevard
New Orleans, LA 70123

RE: Call for information and nominations (Call or notice) for possible commercial wind energy leasing on the outer continental shelf (OCS) offshore the U.S. central Atlantic coast

Dear Ms. Duplantis:

We have reviewed the April 29, 2022 *Federal Register* (FR) Notice requesting information related to possible commercial wind energy leasing offshore the U.S. central Atlantic coast. While this is not a leasing announcement, the areas described in the FR Notice may be available for future leasing. BOEM is soliciting information and feedback on site conditions, resources, and ocean uses in close proximity to or within the identified Call Area, which comprises approximately 4 million acres offshore the Commonwealth of Virginia and the States of Delaware, Maryland, and North Carolina. In the FR Notice, you specifically request information on resources within our jurisdiction, including commercial and recreational fisheries, federally designated (or proposed) critical habitat, essential fish habitat, protected species, and areas that are environmentally sensitive or crucial to marine productivity and are state or federally managed for their conservation value. You are requesting feedback on this area in an effort to understand potential use conflicts, identify factors that should be considered in determining the size and number of wind energy areas (WEAs), and receive relevant socioeconomic, cultural, biological, and environmental data and information.

We appreciate the opportunity to offer information related to NOAA trust resources, including habitat, protected species, fisheries, and NOAA scientific surveys for you to consider when identifying potential WEAs in the Central Atlantic outer continental shelf (OCS). The comments and information provided herein were prepared in coordination with the Southeast Regional Office of NOAA's National Marine Fisheries Service (NMFS). As an agency with a direct understanding of the challenges associated with refining lease areas through the regulatory process, we underscore the need for a deliberative, science-based approach to identifying WEAs in the Central Atlantic. The Call Areas overlap with a number of sensitive habitats, areas of high biodiversity, and substantial fishing operations that warrant special consideration for avoidance, minimization, and, if necessary, mitigation as this process moves forward. We ask that you fully consider these comments as you work to identify areas for future leasing in the Central Atlantic.



Coordination to Date

As an agency with legal jurisdiction and special expertise related to marine resources, we provided input into your process at the earlier planning stages through a November 1, 2021, letter and during the Central Atlantic Task Force meeting on February 16, 2022. We acknowledge and appreciate the fact that some of the resource areas of concern raised during that earlier coordination have been removed from further consideration. Much of these areas were in the southern portion of the planning areas where you removed overlap with snapper/grouper Habitat Areas of Particular Concern (HAPCs), critical habitat designated for loggerhead sea turtles under the Endangered Species Act, the mean north wall of the Gulf Stream, as well as some of the canyons and methane seeps. We expect refining the Call Areas to avoid overlap with these resources will benefit future regulatory processes and project review.

The Call Areas identified in the FR Notice contain additional reductions from earlier planning areas, specifically at the south edge of Area B and the north edge of Area D. Compared to the original planning areas, the proposed Call Areas reduce overlap with several fisheries, including alewife, Atlantic chub mackerel, Atlantic croaker, bluefish, blueline tilefish, *Illex* squid, spot, and weakfish fisheries based on federal data. This is mostly due to the removal of inshore portions of Area B. However, despite these refinements, significant sensitive marine resources remain present in the proposed Call Areas. To move forward with responsible development in the Central Atlantic, we strongly encourage BOEM take a deliberative, science-based approach to both further refine potential wind energy areas and develop robust lease stipulations with the goal of avoiding or reducing the potential for adverse impacts to marine resources, including fisheries, and the fishing communities that rely on them.

Resources in the Call Area

Appendix A of this letter provides further details specific to NOAA trust resources that may be affected by potential future development in the Call Areas, including habitat resources, protected species, fisheries and fishing communities, and NOAA scientific surveys. Appendix B includes detailed socioeconomic impact reports for both commercial and party/charter vessel operations in each Call Area and all Call Areas combined.

The identified Call Areas overlap extensively with important habitat areas, including deep-sea coral habitats. Deep-sea corals are fragile and slow growing, making them particularly vulnerable to anthropogenic impacts. BOEM is still considering the Frank R. Lautenberg Deep-Sea Coral Protection Area for offshore wind development; we request the coral protection area be removed from further consideration. This area was identified for protection through a transparent and extensive stakeholder-driven process led by the Mid-Atlantic Fishery Management Council, and it is being considered for inclusion in the Administration's atlas documenting areas that are conserved to achieve the "30 by 30" goal of conserving 30 percent of the Nation's lands and waters by the year 2030. It includes deep-sea coral habitats that have been identified in and around submarine canyons that extend beyond the edge of the continental shelf into deeper water within Call Area E and portions of Call Area F. Outside of the coral protection area, the south end of Call Area F overlaps with canyons and valuable coral habitats along the shelf break.

In addition to corals, other sensitive complex habitats and benthic features important to supporting fisheries occur in the Call Areas. Portions of the Call Areas A and B, and E overlap with prime fishing grounds that have been identified and mapped by the State of New Jersey; these areas may include complex hard bottom habitats, live bottom habitats and/or benthic features such as sand ridges and troughs. These habitat areas should be removed from further consideration, as leasing and potential follow-on development would cause unacceptable levels of adverse effects. The eastern edge of some inshore Call Areas, particularly Call Areas B, C, and D, are immediately adjacent to the shelf break, canyons, and designated HAPCs for tilefish, and may overlap with coral habitats. Conservation buffers between these habitats and any potential lease areas should be established to avoid or minimize adverse impacts from potential future development. It is also important to note that most of the Call Areas have not been fully mapped, and we expect there to be additional sensitive habitats in these Call Areas. BOEM should conduct extensive mapping and habitat data collection prior to finalizing WEAs for leasing to help identify sensitive habitat areas so that these habitats can be excluded from leasing; this will reduce conflicts and delays during the regulatory process.

Several species of marine mammals, sea turtles, and marine fish that are listed as threatened or endangered under the Endangered Species Act (ESA) of 1973, as amended, occur in the Central Atlantic Call Areas and surrounding waters that will be used for transmission corridors and/or project vessels. See Appendix A for more details. As you continue through this process, we strongly encourage you to consider all available options to avoid and minimize risk to these species and their habitats. Options include, but are not limited to, limiting the extent of leasing and development in areas used by these species, and implementing robust lease stipulations to avoid or minimize effects to these species and the ecosystems on which they depend. For example, given the presence of protected species and their habitats in the Call Areas, it would be especially beneficial to identify lease stipulations in the proposed lease sale notice that would avoid, minimize, and document the effects on them due to in-water activities that occur prior to submission of any Construction and Operations Plans. As noted above, the Call Areas now under consideration no longer overlap with any designated critical habitat. However, please note that, consistent with the terms of a Settlement Agreement, by June 30, 2023, NMFS will submit to the Office of the Federal Register for publication a proposed determination concerning the designation of critical habitat for the six distinct population segments (DPS) of green sea turtles, including the North Atlantic and South Atlantic DPSs, whose ranges overlap with the Central Atlantic Call Areas. Once the determination is available, we would be happy to identify any additional coordination that may be required by ESA section 7(a)(4).

While we recognize that BOEM's recent revisions of the planning areas have reduced overlap with several fisheries, the Call Areas identified in the FR Notice remain a concern for key regional fisheries. Vessels fishing in all of the Call Areas combined landed an average of 6.6 million pounds (lb) of all species, valued at \$11 million each year, with surfclams, scallops, and squid comprising the majority of the landings and revenue. Vessels from Massachusetts to North Carolina operate in the Call Areas, with Areas A and B particularly important to vessels operating out of Atlantic City, Ocean City, and Cape May, NJ; New Bedford, MA; and Newport News, VA. When combined with existing lease areas, the Call Areas overlap with up to 26 percent of annual surfclam revenue, 19 percent of annual black sea bass revenue, and 17 percent of annual scallop revenue based on historic fishing operations and similar proportions of annual

landings for each species (see Appendix A, Table 6). Accordingly, offshore wind development in all of these areas could result in substantial cumulative economic and social impacts to important regional fisheries and associated fishing communities. Fishing communities such as Atlantic City, NJ, New Bedford, MA, Newport News, VA, as well as smaller fishing communities of Hobucken and Engelhard, NC, are highly dependent on commercial fishing and the potential for wind farm development in these areas raises Environmental Justice concerns. These communities have vulnerable populations with high rates of poverty and/or minority populations that may have less personal capacity to adapt to changes. NMFS is committed to support and advance equity and opportunities for these communities and encourages BOEM to consider the impacts of the Call Areas as well as cumulative development to these communities. The social and economic impacts from offshore wind development in the Call Areas will not only impact vulnerable coastal communities and those that rely on commercial and recreational fishing for their livelihood; they also will have direct impacts on domestic food production that could limit the availability of sustainable sources of protein. Avoiding, minimizing, and mitigating the impacts of offshore wind in the Call Areas will help to ensure that Americans have access to abundant, healthy, affordable, and sustainably-managed seafood. Based on fishery surveys, vessel monitoring system data, and fishing footprint analysis, Call Areas A and B are important to the scallop, surfclam, and *Illex* squid fisheries, with Area C reemerging as an important area for the surfclam fishery in recent years based on information provided by the fishing industry. We recommend BOEM consider removing these areas from future offshore wind development to minimize localized and regional impacts to existing fishery uses, associated marine resources, and the Nation's food supply.

As stated in previous environmental impact statements, major adverse impacts to NMFS scientific research and surveys would occur from offshore wind development on the OCS. These impacts could potentially affect fisheries management through lower quotas for commercial and recreational fishermen due to increased uncertainty in the surveys' measures of abundance. Effects to NMFS scientific surveys would also result in adverse effects on monitoring and assessment activities associated with recovery and conservation programs for protected species, including the critically endangered North Atlantic right whale. The interaction of the Call Areas with Northeast Fisheries Science Center (NEFSC) and Southeast Fisheries Science Center (SEFSC) scientific surveys are described in Appendix A.

Recommended Areas to be Removed from Further Consideration

There are some proposed Call Areas or portions of Call Areas that substantially overlap with important marine resources, fishing operations, and scientific surveys (see Appendix A for more detailed information). The following areas should be removed from further consideration due to the anticipated substantial adverse impacts from potential development of these areas:

- Frank R. Lautenberg Deep-Sea Coral Protection Area (overlaps with all of Area E and portions of Area F);
- The southern portion of Area F overlapping the canyon BOEM refers to as “The Point” in *Large Submarine Canyons of the United States Outer Continental Shelf Atlas* (OCS Study BOEM 2019-066);
- All Call Areas that overlap with or occur within close proximity of the edge of the continental shelf, the continental slope, canyons, methane seeps, and HAPC, particularly

the eastern edge of the inshore Call Areas B, C and D. We recommend BOEM work with us to identify a suitable buffer to minimize impacts of any future development on benthic and pelagic habitats along the shelf break; and

- Areas A and C and eastern portions of Area B to minimize conflict with fisheries and habitats that support these fisheries, including areas identified as Prime Fishing Areas by the state of NJ.

In summary, we recommend: 1) Areas A, C, and E be completely eliminated from further consideration; 2) Call Area F should be significantly reduced both at the northern and southern end where overlap with coral protection areas and offshore canyons occur; 3) Inshore Call Areas (particularly B, C (if not wholly excluded), and D) be reduced along the eastern edge to minimize overlap and conflicts with canyons, coral habitats, and HAPC; and, 4) the eastern portion of Area B be reduced to minimize conflict with fisheries and sensitive habitats. More information on the rationale for our recommendations is provided in the enclosed Appendices.

Scientific Recommendations for Site Identification

Given the important marine resources and potential user conflicts in the Central Atlantic Call Areas, we strongly recommend BOEM take a deliberative ecosystem-based management approach to evaluating and identifying areas within the Central Atlantic that may be eligible for leasing. Currently, BOEM's process for identifying Wind Energy Areas and then identifying and refining lease areas is not clearly understood. A science-based planning approach would provide greater transparency and clarity to the process by better informing the public on potential resource impacts and user conflicts, whether they occur prior to COP approval or as a result of it, the importance of reducing conflicts, and how they may be reduced. Below we outline recommended steps that should be taken prior to issuing additional leases on the OCS.

1. Design and apply ecosystem-based management and marine spatial planning approaches to considering leasing and any wind energy development in the Central Atlantic.

The Central Atlantic Call Areas cover approximately 4 million acres of the OCS, in addition to the 1.75 million acres already leased and the approximately 811,000 acres recently leased in the New York Bight and Carolina Long Bay areas. Given the extensive area eligible or proposed for development on the Atlantic OCS, we request that you take this opportunity to establish a method for estimating cumulative impacts upfront in the planning process. This should include the development of decision-support tools to analyze and predict the aggregated and cumulative impacts from multiple stressors, including offshore wind development and associated activities in the context of climate change. Such modeling exercises and tool development are reliant on rigorous and sustained systematic data collection on various ecosystem parameters and would be important for informing the identification of future lease areas. This approach would include an integrated ecosystem assessment or application of best available ecosystem-based management tools to incorporate a cumulative impact analysis of additive impacts to inform the planning process, rather than waiting to consider such effects on a project-by-project basis. This analysis should include the evaluation of potential transmission corridors rather than simply focusing on the lease areas alone. This is particularly

important given BOEM's proposal to designate WEAs beyond the continental shelf break. Such an approach can help inform the wind energy area identification process to weigh, if not reduce, resource impacts and user conflicts, while providing more transparency to the process of wind energy area identification.

We understand BOEM is working with NOAA's National Centers for Coastal Ocean Science (NCCOS) to conduct marine spatial planning in the Central Atlantic Call Areas to inform your decision on area identification. This is an important step to better inform area identification and it will be important to use the results of this effort to inform final lease areas within the Central Atlantic. However, we are concerned that the timeline to effectively and transparently conduct such a process will limit our ability to fully take advantage of such an approach. We encourage you to work with NCCOS to take a comprehensive approach and incorporate the best available data and consider existing data gaps to inform any marine spatial model. In an effort to assist in this process, we are also working with NCCOS to provide a list of existing data sets and models that we recommend be considered in your spatial planning efforts for the Central Atlantic. We welcome the opportunity to work with you and NCCOS to help inform any marine spatial planning efforts.

2. Design and execute research and test performance of pilot-scale floating wind technologies.

Prior to considering areas beyond the continental shelf break as eligible for leasing, we recommend BOEM further study and evaluate the potential effects of floating technology on marine resources, including associated inter-array and export cables. Such studies can support the development of science to be applied to the commercial leasing process in order to ensure that our offshore wind energy goals can be met with increased predictability of development opportunities. Studies should examine floating wind turbine and inter-array/export cable effects on habitats, corals, marine mammals, and benthic and pelagic fishing operations. A full evaluation of the transmission of energy from floating wind to shore should be incorporated into these studies, particularly how the cables will be transported through the continental shelf and associated habitats. Research study topics can be informed by recent efforts such as Maine's Offshore Wind Roadmap, RODA's Synthesis of the Science Report, Responsible Offshore Science Alliance discussions, and the National Renewable Energy Laboratory's data needs recommendations. Pilot scale testing should be conducted prior to large-scale commercial development to inform siting and operational development for future wind energy areas.

3. Establish and implement a federal survey mitigation program with funds to apply mitigation to existing and future leasing.

In March 2022, NOAA and BOEM released a draft Federal Survey Mitigation Implementation Strategy to address our agencies' efforts to mitigate the impacts on NMFS scientific surveys and the risks posed to living marine resource management. The strategy outlines actions that need to be taken in order to develop and implement regional

survey mitigation programs, including identifying and securing the necessary resources to implement mitigation activities. Prior to leasing in the Central Atlantic, key elements of the strategy should be completed, including developing and resourcing Northeast and Southeast Regional Federal Survey Mitigation Programs. This will provide certainty to developers, NMFS, and the public who depend on NMFS scientific survey enterprise.

4. Establish and begin collecting region-wide baseline monitoring, including passive acoustic monitoring and habitat surveys of sufficient spatial and temporal resolution.

In order to effectively perform environmental assessments of future project impacts on the marine environment, it is critical to understand resource and human use conditions of areas being considered for development. No standardized baseline monitoring requirements exist that allow sufficient resolution for assessing the resource conditions of proposed development areas. While guidelines and best practices have been developed, there are major gaps in our understanding of habitat conditions, fisheries use patterns, protected species distribution and habitat use, and ecosystem conditions; without consistent standardized approaches, it is not possible to effectively evaluate project impacts. It is important to establish and begin a baseline region-wide monitoring program to help inform wind energy area identification and provide more certainty to future regulatory processes.

5. Establish pre-construction, construction, and post-construction fisheries and wildlife monitoring requirements.

Prior to WEA identification and leasing, it is critical to establish certainty for all parties with regards to scientific needs and regulatory requirements for monitoring fisheries, wildlife, and ecosystem conditions. In the absence of monitoring requirements, individual projects will continue to implement narrowly defined monitoring strategies that do not follow standardized protocols, procedures, methods, and data sharing arrangements. As part of the development of uniform monitoring methods, we encourage early collaboration with NMFS scientists in the Northeast and Southeast regions to maximize the utility of any monitoring efforts.

6. Establish standardized regional requirements for mitigating impacts of offshore wind development.

Consistent with the Council on Environmental Quality regulations, we encourage BOEM to avoid and minimize impacts to existing users and marine resources at all stages in the process and mitigate adverse impacts that cannot be avoided. Given the importance of the Call Areas to marine trust resources, BOEM, in partnership with state and federal agencies and affected stakeholders, should develop a consistent, equitable, and science-based mitigation process to address unavoidable impacts on wildlife, including protected species, habitats, and fishing industries and communities. Such a process should be required as a lease stipulation when any leases are issued, but also employed throughout project development. Developing consistent and equitable regional mitigation standards

following transparent scientific-based processes are an essential element in increasing the certainty and predictability for developers, conservation interests, and fishing communities. It is critical that fair and equitable processes are established to address any foreseeable or unforeseen impacts of offshore wind development on the marine ecosystem and this should be developed prior to additional leasing. NMFS continues to assert that the foregoing objectives could be achieved through preparation of programmatic environmental analyses to inform the identification of WEAs and develop avoidance, minimization and mitigation measures that could be incorporated and applied in future decision making such as disclosure of proposed lease stipulations prior to lease issuance.

Early Engagement and Enhanced Coordination

The recommendations put forward in this letter and the enclosed Appendix are intended to help inform BOEM's process for wind energy area identification. Taking an enhanced scientific approach to area identification, as recommended, will significantly improve the process of weighing and reducing impacts to marine resources, weighing and reducing conflicts with existing ocean uses, and providing more certainty to the regulatory process. Stakeholder coordination throughout the process, including at the earliest stages, is also key to helping ensure conflicts are minimized. Below are some recommendations for points in the process to coordinate early with our agency and other relevant stakeholders as you work toward area identification and future leasing in the Central Atlantic.

- *Interagency Coordination:* We welcome open communication with our agency as you work through this area identification process and future leasing. We would be happy to follow up with you and further discuss the information, comments, and recommendations put forward in this letter prior to finalizing any wind energy areas. Once areas are identified for future leasing, we would appreciate the opportunity to work with you to ensure future lease stipulations include measures to promote responsible development that avoids or minimizes adverse impacts to marine resources, existing ocean uses and the communities that rely on these resources, including incorporation of standard mitigation and monitoring requirements and ensuring funds to support such programs are available. We encourage frequent coordination and communication with our agency early and often throughout the process.
- *Early and Continued Engagement:* As we have indicated on several occasions, we recommend coordination with our agency occur at the earliest possible point in the process, at the earliest stages of project scoping, and prior to finalizing any project design. Frequent and continued engagement between BOEM, resource agencies, and developers will reduce the potential for resource conflicts to disrupt or delay project plans. The efforts underway to use NOAA's expertise in marine spatial planning to refine planning areas, including the Central Atlantic Call Area, into potential lease areas is a significant step forward and provides an ideal forum for early and continued engagement.
- *Stakeholder Engagement:* We recommend you coordinate with all affected stakeholders and maintain an open and transparent process as you work toward area identification in the Central Atlantic. In addition to soliciting and considering input from stakeholders,

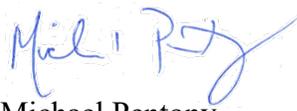
BOEM should provide a clear explanation of how that input was considered and incorporated into any final wind energy area selection decisions.

Conclusion

As a science agency, we recognize the urgency to mitigate climate change, and we support the Administration's goal of deploying offshore wind energy while also protecting biodiversity and promoting ocean co-use. However, it is crucial that, in that effort, we must not lose sight of the need to recognize the impacts associated with large scale development of the OCS. We must work diligently to ensure any planning and development is conducted in a responsible manner, with the benefit of scientific information that aims to better inform decision makers and the public of how to avoid and minimize adverse impacts to marine resources and to reduce conflict with ocean uses and communities that rely on these areas for their livelihood, and ensure that the nation has access to a sustainable and healthy source of seafood. As we have suggested from the beginning of our involvement with offshore wind development, a robust scientific comprehensive analysis should be conducted for area identification/selection in consideration of the issues discussed above to avoid and minimize adverse impacts on NOAA trust resources early in the process, and before developers are economically tied to specific locations. A programmatic NEPA analysis would allow for such an evaluation and we recommend it be developed for the Central Atlantic to inform area identification.

We appreciate the opportunity to comment and look forward to seeing how you address the comments and recommendations put forward in this letter and the enclosed Appendices. Should you have any questions regarding these comments, please contact Sue Tuxbury in our Habitat and Ecosystem Services Division at (978) 281-9176 or susan.tuxbury@noaa.gov.

Sincerely,



Michael Pentony
Regional Administrator

cc: David Macduffee, BOEM
Brian Hooker, BOEM
Brian Krevor, BOEM
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Rachael Peabody, VMRC
David Stormer, DEDFW
F/SER, Strelcheck, Fay, Bernhart, Wilber

APPENDIX A

NOAA Trust Resources in the Proposed Central Atlantic Call Areas

Habitat Resources

The identified Call Areas overlap extensively with ecologically important and sensitive habitat areas. Numerous resources¹ are available to aid BOEM in their understanding of many of these areas, though they are also discussed at length herein. Specifically, Figure 1 depicts known important habitat areas, and illustrates extensive overlap of the proposed Call Areas with the Frank R. Lautenberg Deep-Sea Coral Protection Area as well as areas identified as suitable habitats for corals. See Deep Sea Corals Amendment (Amendment 16 to the Mackerel, Squid, Butterfish Fisheries Management Plan) for maps and more information.

Frank R. Lautenberg Deep-Sea Coral Protection Area

The mid-Atlantic Frank R. Lautenberg Deep-Sea Coral Protection Area, recommended by the Mid-Atlantic Fishery Management Council and approved by NOAA in 2016, covers a 99,000 km² (~38,000 square mile) area on the outer continental shelf (OCS), slope, and canyons to the outer boundary of the EEZ and includes two types of zones. ‘Discrete’ zones protect defined areas of canyons and canyon complexes based on known coral distributions or outputs of predictive models that rank the likely presence of suitable coral habitats. Discrete canyons within and adjacent to the Call Areas, from north to south, include Wilmington, North Heyes-South Wilmington, South Vries, Baltimore, Warr-Phoenix Canyon Complex, Accomac-Leonard Canyons, Washington, Norfolk Canyons. A precautionary ‘broad’ zone protects a large area of deepwater habitats extending from approximately 450 m on the slope to the outer limits of the U.S. EEZ. The objective of designating the coral protection area was to protect corals by limiting future expansion of bottom fishing in an area that is largely outside the footprint of current fishing activity. Both zones restrict most bottom-tending gears, with a few exceptions. Due to its unique role protecting important coral habitat, the Frank R. Lautenberg Deep-Sea Coral Protection Area should not be considered for development and Call Areas that overlap with it should be excluded from further consideration. The entire Call Area E should be eliminated, as well as the northern portion of Call Area F due to their overlap with the Coral Protection Area.

Coral Habitat Suitability Model

A coral habitat suitability model was developed by NMFS and NOS to inform the coral protection area designation process. This coral suitability model has been peer reviewed and ground-truthed and is the best available model for predicting coral habitat in the mid-Atlantic. Both the discrete and broad zones of the Frank R. Lautenberg Deep-Sea Coral Protection Area were defined based on coral habitat suitability modeling, occurrence/detection data from coral surveys, and historical observations, as well as areas of high slope. It is important to note that only a small portion of the overall protected area was actually surveyed, and coral data from both zones used in the suitability model are presence data only. Absence of coral data does not mean

¹ <https://www.mafmc.org/actions/msb-am16>; https://www.mafmc.org/s/DeepSea-Corals-EA_Signed-FONSI.pdf; <https://portal.midatlanticocean.org/resources-data-links/>

absence of corals; thus extensive and full coverage habitat mapping, far more extensive than currently conducted in existing lease areas, would be necessary to determine the extent at which corals could be impacted by future development. Removing the coral protection area and other areas identified as suitable coral habitat areas from further consideration is the most appropriate measure to ensure sensitive coral habitats remain protected.

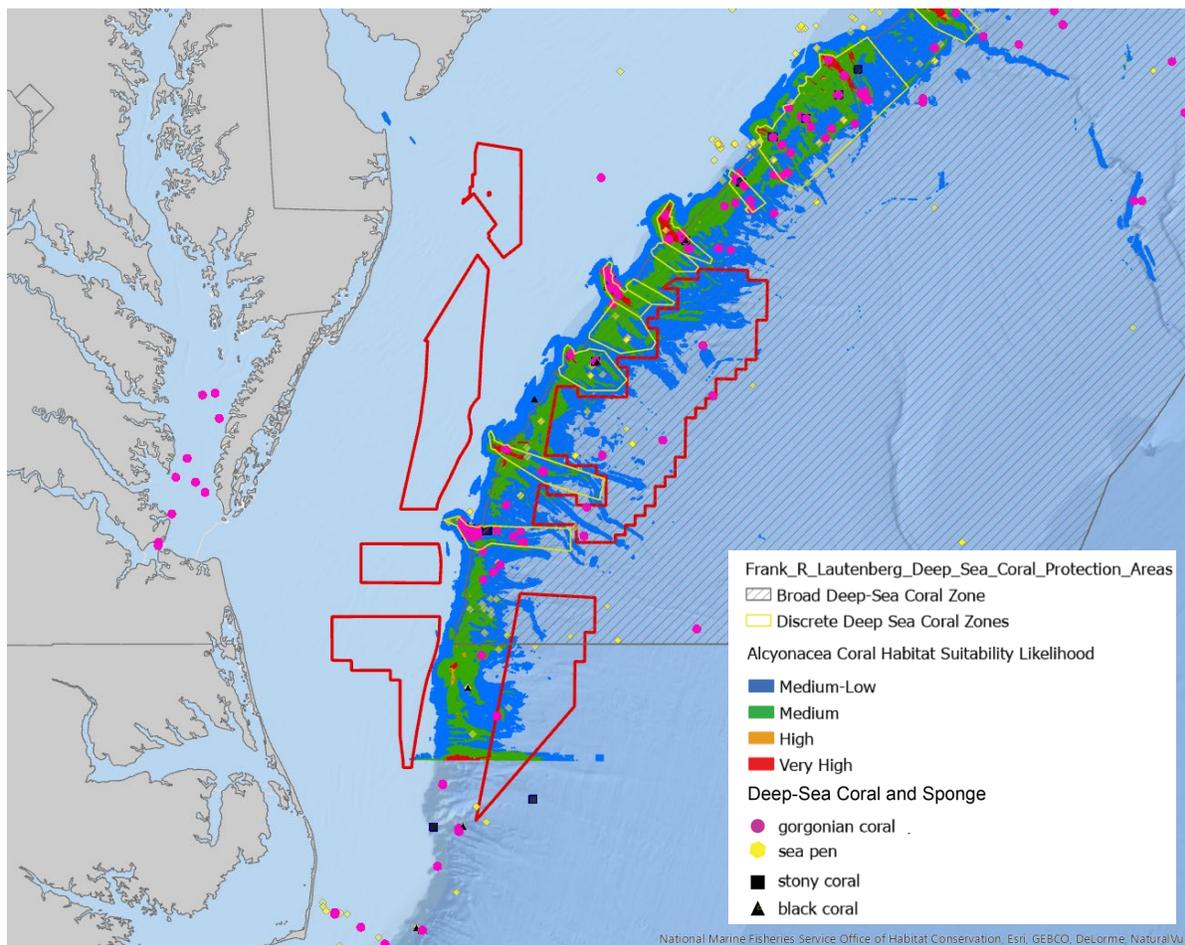


Figure 1. Frank R. Lautenberg Deep Sea Coral Protection Area: This dataset depicts the discrete and broad zone boundaries of the Frank R. Lautenberg Deep-Sea Coral Protection Area. Deep Sea Corals and Sponges (observed): This layer represents NOAA's Deep-Sea Corals and Sponges point location data.² NOAA's Deep-Sea Coral Research and Technology Program (DSCRTP) oversees a geodatabase of the known locations of deep-sea corals and sponges in U.S. territorial waters and beyond. The figure also displays the model output for alcyonacean deep-sea coral habitat suitability in the U.S. North and Mid-Atlantic.³ and BOEM Central Atlantic Call Areas.

² NOAA National Database for Deep Sea Corals and Sponges (Database version: 20220426-0). <https://deepseacoraldata.noaa.gov/>. NOAA Deep Sea Coral Research & Technology Program.

³ Kinlan, B.; Poti, M.; Dorfman, D.; Caldow, C.; Drohan, A.; Packer, D.; Nizinski, M. (2016). Model output for deep-sea coral habitat suitability in the U.S. North and Mid-Atlantic from 2013 (NCEI Accession 0145923).

Deep-Sea Corals and Habitats along the Continental Shelf Break

Corals and other sensitive benthic habitats areas extend beyond the designated coral protection area and overlap with portions of Call Area F (see suitability model results in Figure 1). The Keller Canyon and Hatteras Canyon occur in the southern portion of Call Area F and overlap an area known as “The Point,” which the South Atlantic Fishery Management Council designates a Habitat Area of Particular Concern (HAPC) under four fishery management plans (coastal migratory species; snapper-grouper complex, coral; and dolphin and wahoo). The Point also overlaps an area the Council designates an HAPC for tilefish. The Council’s essential fish habitat users guide⁴ and on-line GIS should be consulted for precise description of these areas. While these canyons and The Point are not as well studied as the Frank R. Lautenberg Deep-Sea Coral Protection Area, this portion of the Call Area F has the same geomorphic features as the northeastern planning area, including rare methane-seep habitats⁵ which could not be mitigated, repaired, or replaced should they be damaged by development. Accordingly, this southern portion of Call Area F should not be considered further for development.

In the FR Notice, BOEM acknowledges that deep-sea corals are likely to occur in the Call Areas in deeper waters and references a recent BOEM funded study that synthesized data and modeled deep-sea coral and hardbottom habits on the OCS offshore the U.S. Southeast Atlantic coast. We request more information related to which study is referenced here. We understand BOEM conducted a deep-sea coral study that focused on the Baltimore and Norfolk canyons (2012-2013), but we are unclear which study and modeling effort is referenced in the FR Notice. We recommend BOEM consider all available data, including the extensive work that was done to designate the Frank R. Lautenberg Deep-Sea Coral Protection Area and subsequent deep-sea coral surveys since then, that are in the DSCRTP database. This information should be considered in the area identification process and any spatial planning model developed for the Central Atlantic.

Bottom habitats in these shelf, slope, canyon, and methane seep areas are hotspots of biodiversity that warrant protection because they support diverse biological communities that include rare, fragile, and vulnerable species of deep-sea corals and sponges. Chemosynthetic communities near methane seeps are unique and include microbial mats, mussels, and tube worms, as well as commercial, recreational, and protected species. The upper slope areas are ecotones and upwelling areas used by many highly migratory fish species, whales, and other marine mammals for migration and feeding. The deep-sea coral and sponge habitats provide important three-dimensional structure for many deep-water bottom communities and have been identified as habitat for certain commercially important fish and shellfish species. Many deep-sea corals have a complex, branching form of growth that makes them very fragile. Because they grow and reproduce at very slow rates (with some estimated to be hundreds of years old) they are highly susceptible to anthropogenic impacts that makes mitigation impossible and their recovery from disturbances difficult over short time periods. This vulnerability has stimulated intensive research, monitoring, mapping, and conservation efforts to protect deep-sea corals and their

Threshold Logistic Outputs for Alcyonacea. NOAA National Centers for Environmental Information (NCEI). <https://www.ncei.noaa.gov/archive/accession/0145923>.

⁴ <https://safmc.net/download/SAFMCFHUsersGuideAugust21.pdf>

⁵ <https://oceanexplorer.noaa.gov/explorations/17atlantic-margin/welcome.html>

habitats.

These vulnerable habitats are not suitable for development and we request BOEM avoid leasing areas for development that may overlap with, or otherwise impact these areas. Additionally, sufficient buffers should be implemented around the continental shelf break to avoid and minimize impacts from construction and operation of future offshore wind projects.

Conservation buffers should be designed in consideration of both impacts to the benthos as well as affects to persistent fronts and areas of upwelling that sustain the biodiversity of these areas.

Given the vulnerability of habitats along the shelf break, we recommend the inshore Call Areas be modified along the eastern edge to ensure an adequate buffer between any potential wind energy area and the edge of the continental shelf, the slope, the canyons, methane seeps, and designated HAPC. Of particular concerns are Call Areas B, C, and D which are located in close proximity to the shelf break. Prior to identifying the wind energy areas, BOEM must consider potential effects to oceanographic processes along the shelf break, including effects from the wind turbine structures themselves, as well as oceanographic effects from extraction of energy from the atmosphere during operation. Given the uncertainties around the impacts to oceanographic processes from offshore wind, and the unique and vulnerable nature of the resource, we recommend a conservative approach to identifying a suitable conservation buffer. A conservation buffer zone between any potential development and these shelf, slope, canyon, and methane seep areas is necessary to ensure these areas of high biodiversity are not adversely impacted, directly or indirectly, by construction or operation of wind facilities. We can work with you to review best available information and develop a suitable buffer zone for this area; we note that recent studies have indicated strongest oceanographic effects occur within 20-30 km of a wind field (Christiansen et al. 2022⁶).

Energy Transmission from Call Areas

BOEM's considerations for wind energy area identification should not be confined to the Call Areas where future leasing may occur. In addition to effects to habitats within and adjacent to the Call Areas, BOEM should consider potential transmission corridors, particularly for the Call Areas beyond the shelf break. We recommend BOEM conduct a comprehensive evaluation of potential cable routes and available onshore connection locations prior to finalizing the designation of wind energy areas. Based on the location of the Call Areas, we expect export cable transmission to require extra booster stations and/or AC/DC converter stations, which require water intakes and discharge at elevated temperatures; creating unmitigated impacts throughout the life of a project. Any leasing of areas east of the shelf break may result in impacts to canyons, corals, methane seeps, or other sensitive habitats along the shelf break and slope as a result of energy transmission to shore. Potential transmission routes should be considered to help identify appropriate areas for leasing and minimize adverse impacts from any future development.

New Jersey Prime Fishing Areas

The Call Areas also overlap with numerous New Jersey (NJ) Prime Fishing Areas, particularly in

⁶ Christiansen, N., U. Daewel, B. Djath, and C. Schrum. 2022. Emergence of Large-Scale Hydrodynamic Structures Due to Atmospheric Offshore Wind Farm Wakes. *Frontiers in Marine Science.*, 03 February 2022 | <https://doi.org/10.3389/fmars.2022.818501>.

the inshore Call Areas A and B, with some overlap in Call Area E. Prime Fishing Areas are identified and designated by NJ and include "...areas that have a demonstrable history of supporting a significant local intensity of recreational or commercial fishing activity. These areas include features such as artificial reefs, rock outcroppings, sand ridges or lumps, rough bottoms, aggregates such as cobblestones, coral, shell and tubeworms, slough areas and offshore canyons" (N.J.A.C 7:7-9.2). Example areas that overlap with, or are entirely within, the Central Atlantic Call Areas include, but are not limited to, "Triple Wrecks," "Parking Lot," and "Doc' Lummis Slough," within Call Area A, and the two "T Cups." within Call Area B. A map of all overlaps with Prime Fishing Areas is shown in Figure 2. We recommend these areas be removed from further consideration since they likely include important benthic features and complex habitat areas that are not suitable for development. In addition to the Prime Fishing Areas, numerous fish havens and other named features (on charts), such as lumps, banks, and shoals, are present in the Call Areas. Many of these habitat areas are also important for commercial and recreational fishing; specifically, the naming of features is typically the result of the area being important to various marine users, primarily commercial and recreational fishing communities. These areas, inclusive of the NJ Prime Fishing Areas are likely characterized by high fish production, high benthic faunal density, and species diversity; dense aggregations of fish are supported by high local primary production. Therefore, named areas on charts, fish havens, and NJ Prime Fishing Areas should be removed from consideration for future wind energy areas.

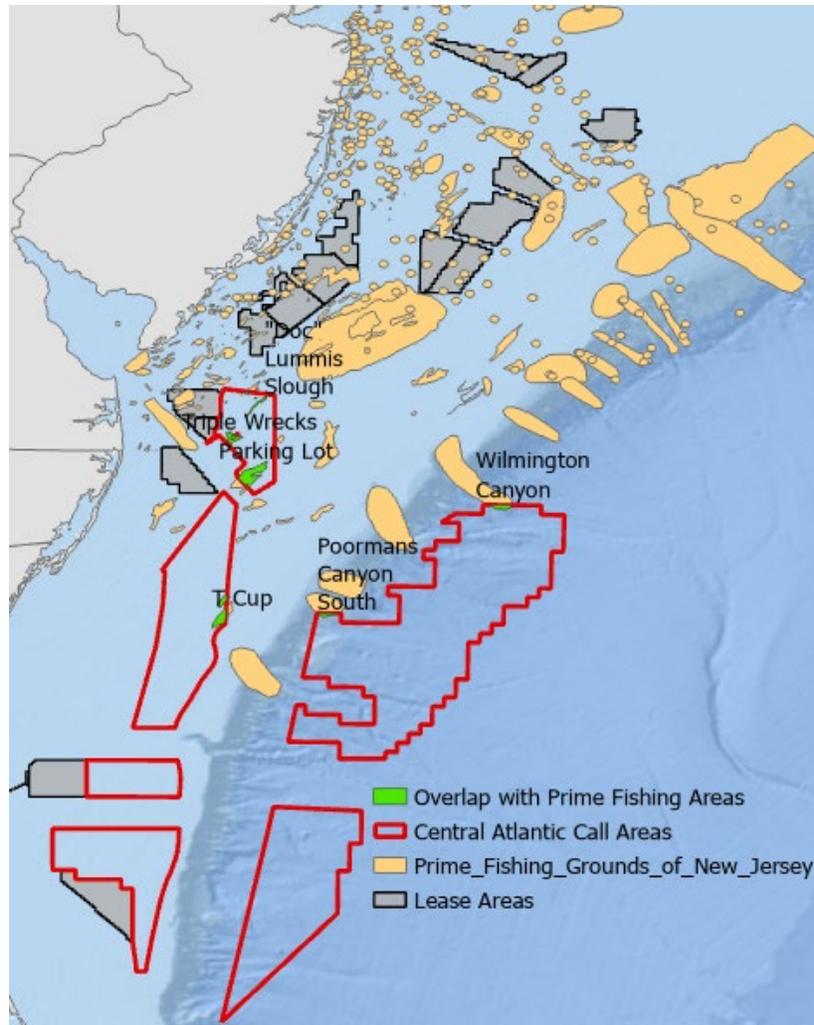


Figure 2. New Jersey (NJ) Prime Fishing Areas⁷ identified and mapped in the mid-Atlantic and overlap with the BOEM Central Atlantic Call Areas.

Other Habitats of Concern

In addition to the habitats and protected areas described above, other ecologically sensitive habitats exist within the Call Areas. High-resolution site-specific information will be needed to precisely identify where these habitats are located in order to avoid and minimize adverse impacts from any future offshore wind development. For example, we know that discrete “live bottom” areas consisting of rock outcrops, ledges, boulders, and cobbles with dense aggregations of vulnerable, structure-forming biota (e.g., gorgonian corals and anemones) that support abundant fish populations, exist on the continental shelf in the Mid-Atlantic, and are likely to occur within expansive areas encompassing the Central Atlantic Call Areas. Other valuable and sensitive habitats in the Call Areas may include shellfish beds (e.g., Atlantic surfclams) and large topographic features (e.g., shoals and shoal complexes, scarps, sand ridges, and sand waves, and their associated troughs and depressions). Broader scale mapping efforts will be necessary to identify complex habitats and benthic features.

⁷ <https://gisdata-njdep.opendata.arcgis.com/datasets/njdep::prime-fishing-grounds-of-new-jersey/about>

Habitat Mapping and Data Collection Needs

Site-specific habitat data collection is necessary to identify all areas that may not be suitable for development. If sensitive areas are not removed or identified at the site identification stage, we will recommend their removal during the regulatory process. We have concerns that the level of habitat mapping that has been conducted for recent projects would not be sufficient to detect some sensitive habitat types found in these Call Areas, such as corals; thus, substantially more mapping efforts and aerial coverage are necessary to ensure these vulnerable habitats are not impacted. To reduce potential conflict later in the process, we recommend BOEM initiate large-scale habitat mapping in the Call Areas, in consultation with our agency, prior to leasing. This may help identify sensitive areas early in the planning process and provide more certainty and efficiencies for the regulatory process.

BOEM should consult satellite oceanography to assess frontal regions that may overlap with or be adjacent to the Call Areas, particularly along the shelf break, and should remove these areas, which provide important habitat for fisheries and protected species, from further consideration. Once the wind energy areas are established, BOEM should conduct regular physical and biological oceanographic sampling in the areas and adjacent waters to collect baseline data on the pelagic environment. Such sampling should begin prior to lease issuance as a component of region-wide baseline monitoring. Sampling should occur three to five years prior to construction and should be designed to assess seasonal characteristics of the water column, including the formation and breakdown of the Cold Pool, the Gulf Stream, and prey resources (i.e., plankton, forage fish). BOEM's research design should consider recent efforts to assess ecological metrics and sampling strategies, such as a 2021 workshop held by Rutgers University and a related workshop held in 2019 on offshore wind and the Cold Pool⁸. BOEM should use the information collected prior to construction to provide a baseline to assess the impacts of offshore wind development. Sampling should occur such that results can be used to assess effects of wind turbines on the oceanographic and atmospheric environment. The studies should also be used to inform the development of lease areas to minimize effects to oceanographic features (and subsequently habitats and protected species) by limiting placement of structures which may overlap with identified features (i.e., frontal activity) that may aggregate a high diversity of species and prey or unique features to the region (i.e., Gulf Stream, Cold Pool) that support ecosystem function.

Summary

In summary, we recommend the following steps be taken to avoid and minimize impacts to vulnerable habitats in the Central Atlantic Call Areas:

- Remove Frank R. Lautenberg Deep-Sea Coral Protection Area (overlaps with all of Area E and portions of Area F) from further consideration for development;
- Remove the southern portion of Area F overlapping the canyon BOEM refers to as “The Point” in *Large Submarine Canyons of the United States Outer Continental Shelf Atlas*

⁸ 2021 Partners in Science Workshop: Identifying Ecological Metrics and Sampling Strategies for Baseline Monitoring During Offshore Wind Development, 2019 Partners in Science Workshop: Offshore Wind and the Mid-Atlantic Cold Pool (https://rucool.marine.rutgers.edu/wp-content/uploads/2020/10/PartnersWorkshop_WhitePaper_Final.pdf)

- (OCS Study BOEM 2019-066) from further consideration;
- Remove designated prime fishing grounds that have been identified and mapped by the State of New Jersey from further consideration. These areas overlap with portions of the Call Areas A, B, and E;
 - Work with NMFS to identify an appropriate conservation buffer to avoid and minimize impacts to benthic and pelagic habitats located along the shelf break and slope, including deep-sea corals, methane seeps, canyons, and designated HAPCs, from construction and operation of future offshore wind development. This should include reduction of the eastern edges of inshore Call Areas B, C, and D, which occur within close proximity to continental shelf break;
 - Conduct an analysis of potential offshore wind transmission corridors and onshore connection sites. This information should be used to inform siting of any final wind energy areas to help minimize adverse effects of future development on habitats in the Central Atlantic; and
 - Conduct habitat mapping and begin baseline physical and biological oceanographic sampling in and around the Call Areas prior to issuing any leases to help identify sensitive habitats and unique benthic features unsuitable for development early in the process and to begin critical baseline monitoring to inform any future development.

Protected Resources

Several species of marine mammals, sea turtles, and marine fish that are listed as threatened or endangered under the Endangered Species Act (ESA) of 1973, as amended, occur in the Central Atlantic Call Areas and surrounding waters. Tables 1 through 3 detail the ESA-listed species whose range overlaps with at least some portion of the Central Atlantic Call Areas. As currently identified, none of the areas overlap with designated critical habitat. As noted above, critical habitat for the North Atlantic DPS of green sea turtle may be proposed in a future rulemaking. All ESA-listed marine mammals are also protected under the MMPA. More information on these species, including links to relevant regulatory and planning documents, are available on the NMFS webpage (<https://www.fisheries.noaa.gov/species-directory/threatened-endangered>).

As the potential lease sites in the Call Areas are further defined, it will be critical to fully consider both project-specific and cumulative effects of offshore development (including activities that occur prior to construction) on all species listed under the ESA and MMPA and the habitats and ecosystems on which they depend, and to evaluate ways to avoid and minimize adverse impacts to these species and their habitats. We strongly encourage you to consider all available options to minimize risk to these species and their habitats including limiting the extent of leasing and development in areas used by these species and implementation of robust lease stipulations. Additionally, before leases are issued (or at the latest, before construction), a robust monitoring program should be implemented in any Central Atlantic Call Areas to collect information to refine these areas and inform further development; please see our comments below about recommended baseline monitoring.

Note the abbreviations used in the following tables are: DPS = distinct population segment; E = an “endangered” listing under the ESA; FR = Federal Register; T = a “threatened” listing under the ESA.

Table 1. ESA-Listed Marine Mammals Occurring in the Central Atlantic Call Area

Species	ESA Listing Status	Listing Rule/Date	Most Recent Recovery Plan/Outline Date
Blue whale	E	35 FR 18319/December 2, 1970	November 2020
Fin whale	E	35 FR 12222/December 2, 1970	August 2010
North Atlantic right whale	E	35 FR 18319/December 2, 1970	June 2005
Sei whale	E	35 FR 12222/December 2, 1970	December 2011
Sperm whale	E	35 FR 12222/December 2, 1970	December 2010

Table 2. ESA-Listed Sea Turtles Occurring in the Central Atlantic Call Area

Species	ESA Listing Status	Listing Rule/Date	Most Recent Recovery Plan/Outline Date
Green sea turtle (North Atlantic DPS)	T	81 FR 20057/April 6, 2016	October 1991
Green sea turtle (South Atlantic DPS)	T	81 FR 20057/April 6, 2016	October 1991
Kemp’s ridley sea turtle	E	35 FR 18319/December 2, 1970	September 2011
Leatherback sea turtle	E	35 FR 8491/June 2, 1970	April 1992
Loggerhead sea turtle (Northwest Atlantic DPS)	T	76 FR 58868/September 22, 2011	December 2008
Hawksbill sea turtle*	E	35 FR 8491/June 2, 1970	December 1993

*Hawksbill sea turtles are rare north of Florida but could occasionally occur in association with hard bottom habitat in southern portions of the call areas.

Table 3. ESA-Listed Fishes Occurring in the Central Atlantic Call Area

Species	ESA Listing Status	Listing Rule/Date	Most Recent Recovery Plan/Outline Date
Atlantic sturgeon (Carolina DPS)	E	77 FR 5914/February 6, 2012	N/A
Atlantic sturgeon (South Atlantic DPS)	E	77 FR 5914/February 6, 2012	N/A
Atlantic sturgeon (Chesapeake Bay DPS)	E	77 FR 5914/February 6, 2012	N/A

Atlantic sturgeon (New York Bight DPS)	E	77 FR 5914/February 6, 2012	N/A
Atlantic sturgeon (Gulf of Maine DPS)	T	77 FR 5914/February 6, 2012	N/A
Giant manta ray	T	83 FR 2916/January 22, 2018	2019
Oceanic whitetip shark	T	83 FR 4153/January 30, 2018	2018

In addition to the five stocks of ESA-listed marine mammals, 15 protected cetacean species occur in the Central Atlantic Call Area, six of which are considered “strategic” under the MMPA (Table 4, grouped by hearing frequency). Descriptions of all marine mammal stocks under NMFS jurisdiction can be found in the final 2020 and draft 2021 Stock Assessment Reports⁹.

Table 4. MMPA-Protected Marine Mammal Species Occurring in the Central Atlantic Call Area

Common Name	Status	Occurrence ¹⁰
Low Frequency Cetaceans (baleen whales)		
Blue whale	MMPA protected, ESA endangered	Year-round
Fin whale	MMPA depleted, MMPA strategic, ESA endangered	Year-round ¹¹
Humpback whale (West Indies DPS); Gulf of Maine MMPA stock)	MMPA protected	Year-round
Minke Whale	MMPA protected	Low likelihood, potentially year round ¹²

⁹ <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments>

¹⁰ Habitat-based density models (<https://seamap.env.duke.edu/models/Duke/EC/>) have been developed for all marine mammals in the Atlantic. These models are updated periodically; therefore, NMFS recommends referencing these models for occurrence throughout the planning process.

¹¹ Edwards et al. (2015) and Davis et al. (2020) found evidence to confirm the presence of humpback, fin and sei whales in every season throughout much of the U.S. Exclusive Economic Zone (EEZ) north of 35° N; however, densities vary seasonally.

¹² Per the 2020 SAR, minke whales are typically most abundant in New England waters during the spring-to-fall period. Records based on visual sightings and summarized by Mitchell (1991) suggest a possible winter distribution in the West Indies, and in the mid-ocean south and east of Bermuda, a suggestion that has been validated by acoustic detections throughout broad ocean areas off the Caribbean from late September through early June (Clark and Gagnon 2002; Risch et al. 2014).

North Atlantic right whale	MMPA depleted, MMPA strategic, ESA endangered	Fall/winter/spring, possibly summer
Sei whale	MMPA depleted, MMPA strategic, ESA endangered	Low likelihood; Spring ¹²
Mid-frequency Cetaceans (dolphins, toothed whales, beaked whales, bottlenose whales)		
Atlantic Spotted Dolphin	MMPA protected	Year-round
Beaked whales (various spp.) ¹³	MMPA protected	Year-round
Harbor porpoise	MMPA protected	Fall/winter/spring ¹⁴
Pilot whale, long-finned	MMPA protected	Low likelihood
Pilot whale, short finned	MMPA protected	Year-round
Risso's dolphin	MMPA protected	Year-round
Short-beaked Common Dolphin	MMPA protected	Winter/spring ¹⁵
Sperm Whale	MMPA protected, ESA endangered	Year-around
Western North Atlantic Bottlenose Dolphin, Offshore stock	MMPA protected	Year-round
Western North Atlantic Bottlenose Dolphin, Northern and Southern Migratory Stocks	MMPA protected, MMPA depleted, MMPA strategic	Year-round ¹⁶

¹³ Beaked whale species occurring in the Atlantic include Cuvier's beaked whale and several *Mesoplodon spp.* (Blainville's, Gervais, Sowerby's, True's beaked whales).

¹⁴ Per the 2020 SAR, during fall (October–December) and spring (April–June), harbor porpoises are widely dispersed from New Jersey to Maine, with lower densities farther north and south. During winter (January to March), intermediate densities of harbor porpoises can be found in waters off New Jersey to North Carolina, and lower densities are found in waters off New York to New Brunswick, Canada.

¹⁵ Per the 2020 SAR, the species is less common south of Cape Hatteras, although schools have been reported as far south as the Georgia/South Carolina border (32° N) (Jefferson et al. 2009). They exhibit seasonal movements, where they are found from Cape Hatteras northeast to Georges Bank (35° to 42°N) during mid-January to May (Hain et al. 1981; CETAP 1982; Payne et al. 1984).

¹⁶ These stocks make broad-scale, seasonal migrations in coastal waters from the shoreline to the 20-m isobath. See the SARs for more detailed information.

High Frequency Cetaceans (true porpoises, Kogia)		
Kogia spp.	MMPA protected	Year-round
Pinnipeds		
Gray Seal	MMPA protected	Low likelihood
Harbor Seal	MMPA protected	Fall/winter/spring ¹⁷

Overall, information on the fine scale distribution, abundance, and habitat use of protected species in the the Central Atlantic Call Areas is limited. Broad-scale distribution data for these species is available; however, continued data collection on seasonal distribution, density, abundance, behavior, movements, and habitat use for these species is needed to better understand the consequences of leasing and development in the Central Atlantic Call Areas. Moreover, as described above, an assessment of the cumulative impacts of leasing these areas in combination with previously leased areas or other planned lease areas (e.g., Gulf of Maine) should be undertaken prior to finalizing any Wind Energy Areas and additional leases. This is particularly important as many protected species are migratory in nature and are likely to be exposed to effects of offshore wind projects in multiple lease areas. Please see our comments below about recommended baseline monitoring to inform the further development of the Central Atlantic Call Areas.

The overlap with critical habitat designated for the Northwest Atlantic DPS of loggerhead sea turtles has been removed; however, we note that Call Areas D and F are directly adjacent to the constricted migratory corridors and *Sargassum* habitat of the Northwest Atlantic DPS of loggerhead sea turtle. As such, careful assessment of the potential impacts to the physical and biological features (PBFs) of each habitat type and the primary constituent elements that support the PBFs of each habitat type should be carried out and appropriate buffers should be considered to minimize the potential impact of development on the features of this habitat.

Endangered North Atlantic right whales occur year round, albeit in varying densities, in the Central Atlantic Call Areas, as well as along the potential cable corridors and anticipated vessel transit routes. The status of this species is extremely poor and distribution and habitat-use in this region is not particularly well known. The consequences of leasing these areas on North Atlantic right whales needs to be carefully considered. This species will be exposed to effects of offshore wind development in every lease area identified on the Atlantic OCS to date. The lack of a cumulative assessment of development of these lease areas on North Atlantic right whales, their designated critical habitat, and the areas in between, severely limits full consideration of the consequences to this severely depleted and sensitive species. According to Krzystan et al.

¹⁷ Per the 2020 SAR, recent studies demonstrate that various age classes utilize habitat along the eastern seaboard throughout the year with occurrence within the call areas from September through May.

(2018),¹⁸ North Atlantic right whales are not just migrating southward during fall and northward during spring; sightings data suggest they are occurring throughout the calving season along the Mid-Atlantic. As the population continues to decline¹⁹ and in the midst of a protracted Unusual Mortality Event²⁰ the development of fixed and floating offshore wind facilities presents additional risk to the species from stressors such as noise exposure, vessel traffic, increased energy expenditure by individuals due to displacement, habitat changes, and displaced fishing effort. The identification of any areas eligible for leasing, pre-construction activities, and ultimate development of wind energy facilities must be done in a way that avoids and minimizes effects to North Atlantic right whales and their habitat, with particular consideration of risks to migrating pregnant right whales and their newborn calves.

It is important to recognize that many protected species range along the East Coast and thus are likely to be exposed to effects of multiple offshore wind projects. As mentioned elsewhere, leasing in the Central Atlantic should be informed by an assessment of the anticipated effects on protected species that occur in the area, including consideration of operational impacts (e.g., turbine noise, physical presence of turbines, vessel traffic, habitat modifications); this analysis should consider project-specific and cumulative effects that may occur before, during and after construction. It is also important to consider how development in this area may affect the availability and quality of habitat as well as vessel traffic and fishing use patterns which may affect the risk that these activities pose to protected species.

Additional information on the species that occur in the Central Atlantic Call Area can be found at:

- Greater Atlantic Regional Fisheries Office (GARFO) Section 7 Mapper²¹
- Southeast Regional Office (SERO) Section 7 Mapper²²
- Ocean Biodiversity Information System Spatial Ecological Analysis of Megavertebrate Populations²³
- Passive Acoustic Cetacean Map²⁴
- WhaleMap²⁵
- Atlantic Marine Assessment Program for Protected Species (AMAPPS)
 - AMAPPS reports²⁶
 - AMAPPS Mammal Mammal Model Viewer²⁷

¹⁸Krzystan, A.M., Gowan, T.A., Kendall, W.L., Martin, J., Ortega-Ortiz, J.G., Jackson, K., Knowlton, A.R., Naessig, P., Zani, M., Schulte, D.W., and Taylor, C.R. (2018). Characterizing residence patterns of North Atlantic right whales in the southeastern USA with a multistate open robust design model. *Endangered Species Research*, 36:279–295.

¹⁹Pace, R. M. 2021. Revisions and Further Evaluations of the Right Whale Abundance Model: Improvements for Hypothesis Testing. NOAA Technical Memorandum NMFS-NE-269. National Marine Fisheries Service, Northeast Fisheries Science Center, Woods Hole, MA. April 2021.

²⁰<https://www.fisheries.noaa.gov/national/marine-life-distress/2017-2022-north-atlantic-right-whale-unusual-mortality-event>

²¹<https://www.fisheries.noaa.gov/resource/map/greater-atlantic-region-esa-section-7-mapper>

²²<https://www.arcgis.com/home/item.html?id=b184635835e34f4d904c6fb741cfb00d>

²³<https://seamap.env.duke.edu/>

²⁴<https://apps-nefsc.fisheries.noaa.gov/pacm/#/>

²⁵<http://whalemap.org>

²⁶<https://www.fisheries.noaa.gov/new-england-mid-atlantic/population-assessments/atlantic-marine-assessment-program-protected>

²⁷<https://apps-nefsc.fisheries.noaa.gov/AMAPPSviewer/>

- Marine Mammal Stock Assessments²⁸
- Habitat-based Marine Mammal Density Models for the US Atlantic: Latest Versions²⁹
- DOE Mid-Atlantic Baseline Studies³⁰
- New York State Dept. of Conservation NY Bight Passive Acoustic Monitoring, Aerial, Shipboard Surveys^{31,32}

We would also like to bring your attention to two other NOAA efforts related to protected species: The Biologically Important Areas (BIAs)³³ effort and updates to the North Atlantic right whale vessel speed rule (50 CFR § 224.105). The two efforts are discussed below.

BIAs identify areas and times within which cetacean species or populations are known to concentrate for specific behaviors, or be range-limited, and provide additional context within which to examine potential interactions between cetaceans and human activities. Specific to anthropogenic sound and marine mammals, there is compelling evidence indicating that a variety of contextual factors, including behavioral state and life stage, can influence the probability, nature, and extent of a marine mammal's response to noise. The BIAs provide some of this important contextual information for cetaceans and can augment the cetacean density, distribution, and occurrence data typically used in marine mammal impact assessments. BIAs are compilations of the best available science and have no inherent or direct regulatory power. They have been used by NOAA, other federal agencies, and the public to support planning and marine mammal impact assessments, and to inform the development of conservation measures for cetaceans. Importantly, NOAA, with the support of the U.S. Navy, has convened a working group of regional cetacean experts who have begun updating and revising the BIAs identified in Van Parijs et al. (2015), identifying the full extent of any BIAs that overlap U.S. waters, adding new BIAs where appropriate, and now scoring each BIA. The use of a new BIA scoring and labeling system will improve the utility and interpretability of the BIAs by designating an overall Importance Score for each BIA. Finalization of the updated website and database is scheduled for December 2022. The locations, timing, and Importance Scores of the updated and revised BIAs in the Central Atlantic, once this information becomes available, should be considered as lease areas are identified. Until then, the previously recognized North Atlantic right whale migratory corridor BIA that extends along the East Coast establishes the importance of the Central Atlantic to migrating mothers and their newborn calves. As noted previously, given how little is known about North Atlantic right whale habitat utilization in the Central Atlantic, this BIA should be carefully considered when refining Call Areas.

In June 2020, NMFS completed an assessment³⁴ of its vessel speed rule (50 CFR § 224.105). This assessment included an evaluation of mariner compliance with the rule's Seasonal

²⁸ www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments

²⁹ <https://seamap.env.duke.edu/models/Duke/EC/>

³⁰ <http://www.briloon.org/mabs>

³¹ <https://www.dec.ny.gov/lands/113647.html>

³² https://remote.normandeau.com/nys_aer_overview.php

³³ <https://oceannoise.noaa.gov/biologically-important-areas>

³⁴ National Marine Fisheries Service. 2020. North Atlantic Right Whale (*Eubalaena glacialis*) Vessel Speed Rule Assessment. National Marine Fisheries Service, Office of Protected Resources, Silver Spring, MD.

Management Area (SMA) vessel speed restrictions and cooperation with the voluntary Dynamic Management Area (DMA) program. The evaluation found that compliance with the rule (all vessels over 65 feet are required to reduce speed to 10 knots or less in SMAs) reached 81% across all SMAs and called for revising SMA timing and boundaries to better match current North Atlantic right whale habitat use and distribution. Cooperation with DMAs was generally low, and the assessment recommended that the DMA program be terminated or modified. NMFS is currently considering the recommendations of the assessment and related public comments as we explore potential options for further reducing vessel strikes of North Atlantic right whales. All potential measures to further reduce the risk of vessel strike for North Atlantic right whales, including the recommendations of the assessment, and any information provided in any future rulemaking, should be considered as potential lease areas and lease conditions are identified.

Recommendations for Monitoring to Inform Area Refinement

To inform the further refinement of the Central Atlantic Call Areas, and in respect to our suggestion of taking an ecosystem approach to identifying areas and conducting a cumulative impact analysis, we recommend the following monitoring efforts below be completed before leases are issued (or at the latest, before construction).

Continuous archival Passive Acoustic Monitoring (PAM) and acoustic and satellite telemetry should be conducted in the Call Areas prior to leasing and construction to collect baseline information on the presence, distribution, and seasonality of North Atlantic right whales, other marine mammals, and acoustically tagged species (e.g., highly migratory species such as tunas and sharks, sturgeon, and sea turtles). Additionally, both archival and real-time PAM should be used to collect baseline information on the presence, distribution, and seasonality of marine mammals located in the potential transit routes from ports that may be used to support offshore construction and operations. Archival PAM should also be used to establish baseline noise levels and habitat conditions in the Call Areas and surrounding waters. A coordinated regional PAM approach should be taken which follows the recommendations in Van Parijs et al. 2021.³⁵ Monitoring using continuous PAM archival recorders should occur three to five years prior to the identification of lease areas, or at least a minimum of three to five years before construction. If conducted prior to leasing, the information from the PAM should be used to inform the location and size of potential lease areas by removing areas which overlap with identified locations with high species diversity, biological importance (i.e. migratory routes), or high individual species presence (i.e. hotspot). If PAM is conducted after leasing, but prior to construction, the information should be used to inform the development of lease areas to minimize effects to protected species by limiting activities, such as construction or placement of structures, which may overlap with identified locations with high species diversity, biological importance (i.e. migratory routes), or high individual species presence (i.e. hotspots).

Systematic aerial surveys should be conducted in the Call Areas and adjacent waters to collect baseline data on the presence, abundance, distribution, and seasonality of marine megafauna prior to leasing and construction. Surveys should follow a similar protocol to the aerial surveys

³⁵ Van Parijs, S.M., Baker, K., Carduner, J., Daly, J., Davis, G.E., Esch, C., Guan, S., Scholik-Schlomer, A., Sisson, N.B. and Staaterman, E., 2021. NOAA and BOEM Minimum Recommendations for Use of Passive Acoustic Listening Systems in Offshore Wind Energy Development Monitoring and Mitigation Programs. *Frontiers in Marine Science*, 8, p.760840.

conducted in the Massachusetts/Rhode Island Wind Energy Areas³⁶ and should be flown on a regular basis. Aerial surveys should occur three to five years prior to the identification of lease areas, or at least a minimum of three to five years before construction. If conducted prior to leasing, the information from the aerial surveys should be used to inform the location and size of potential lease areas by removing areas which overlap with identified locations with high species diversity, biological importance (i.e. migratory routes), or high individual species presence (i.e. hotspot). If aerial surveys are conducted after leasing, but prior to construction, the information should be used to inform the development of lease areas to minimize effects to protected species by limiting activities, such as the construction or placement of structures, which may overlap with identified locations of high species diversity, biological importance (i.e. migratory routes), or high individual species presence (i.e. hotspots). Studies that provide a better understanding of behavioral impacts to marine mammals from noise sources such as pile driving and concentrated vessel traffic, with particular attention to baleen whales, should also be undertaken.

Fisheries Operations and Resources

The following summarizes information derived from evaluating the Call Areas using the fishing [footprint method](#) based on vessel logbook data. Tables and figures provided below reflect revenues in 2019 dollars, but the same data presented in the Appendix B reports reflect revenues adjusted to 2020 dollars. Therefore, the numbers in the tables below will not match similar data in the reports. Information presented here was compared to other sources such as vessel monitoring data and resource surveys for key species to corroborate findings.

We appreciate revisions to the western inshore planning area (Call Areas A and B), which reduced overlap with several important regional fisheries. However, the Call Areas continue to overlap with historic operations in several important regional fisheries. Based on the updated Call Areas, Appendix B1 provides summary information on historic fishing operations that could be affected by future wind development projects within the Call Areas as currently proposed. Since 2008, up to 581 vessels have fished nearly 6,000 trips in these Call Areas each year, with most fishing occurring in Areas A and B. Such trips landed in ports within Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Maryland, Virginia, and North Carolina. During 2008-2020, over 89 million pounds (lbs) of fish were landed from these planning areas at a value of over \$169 million. Average annual fishing revenue from trips within all of the Call Areas combined exceeded \$1 million for important fishing communities such as Cape May, NJ, New Bedford, MA, and Newport News, VA (see Table 5). For some species, fishing operations in these areas represent a substantial portion of annual landings and associated revenue. For example, average annual sea scallop landings (836,856 lbs) were valued at \$7.2 million, while surfclam and *Illex* squid annual landings averaged 2.2 million lbs and 1.7 million lbs worth \$1.4 million and \$650,000, respectively (see Table 6).³⁷ Many vessels depended upon these planning areas for more than 50 percent of annual fishing revenue in all years, with several entities reliant on these areas for over 75 percent of annual landings in several years (see Figure 8.1 in

³⁶ <https://www.masscec.com/marine-mammal-and-sea-turtle-surveys>

³⁷ *Illex* squid landings and revenue are likely overestimated based on comparing vessel monitoring system data to data derived on singular fishing locations reported in logbooks.

Appendix B1). Thus, these planning areas are important to existing fisheries and represent substantial contributions to annual regional fishery landings and revenue.

Cumulatively, current and anticipated offshore wind development areas, including all existing and proposed lease areas and the Call Areas, would impact significant amounts of regional commercial fishery operations. For 11 species managed by GARFO and the Atlantic States Marine Fisheries Commission (ASMFC), over 10 percent of annual landings and revenue in certain years came from areas proposed for wind energy development. Relative to total annual regional landings and revenue, fishing operations in these areas represented up to 26 percent of annual landings and 25 percent of annual revenues for Atlantic surfclams; 22 percent of annual Atlantic chub mackerel landings and revenues; 19 percent of annual *Illex* squid landings and revenues; 19 and 18 percent of annual black sea bass landings and revenues, respectively; 17 and 16 percent of annual sea scallop landings and revenue, respectively; and over 12 percent of annual ocean quahog and red crab landings and revenue (see Table 7). If vessel operators choose not to fish within wind energy areas, this could result in substantial adverse economic impacts to many of the region's most important fisheries and associated fishing communities. This could also disrupt the supply of a healthy and sustainable food source to both domestic and international markets, reduce the availability of bait used to target other fish, and increase costs for fishery products worldwide. Together, these impacts could potentially compromise the economic viability of individual fishing businesses and food security for the nation at large.

Of the Call Areas, Areas A and B overlap the most with existing commercial fishery operations under the management of GARFO (see Figure 3 and the reports in Appendix B). Over 80 percent of surfclam revenue from the Call Areas during 2008-2020 (\$19 million) was from Area A, while over 64 percent of scallop revenue from the Call Areas during 2008-2020 (\$60 million) comes from Area B. Up to 506 vessels took up to 4,400 trips annually in Area A since 2008, while up to 450 vessels took up to nearly 2,900 trips annually into Area B since 2008. Vessel dependence varies by area, but many vessels were dependent upon Areas A and B for over 25 percent of annual fishing revenue during this time, with a few dependent upon this area for over 50 percent of annual fishing revenue in some years. Based on industry input, surfclam fishing has increased in the eastern portions of Area C. Although such an increase is not reflected in the area-specific reports in Appendix B, NMFS surfclam survey data indicate concentrations of surfclams in this area supporting industry input. Survey data also confirm the presence of high quantities of surfclams in Area A and most of Area B, particularly the northern and western portions of these areas. While fishing footprint data suggest a high degree of overlap with the *Illex* fishery in Areas B, E, and F, the spatial resolution of the underlying vessel logbook data likely overestimates the degree of impact on this fishery based on comparisons with vessel monitoring system data. The eastern portion of Areas B and C closest to the shelf break and canyons likely overlap with the *Illex* squid fishery to the greatest degree among Call Areas, however. This area also corresponds to historic scallop activity as well as represented by survey and vessel monitoring system data. As a result, we recommend BOEM avoid placing offshore wind projects within Areas A and C, and the eastern portion of Area B to minimize overlap with historical and anticipated commercial fishing operations.

Similar to commercial operations, Areas A and B include the vast majority of for-hire recreational (party/charter vessels) operations for GARFO-managed species within the Call

Areas. For-hire activity in Areas C and D were very similar in terms of total revenue and fish count, with operations in Area E slightly lower in fish caught, but higher in total revenue due to substantially higher revenue reported in 2019. Operations in Area F are minimal during 2008-2020, although this is likely reflective of the limited reporting of more southerly and highly migratory species in fishery logbooks submitted to the Greater Atlantic Regional Fisheries Office. Black sea bass dominated the catch in Areas A, B, and C, while dolphin fish (Mahi-mahi), yellowfin tuna, bluefin tuna, and other species, mostly highly migratory species such as white marlin, skipjack tuna, and wahoo dominated the catch in Areas D, E, and F.³⁸ Based on vessel logbook data for party/charter permits issued by GARFO, over 50 percent of the total number of fish caught within the Call Areas between 2008-2020 (174,000 fish) was caught in Area A (92,000 fish) (see Appendix B8 and B9). Similarly, Area A is responsible for nearly 50 percent of revenue from ticket sales, valued at over \$2.6 million from 2008-2020, or approximately an average of \$95,000 per year. For-hire trips into the planning areas, particularly Area A, have been generally increasing since 2008. For-hire vessels operated primarily out of ports in Maryland (Ocean City), Delaware (Indian River and Lewes), and Virginia, although Cape May, New Jersey also operated in the Call Areas. Over 1,000 angler trips were taken out of individual ports, with several ports (e.g., Ocean City, Cape May, taking over 200 angler trips into the Call Areas each year. Generally, angler trips have increased since 2008, with over 3,200 trips taken in Call Areas in 2020 alone. Many of the GARFO-permitted party/charter vessels operating in the Call Areas relied upon Areas A and B for over 20 percent of annual revenue from angler trips.

³⁸ Due to existing reporting requirements, species catch within the Central Atlantic Call Areas may be reported through multiple logbook reports to different NMFS offices. The summary reports in Appendix B are based on catch reported through Greater Atlantic Region (ME-NC) logbooks and likely underrepresent catch of more southerly species, including highly migratory species, which are reported separately.

Table 5: Average Annual Landings (All Species) within the Central Atlantic Call Areas by Landing Port.

Port	Average annual landings (lb)							Average annual revenue (2019 dollars)						
	All Call Areas Combined	Area A	Area B	Area C	Area D	Area E	Area F	All Call Areas Combined	Area A	Area B	Area C	Area D	Area E	Area F
ALL_OTHERS	732,978	133,086	294,162	112,915	234,570	225,741	157,890	\$1,497,696	\$416,419	\$823,504	\$129,886	\$154,399	\$270,912	\$99,172
ATLANTIC CITY	1,325,173	1,187,324	196,873			1,525		\$862,328	\$767,527	\$134,047			\$8,770	
BARNEGAT	36,893	12,899	48,529			7,742		\$288,968	\$116,277	\$390,177			\$35,343	
BEAUFORT	27,611	2,679	12,619	1,502	6,476	13,403	1,300	\$81,687	\$14,438	\$49,389	\$2,791	\$12,023	\$25,539	\$2,034
CAPE MAY	1,747,677	677,394	323,820	26,839	42,378	743,680	45,368	\$2,238,418	\$840,818	\$976,258	\$15,670	\$36,258	\$415,392	\$22,365
CHINCOTEAGUE	219,601	2,682	205,665	8,287	2,182	10,057		\$408,088	\$4,427	\$379,746	\$34,091	\$3,427	\$17,099	
DAVISVILLE	786,360	3,716	103,912	92,088	324,702	112,807	216,450	\$377,906	\$2,831	\$57,390	\$43,239	\$166,452	\$61,861	\$108,215
ENGELHARD	57,257				15,926		2,029	\$118,297				\$26,232		\$3,551
FALL RIVER	76,838		6,448			45,044		\$116,472		\$13,796			\$61,569	
HAMPTON	232,301	22,924	111,678	24,071	22,408	46,023	17,685	\$589,957	\$153,067	\$359,396	\$12,788	\$25,186	\$79,041	\$11,549
HOBUCKEN	10,045	1,980						\$24,998	\$7,344					
INDIAN RIVER	18,730	14,734	2,229					\$48,942	\$36,020	\$8,552				
LEWES	13,358	12,017						\$29,747	\$25,626					
LONG BEACH	17,069	16,149						\$115,876	\$114,683					
MONTAUK	30,456	2,903	9,883			12,455		\$49,376	\$4,566	\$39,016			\$16,848	
NEW BEDFORD	399,640	79,547	203,999	10,926		111,400	42,610	\$2,372,458	\$632,782	\$1,625,125	\$19,456		\$280,415	\$62,978
NEW LONDON	18,525	4,844	18,188			2,197		\$145,659	\$35,432	\$161,056			\$9,594	
NEWPORT NEWS	284,761	45,752	153,160	10,844	30,971	45,685	24,146	\$1,542,292	\$331,918	\$1,081,016	\$15,303	\$31,215	\$98,780	\$22,343
NORTH KINGSTOWN	1,592,564	63,908	243,817	89,020	266,395	589,627	223,306	\$893,374	\$34,259	\$201,707	\$50,099	\$153,267	\$303,774	\$123,666
OCEAN CITY	1,071,930	627,158	432,256	1,003		10,733		\$882,934	\$486,395	\$368,335	\$2,284		\$27,210	
ORIENTAL	34,423	2,807	12,051		130	19,705		\$56,395	\$5,673	\$24,546		\$368	\$31,264	
POINT JUDITH	68,546	6,202	18,392	1,649	2,427	43,023	3,664	\$88,297	\$10,834	\$35,021	\$1,843	\$2,418	\$43,209	\$3,221
POINT PLEASANT	19,853	6,090	25,857			1,501		\$128,498	\$24,940	\$198,986			\$11,287	
SEA ISLE CITY	27,256	17,520	584			8,166		\$69,774	\$47,731	\$2,513			\$13,166	
STONINGTON	7,905	2,355	11,102			1,106		\$49,653	\$17,913	\$82,297			\$4,639	
VIRGINIA BEACH	58,464		1,287	34,775	26,887			\$123,660		\$1,923	\$105,582	\$25,224		
WACHAPREAGUE	2,398		1,502					\$4,756		\$3,337				
WANCHESE	89,448	3,599	25,009	7,427	47,325	24,460	17,390	\$95,715	\$6,157	\$34,956	\$12,578	\$42,998	\$35,849	\$7,867
WILDWOOD	23,391	22,353						\$83,765	\$78,686					

Table 6: Average Annual Species Landings and Revenue from All Central Atlantic Call Areas Combined during 2008-2020 (revenues in 2019 dollars).

Species	Average Annual Landings 2008-2020 (lb)	Average Annual Revenue 2008-2020 (2019 dollars)
Atlantic sea scallop	836,856	\$7,252,217
Atlantic surfclam	2,256,640	\$1,463,883
<i>Illex</i> squid	1,740,029	\$650,624
Longfin squid	438,393	\$490,532
Black sea bass	126,330	\$381,502
Summer Flounder	190,698	\$342,918
Red crab	215,901	\$214,548
Monkfish	129,178	\$196,804
Ocean quahog	133,619	\$111,466
American lobster*	18,983	\$93,182
Atlantic menhaden*	441,790	\$39,342
Bluefish	40,545	\$30,862
Atlantic chub mackerel	106,684	\$25,835
Atlantic croaker*	45,932	\$23,889
Atlantic herring	164,050	\$17,523
Jonah crab*	18,934	\$16,829
Skate wings	39,950	\$15,739
Spiny dogfish	92,265	\$15,597
Golden tilefish	3,060	\$12,551
Blueline tilefish*	4,962	\$11,937
Scup	17,225	\$9,842
Atlantic mackerel	35,036	\$8,455
Butterfish	17,457	\$8,168
Striped bass	3,161	\$7,170
Tautog	1,103	\$3,708
Silver hake	3,837	\$2,611
American eel*	370	\$1,335
Atlantic cod	621	\$1,163
Witch flounder	713	\$1,105
Horseshoe crab	1,477	\$973
Spot**	576	\$659
Ocean pout	773	\$641
Red hake	864	\$472
Weakfish	204	\$296
Offshore hake	149	\$196
White hake	104	\$192
Spanish mackerel	113	\$126
Black drum*	279	\$113
Cobia*	37	\$67
Redfish	16	\$18
Red drum*	8	\$15
Pollock	6	\$7

*Landings/revenue for these species are underestimated due to limited coverage of these fisheries in Greater Atlantic logbooks.

Table 7: The maximum percentage of total annual regional landings and revenues for species managed by GARFO and the ASMFC caught within existing and proposed offshore wind lease areas and the Central Atlantic Call Areas.

GARFO and ASMFC Managed Species	Maximum Annual Percent Total Regional Species Landings	Maximum Annual Percent Total Regional Species Revenue
American eel**	22%	31%
Blueline tilefish**	26%	28%
Atlantic surfclam	26%	25%
Atlantic chub mackerel	22%	22%
<i>Illex</i> squid	19%	19%
Atlantic menhaden**	20%	19%
Black sea bass	19%	18%
Black drum**	19%	18%
Atlantic croaker**	14%	17%
Atlantic sea scallops	17%	16%
Yellowtail flounder	14%	15%
Offshore hake	14%	14%
Spot**	15%	13%
Ocean quahog	14%	13%
Red crab	12%	12%
Red drum**	11%	11%
Alewife	9%	10%
Bluefish	9%	10%
Skate wings	10%	10%
Atlantic mackerel	9%	10%
Cobia**	18%	9%
Longfin squid	9%	9%
Scup	8%	9%
Monkfish	10%	8%
Weakfish	8%	7%
Summer flounder	7%	7%
Red hake	11%	7%
Spanish mackerel	6%	6%
Butterfish	7%	6%
Silver hake	7%	6%
Hickory shad	7%	6%
Tautog	6%	6%
Golden tilefish	6%	6%
Blueback herring	5%	6%
Jonah crab*	5%	5%
Horseshoe crab	6%	4%
American shad	6%	4%
Spiny dogfish	4%	4%
Winter flounder	3%	4%
Windowpane flounder	3%	3%
Atlantic herring	3%	2%
American lobster*	1%	2%
*Landings/revenue for these species are underestimated due to limited historic coverage of these fisheries in existing reporting requirements for the Greater Atlantic Region.		
**Landings/revenue percentages for these species are likely overestimated due to limited coverage of these fisheries in existing Greater Atlantic Region reporting requirements.		

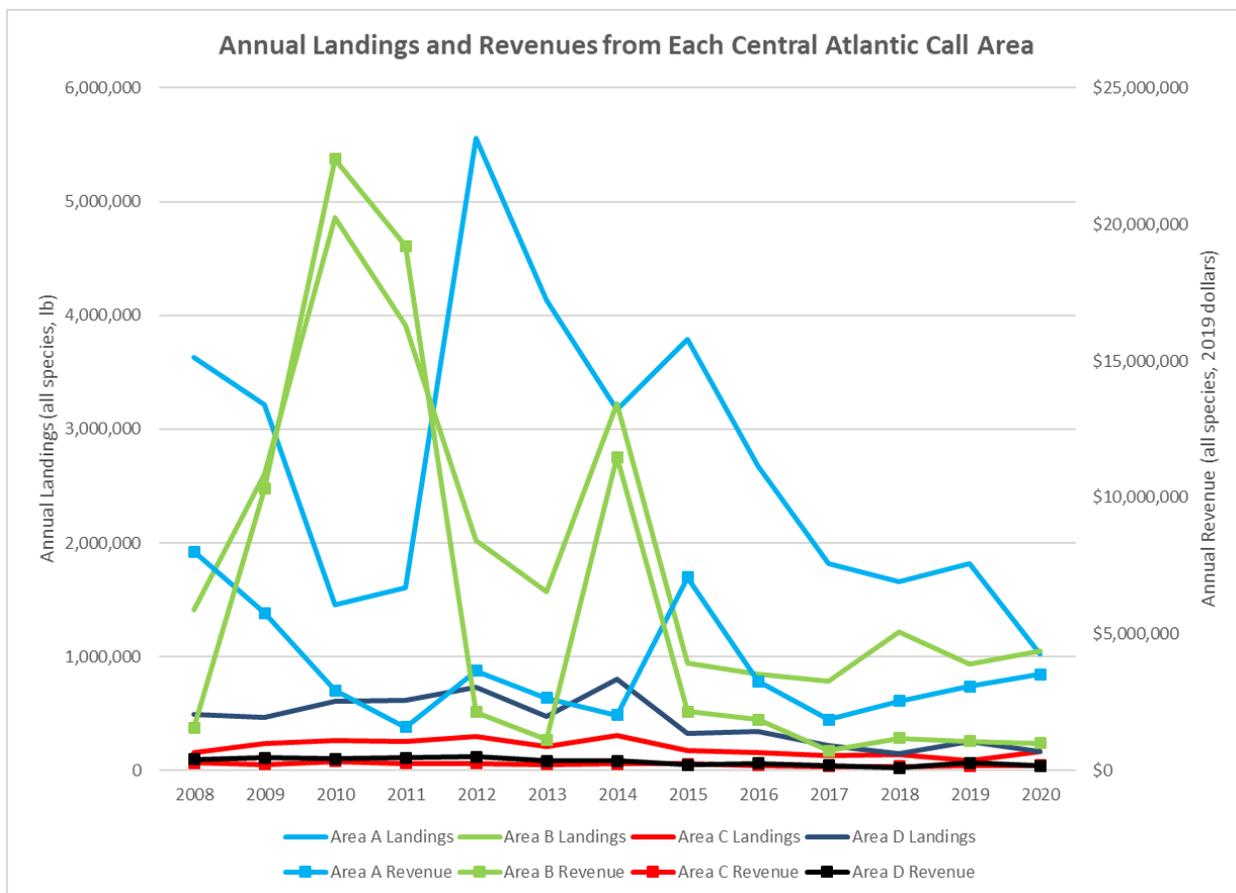


Figure 3. Annual Landings and Revenues from Each Central Atlantic Call Area

The Call Areas are also heavily utilized by recreational and commercial fisheries for Atlantic Highly Migratory Species (HMS), including swordfish, billfishes, tunas, and sharks. Areas offshore of the shelf break (E and F) presumably would be for floating wind. These areas are heavily utilized by commercial HMS longline fishing vessels that primarily target swordfish and tunas. Coastwide, HMS commercial ex-vessel revenues are \$30-40 million per year. The shelf-edge and adjacent waters from North Carolina to New Jersey are a heavily fished area by commercial HMS vessels, with the Mid-Atlantic region accounting for approximately 37% of U.S. Atlantic coast HMS pelagic longline effort in recent years (Figure 4). While HMS vessels from Massachusetts to Florida seasonally operate in Mid-Atlantic waters, vessels based in New Jersey, Delaware, Maryland, Virginia, and North Carolina are more reliant on the region and may be disproportionately impacted. Across HMS commercial permits, 19% (902 vessels) are home ported in these states. While effort in the pelagic longline fishery is focused along the shelf-edge, set locations vary depending on oceanographic conditions, including Gulf Stream position, mesoscale eddies and frontal zones, and seasonal and interannual productivity dynamics. HMS bottom longline fishing targeting coastal sharks and gillnet and trawl vessels targeting smooth dogfish also occur over Mid-Atlantic shelf waters (Areas A, B, C, and D). Given that HMS longline sets often exceed 20 miles in mainline length, these vessels would be unable to fish within turbine arrays, or between neighboring arrays, and would be forced to redistribute effort elsewhere. Furthermore, pelagic longline sets may drift over an additional 30 miles with prevailing currents in this region, requiring additional spatial buffers from

installations to prevent gear entanglements.

These areas are also seasonally fished by HMS private and for-hire recreational fishermen, including for numerous highly valuable HMS tournaments (Figure 5). HMS recreational fishing has an estimated annual economic impact exceeding \$500 million, supporting approximately 4,500 jobs coastwide (<https://www.fisheries.noaa.gov/feature-story/new-report-reveals-economic-impact-recreational-atlantic-highly-migratory-species>). HMS recreational fishing in the Mid-Atlantic represents a significant portion of this total. The states adjacent to the Central Atlantic Call Areas (NJ to NC) account for 27% (1081) of HMS charter/headboat permit holders, 36% (8,473) of HMS private angling permit holders, and 26% (333) of HMS-focused fishing tournaments. Unlike recreational fisheries for smaller species, fishing for HMS such as blue marlin, yellowfin and bigeye tunas, thresher sharks, and others, requires thousands of yards of line, and during fights vessels often drift > 1 mile. Therefore, considerable spacing between neighboring vessels or other obstructions (such as wind turbines) is necessary when targeting HMS. Recreational vessels targeting HMS would be unable to fish within turbine arrays due to increased risks of gear entanglements, aggregation of fishing vessels, and resulting losses of hooked fish.

It should be noted that the vast majority of HMS fishing effort is not reported to the GARFO Vessel Trip Report program, but rather through separate logbook programs managed by the SEFSC and is not well-represented in the attached socioeconomic analyses. Impacts to HMS resources, fisheries, and communities must not be overlooked. Additional information can be found in HMS Stock Assessment and Fisheries Evaluation (SAFE) Reports (<https://www.fisheries.noaa.gov/atlantic-highly-migratory-species/atlantic-highly-migratory-species-stock-assessment-and-fisheries-evaluation-reports>), and recreational data, including the Large Pelagics Survey, is available at <https://www.fisheries.noaa.gov/recreational-fishing-data/recreational-fishing-data-downloads>.

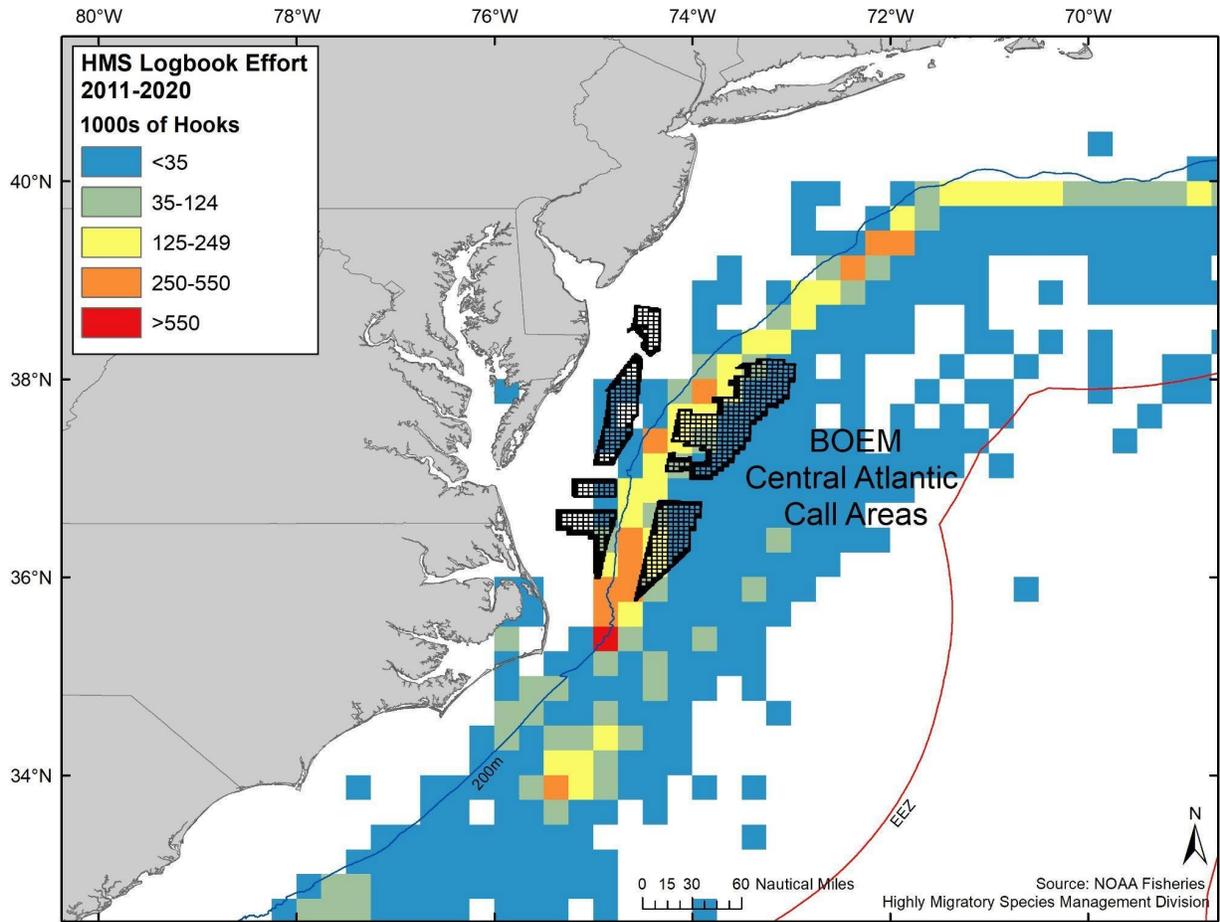


Figure 4. Commercial HMS fishing effort (primarily pelagic longlines targeting swordfish and tunas), 2011-2020, relative to the Central Atlantic Call Areas.

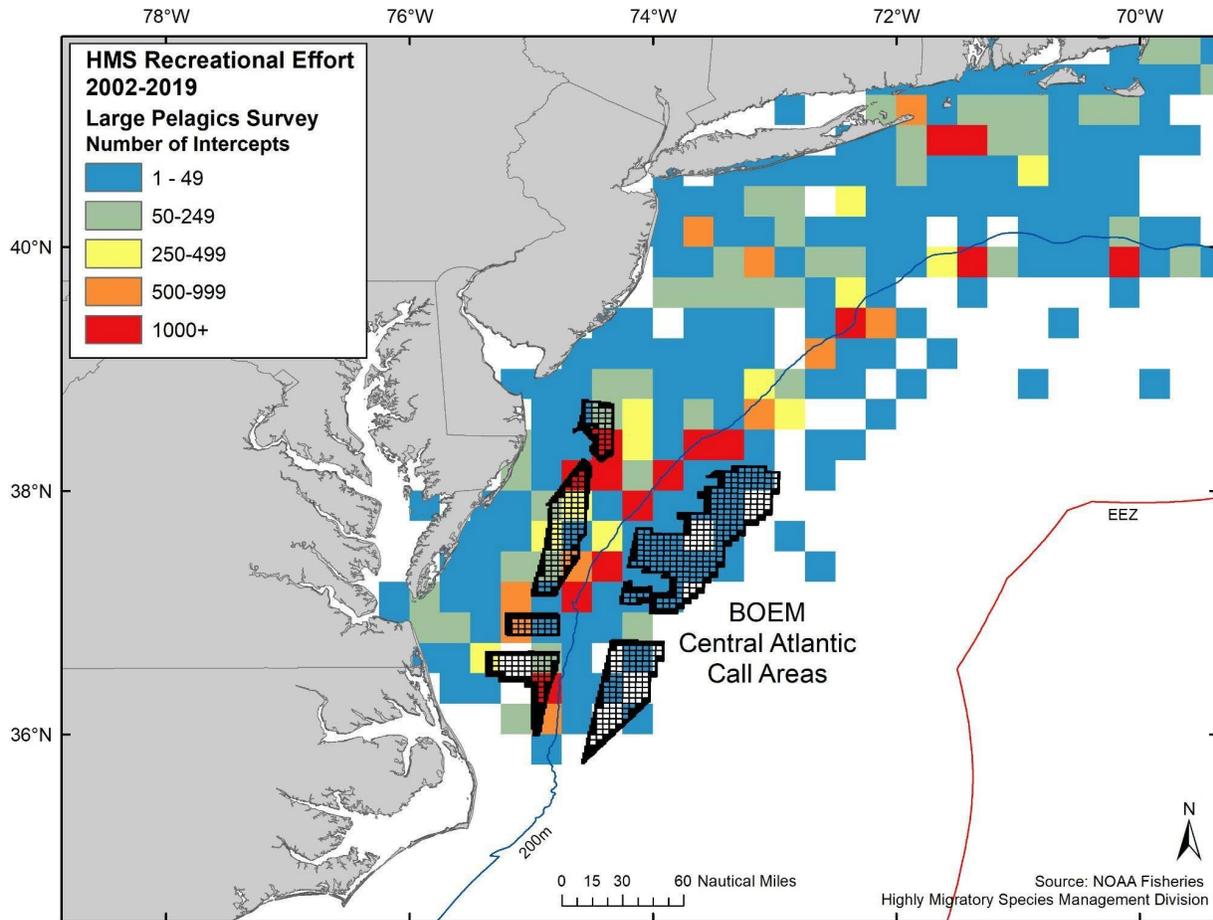


Figure 5. HMS recreational fishing effort sampled by the Large Pelagics Survey (LPS) program, 2002-2019, relative to the Central Atlantic Call Areas. Dockside survey intercepts are conducted from Maine through Virginia during June through October annually. Thus, the lack of effort reported from North Carolina southward is an artifact of the survey design, not a true absence of HMS fishing effort.

A number of the areas cover some of the highly productive recreational and charter fishing locations in the East coast, particularly the area immediately north of Oregon Inlet and the areas just West of the canyons. The areas offshore of Delaware, Maryland and Virginia near the Eastern extent of the Canyons are key fishing locations for HMS as well as for numerous bottom species such as tilefish and seabass.

Fishing Community Dependence and Environmental Justice

The cumulative social effects to coastal communities that are dependent on fishing should be considered before proposing more wind development lease areas. A sample of NOAA Fisheries Community Social Vulnerability Indicators (CSVIs) data is provided in this letter, but further community data is found at: <https://www.fisheries.noaa.gov/national/socioeconomics/social-indicators-coastal-communities>. and data tool here: <https://www.st.nmfs.noaa.gov/data-and-tools/social-indicators/>. NOAA Fisheries' indices for poverty, population composition, and personal disruption can be used to better identify and understand Environmental Justice communities. The indicators show that fishing communities that are dependent upon commercial fishing are far more likely to have higher levels of poverty, have a larger percentage of minority and tribal populations, and/or have residents with less "personal capacity" to respond to change. Table 8 lists ports that have reported landings from within the Central Atlantic Call Areas (see Table 5) that also have environmental justice concerns or gentrification pressure. Based on the CSVIs, the ports reported score Medium-High in commercial fishing dependence (engagement and reliance) and score Medium-High to High in at least one indicator of environmental justice (poverty, population composition, personal disruption) and gentrification (housing disruption, retiree migration, urban sprawl). Many communities listed here have significant portions of landings from within the Call Areas, including Atlantic City and New Bedford. Many are smaller fishing communities that could be more vulnerable to changes (e.g., Wildwood, Hobucken, Engelhard, Beaufort) and show higher environmental justice scores and higher commercial fishing dependence scores.

Further analyses should be completed to understand the effects on food security, including the underserved populations' access to food supply. Additionally, little is understood on the potential effects of wind development on the already vulnerable seafood industry job market. Further research is needed on the multiplier effects to coastal communities and the regional economy on lost or displaced fishing revenue at all stages of cumulative development. These effects should be analyzed and any impacts expected should have transparent and clear mitigation strategies. BOEM should ensure that distributive justice is practiced with underserved communities given access and resources to participate in all stages of the wind energy development process, including future consideration of these planning areas.

PORT	EJ Concerns	Gentrification Pressure
ATLANTIC CITY, NJ	X	X
BARNEGAT LIGHT, NJ		X
BEAUFORT, NC	X	X
CAPE MAY, NJ		X
CHINCOTEAGUE, VA		X
ENGELHARD, NC	X	
FALL RIVER, MA	X	
HOBUCKEN, NC	X	
LEWES, DE	X	X
MONTAUK, NY		X
NEW BEDFORD, MA	X	X
NEW LONDON, CT	X	
NEWPORT NEWS, VA	X	
OCEAN CITY, MD		X
ORIENTAL, NC		X
POINT JUDITH, RI		X
POINT PLEASANT, NJ		X
SEA ISLE CITY, NJ		X
WILDWOOD, NJ	X	X

Table 8. Ports with landings from within the Central Atlantic Call Areas that are medium to highly dependent on commercial fishing and score medium-high to high in at least one indicator of EJ and Gentrification

NOAA Scientific Surveys

BOEM and NMFS have determined that the proposed offshore wind development would have major adverse impacts on NMFS scientific research and surveys, which will in turn result in adverse impacts on fishery participants and communities and on the American public who consume seafood. These impacts potentially include lower quotas for commercial and recreational fishermen due to increased uncertainty in the surveys' measures of abundance, which will lead to lower associated fishing revenue. Proposed new planning areas would also result in adverse effects on monitoring and assessment activities associated with recovery and conservation programs for protected species, including the critically endangered North Atlantic right whale. The interaction of the draft planning areas with NEFSC and SEFSC scientific surveys are described below.

The proposed 3.9 million acres of the Central Atlantic Call Areas overlap with eight NMFS/NEFSC scientific surveys: Spring and Autumn Bottom Trawl Survey, Atlantic Surfclam Survey, Ocean Quahog Survey, Scallop Survey, Ecosystem Monitoring Survey, North Atlantic Right Whale Surveys, Marine Mammal and Sea Turtle Ship-Based and Aerial Surveys, and the Large Coastal Shark Bottom Longline Survey. The majority of surveys only interact with Call Areas A-D, with the exception of the AMAPPS aerial survey which overlaps with Call Area E

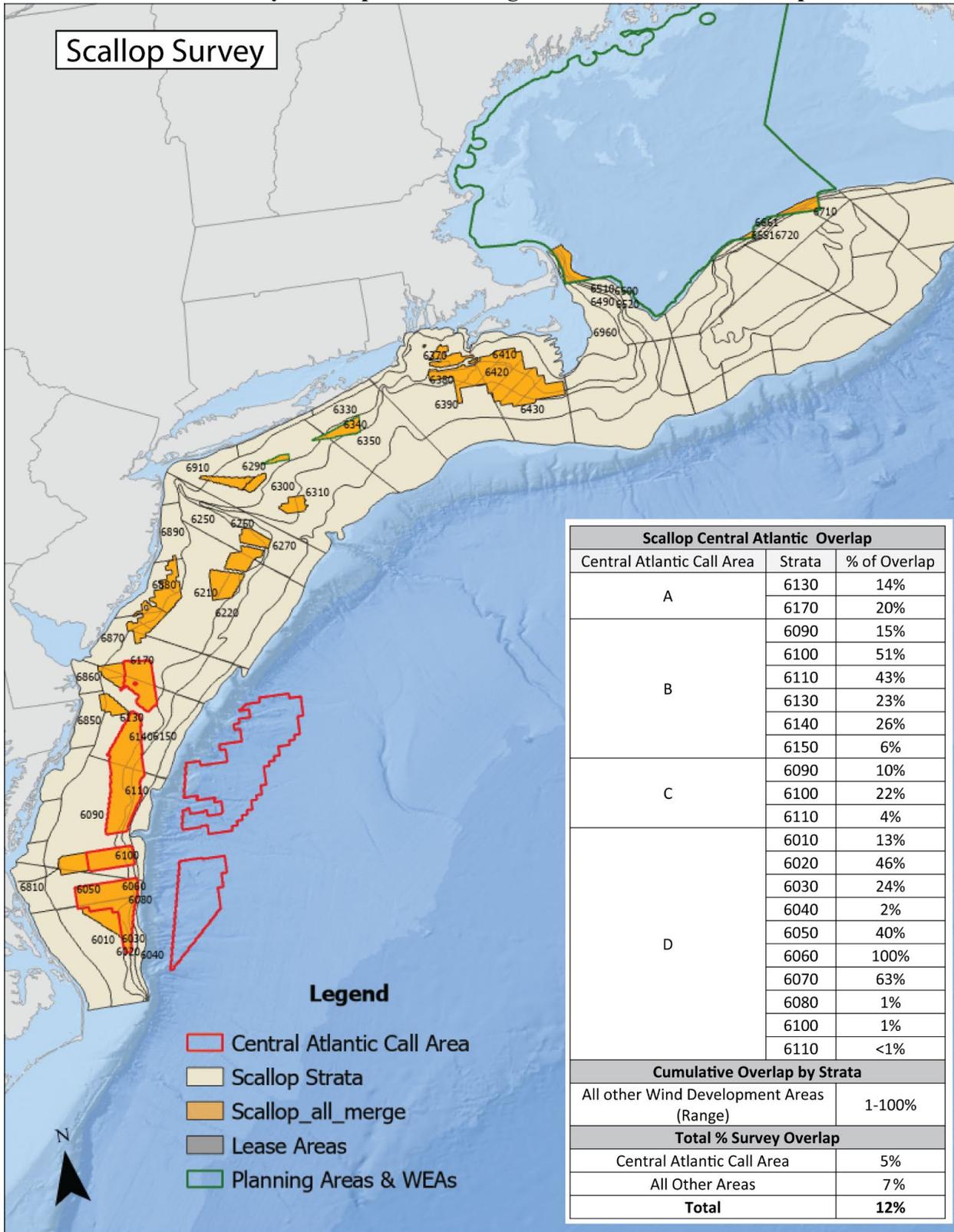
and the AMAPPS shipboard overlaps all Central Atlantic Call Areas. However, it should be noted that submarine cable corridors that will be required remain undefined and these areas will interact with many NEFSC surveys. The minimum and maximum of individual survey strata overlap for all 8 surveys ranges from 1% to 100%. See below for maps of each science survey that intersects with the Central Atlantic Call Areas. The tables within each map provide the overlap for each Central Atlantic Call Area as well as the cumulative ranges of overlap with survey strata and the percent of total survey area overlap with current and anticipated offshore wind development areas (Gulf of Maine Planning Area, SC Call Areas, and existing lease areas) in the region. For example, the Central Atlantic Call Areas overlap with 15 scallop survey strata, ranging from 1-100% overlap. Call Area D interacts with the most strata. The total survey overlap with the Central Atlantic Call Areas represents 5% of the cumulative total (12%) overlap with wind development areas in the region. In addition to the NEFSC surveys, the eastern extent of Central Atlantic Call Area D has minimal overlap with the NMFS/SEFSC South Atlantic Deepwater Longline (SADL) Survey for tilefishes, snappers and groupers (see figures below). In addition, although Call Areas E and F have limited overlap with many fisheries independent surveys, potential changes in pelagic fisheries effort and potential habitat alterations due to offshore wind development may change the distribution, abundance, or vital rates of NMFS managed stocks which may necessitate the need to conduct new and expanded surveys in these offshore areas.

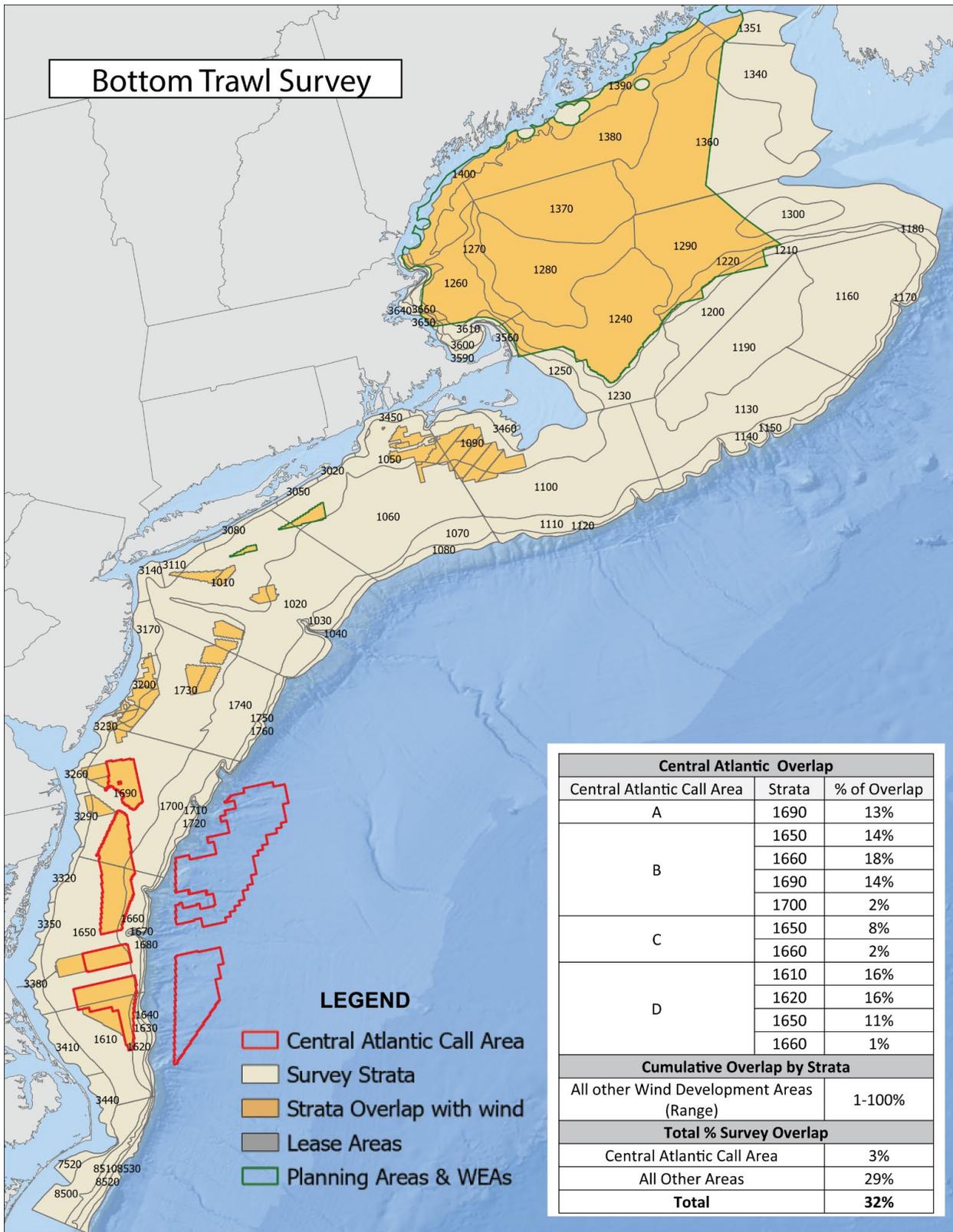
Currently, the NEFSC right whale survey intermittently covers the northernmost part of the inshore Central Atlantic Call Areas. The NEFSC is looking to expand survey efforts along the mid-Atlantic in the near future to support necessary management of this declining species.

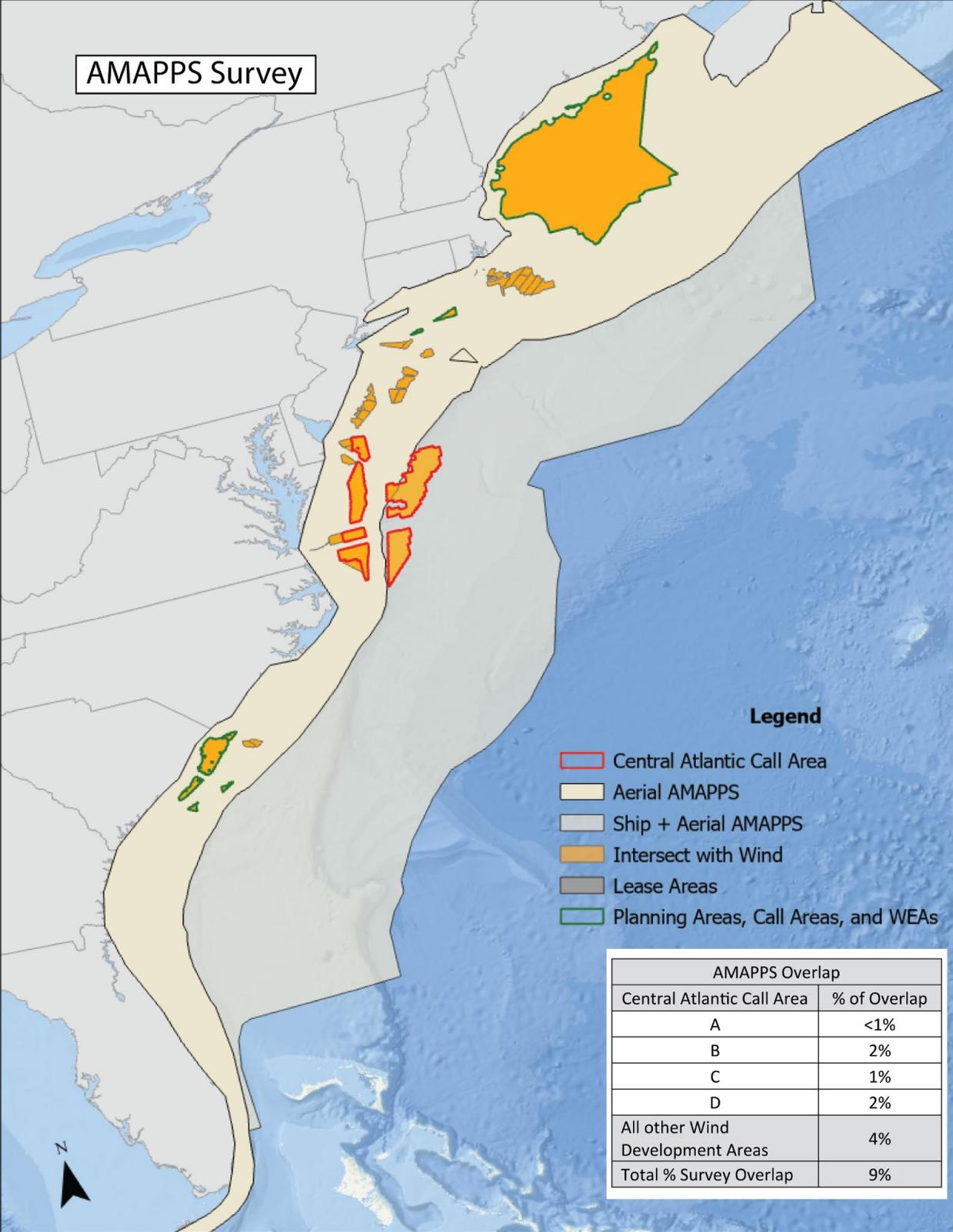
Additional analyses/recommendations:

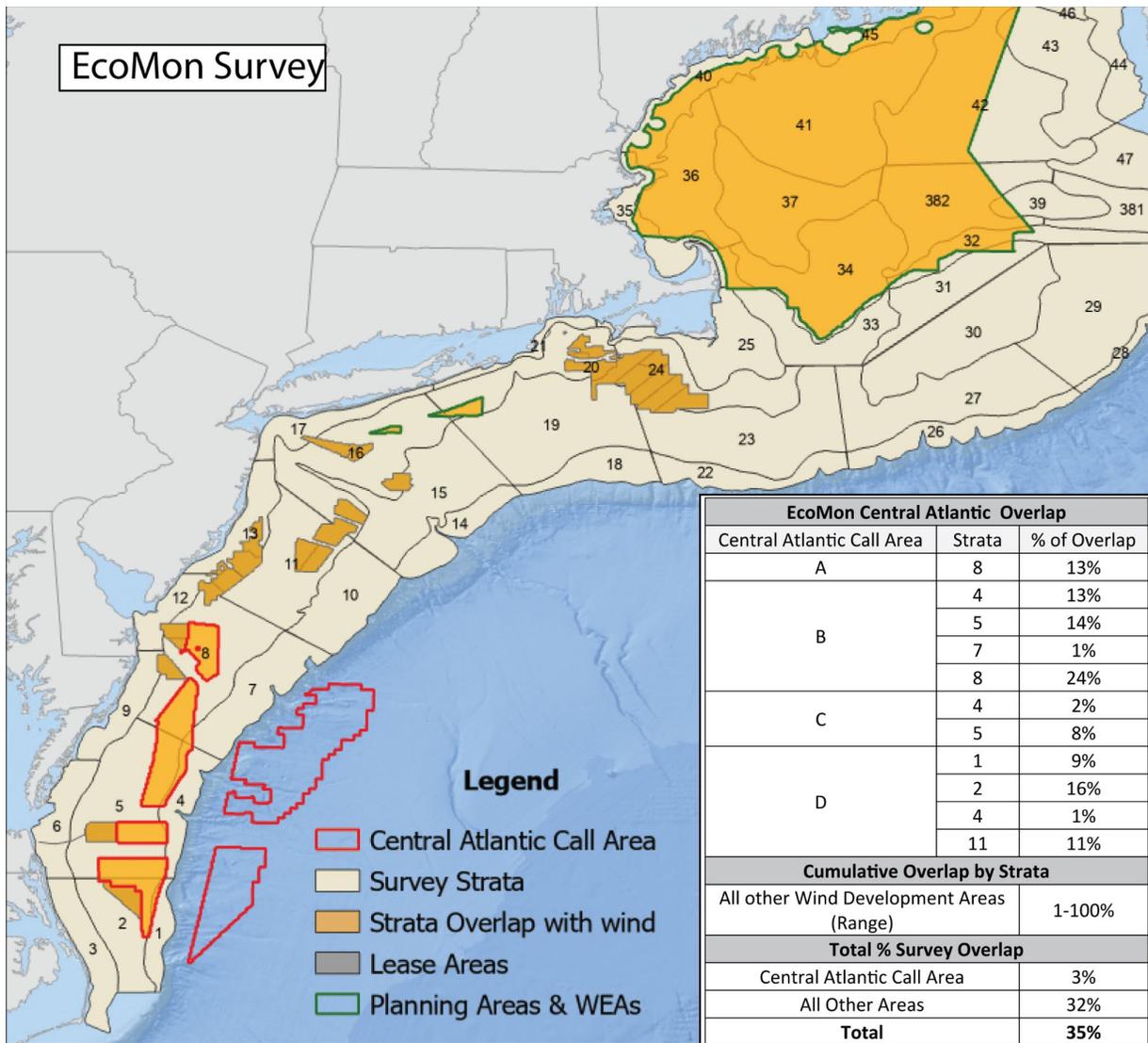
- BOEM should work with the NMFS NEFSC and SEFSC to understand the full extent of overlaps with scientific surveys along the Atlantic Coast, including in existing and proposed lease areas, the Central Atlantic Call Areas, and future planning areas.
- There are efforts underway to examine the extent of impact on our surveys and determine how to mitigate for those impacts, so we cannot determine at this time if there are specific areas that should be removed from the Call Areas to avoid or minimize survey impacts.
- We encourage BOEM to suspend designation of the planning area boundaries until the establishment of regional survey mitigation programs in the Northeast and Southeast Regions as described in the Joint BOEM and NMFS Draft Federal Survey Mitigation Implementation Strategy. Having certainty on how NMFS regional survey mitigation efforts will be conducted and resourced should be an essential precursor to future wind energy development throughout the Atlantic Coast.

NOAA Scientific Survey Overlap with Existing and Planned Wind Development Areas

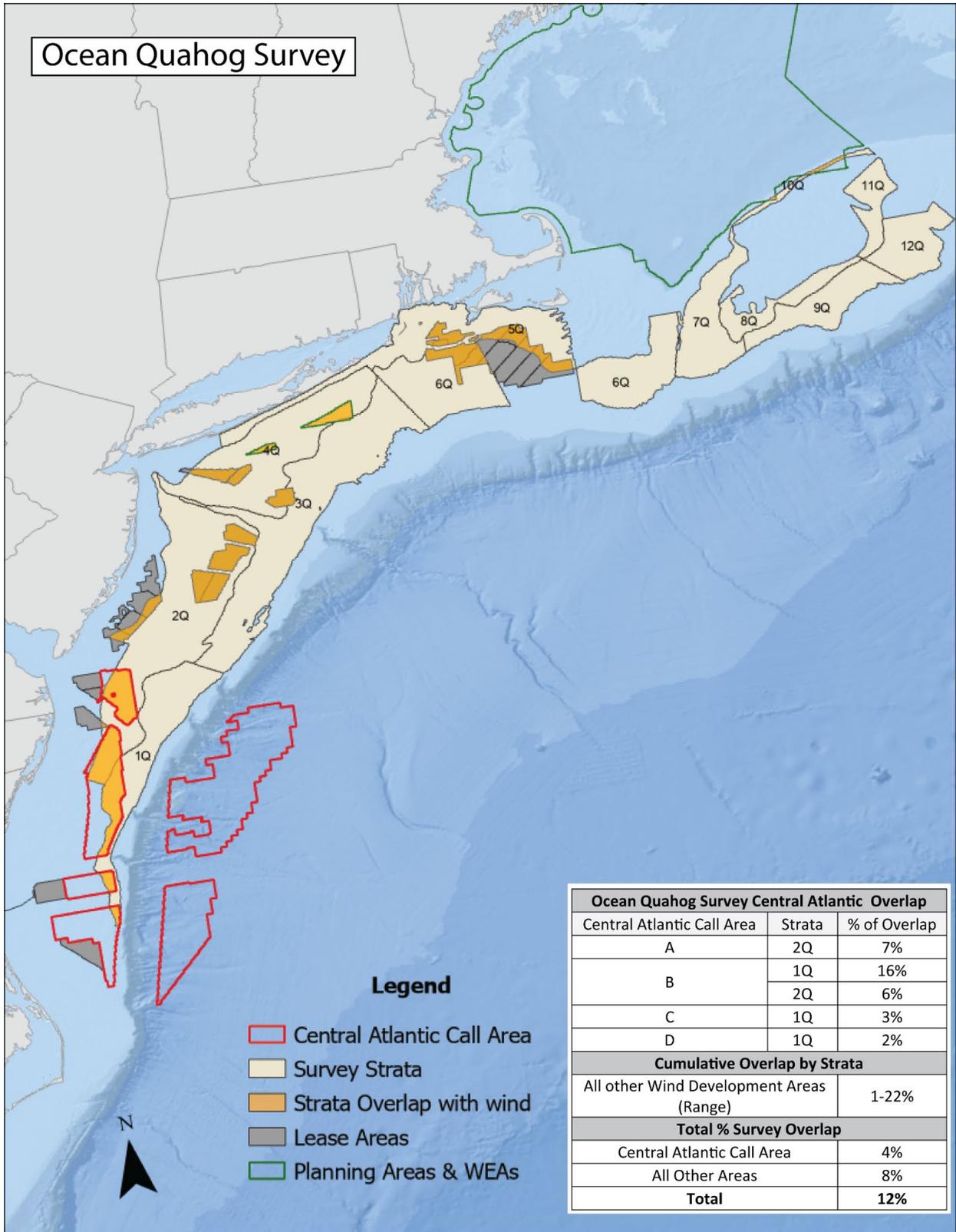


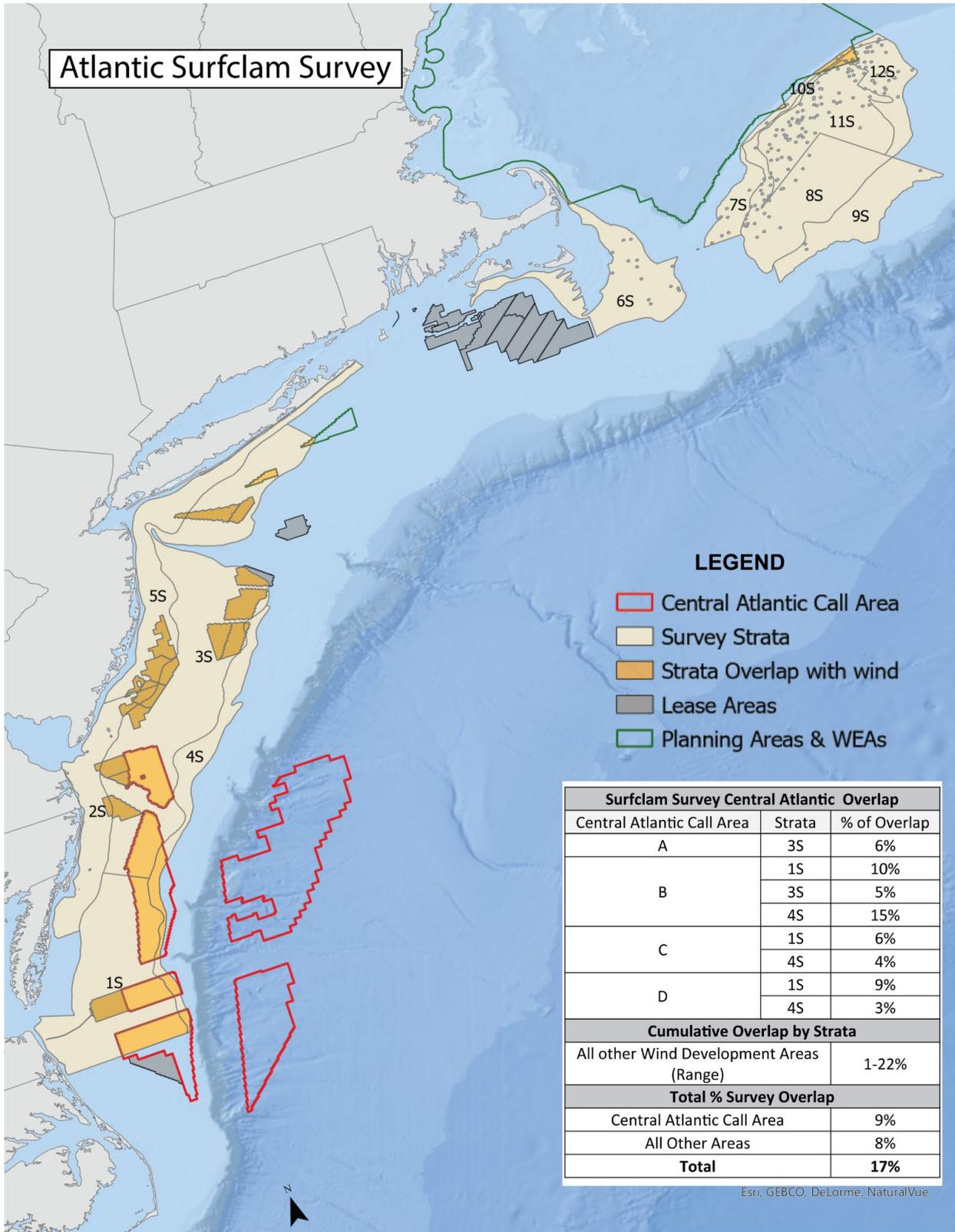




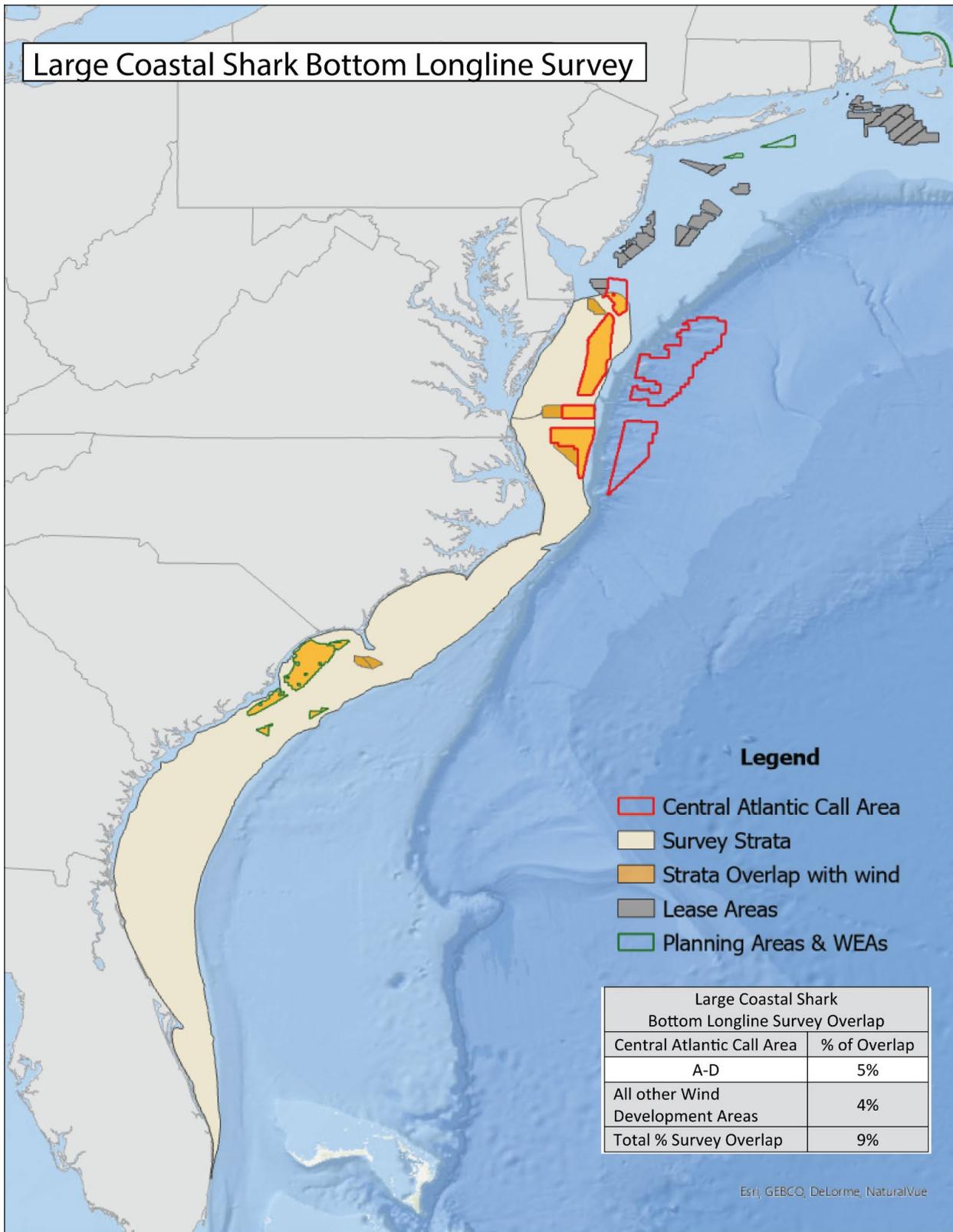


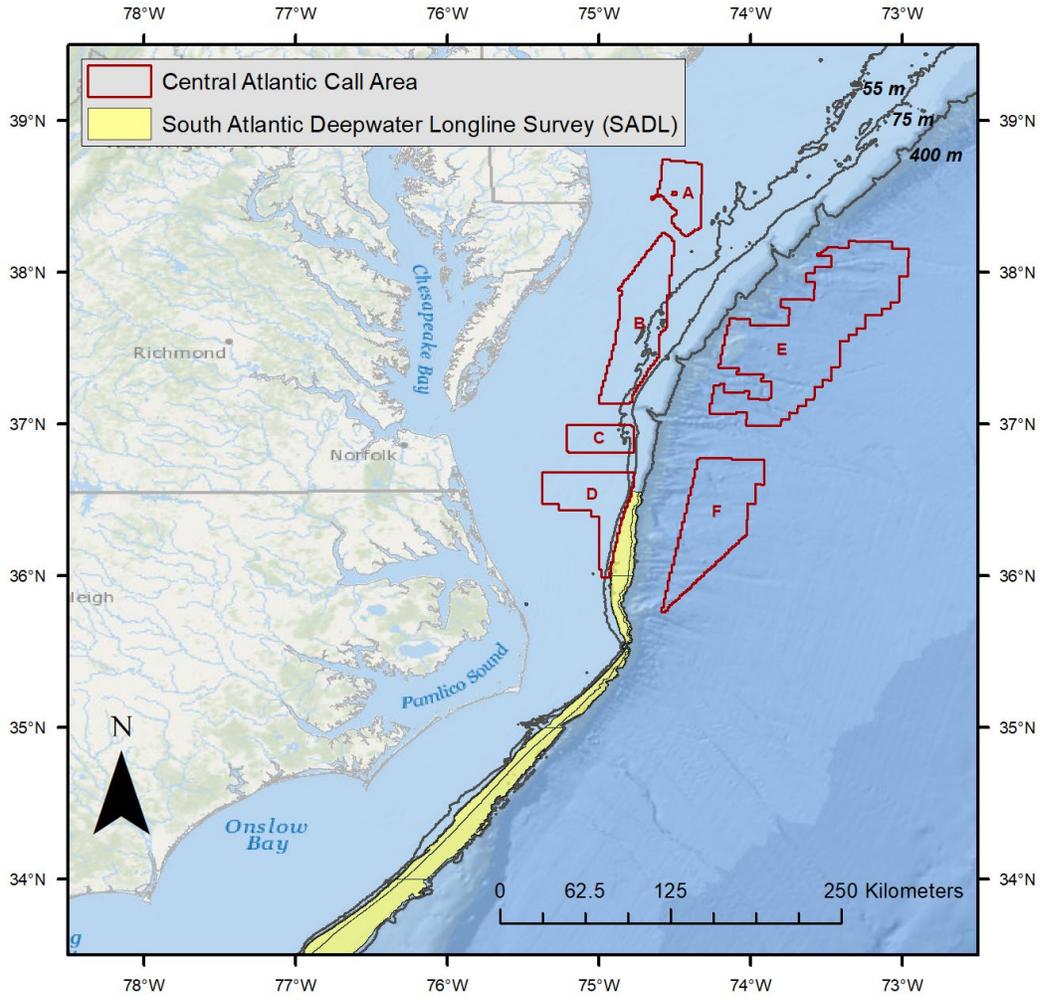
Ocean Quahog Survey





Large Coastal Shark Bottom Longline Survey





Appendix B
Fisheries and Socioeconomic Information for Proposed Central Atlantic Call Areas
(see attached files)