



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
GREATER ATLANTIC REGIONAL FISHERIES OFFICE
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September 10, 2024

Jessica Stromberg
Chief, Environmental Branch for Renewable Energy
Bureau of Ocean Energy Management
45600 Woodland Road, VAM-OREP
Sterling, Virginia 20166-4281

Re: Wind Energy Commercial Lease on the Atlantic Outer Continental Shelf: Gulf of Maine Essential Fish Habitat Assessment

Dear Ms. Stromberg:

We have reviewed the Essential Fish Habitat (EFH) Assessment dated August 2, 2024, prepared for the Wind Energy Commercial Lease on the Atlantic Outer Continental Shelf (OCS) in the Gulf of Maine (GOM). The Proposed Action is the issuance of wind energy commercial leases and site characterization and site assessment activities within all or some of the Maine Wind Energy Area (WEA) and granting of rights-of-way (ROWs) and rights-of-use and easements (RUEs) in support of wind energy development. The WEA is approximately 2.0 million acres located between 20 and 76 NM from shore. A maximum of 15 lease areas are proposed, each roughly 80,000 acres in size, totaling 1.2 million acres across all lease areas. Site assessment activities include the temporary placement (i.e., deployment, maintenance, and decommissioning) of meteorological ocean buoys (met buoys), Passive Acoustic Monitoring buoys (PAM buoys) and Acoustic Doppler Current Profilers (ADCPs) with associated wire burials. Site characterization activities include geophysical, geotechnical, biological, and archaeological surveys and monitoring activities. Fisheries surveys are not included under the Proposed Action and are not included in this consultation.

Consultation Responsibilities

In the Magnuson-Stevens Fishery Conservation and Management Act (MSA), Congress recognized that one of the greatest long-term threats to the viability of commercial and recreational fisheries is the continuing loss of marine, estuarine, and other aquatic habitats. Congress also determined that habitat considerations should receive increased attention for the conservation and management of fishery resources of the United States. As a result, one of the purposes of the MSA is to promote the conservation of EFH in the review of projects conducted under federal permits, licenses, or other authorities that affect or have the potential to affect such habitat. The MSA requires federal agencies to consult with the Secretary of Commerce, through the National Marine Fisheries Service (NMFS), with respect to “any action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by such agency that may adversely affect any essential fish habitat identified under this Act,” 16 U.S.C. § 1855(b)(2).



General Comments

Essential Fish Habitat Assessment

There are several deficiencies in the EFH assessment (Assessment), including an incomplete description of the Proposed Action and analysis of impacts, that hamper our ability to review the effects to EFH and federally managed species and provide site-specific EFH conservation recommendations. For example, ADCP installation and associated wire burial is part of the Proposed Action to be permitted under site assessment activities. However, the Assessment does not include a complete description of these activities or a thorough analysis of potential adverse effects. Important nearshore and estuarine areas such as the Wells National Estuarine Research Reserve,¹ and the Casco Bay and Piscataqua Region estuaries (included in the U.S. Environmental Protection Agency (EPA) National Estuary Program²) also overlap the project area but are not discussed in the Assessment. Additionally, the [GOM Cod Protection Closure Areas](#), which overlap the WEA and potential cable corridor areas, are not delineated in Figure 4-1 or discussed in Section 4.1. Given the potential impacts of site assessment and characterization activities on cod spawning populations, these closures should have been used to inform the impact assessment and to identify avoidance and minimization opportunities.

We appreciate that a cumulative/synergistic impacts analysis was added separately from direct and indirect impacts throughout the Assessment, however, the same conclusion was reached for each potential adverse effect with only one sentence stating that no synergistic or cumulative effects would occur or be created. There is no discussion or explanation of the factors and analysis used to reach these conclusions. As a result, we cannot determine if each adverse effect was evaluated thoroughly for potential synergistic impacts (e.g., cumulative impacts of sound on fish in combination with reasonably foreseeable activities such as offshore wind development). Additionally, in some portions of the Assessment, words to describe severity of impacts such as “minimal” or “negligible” are used, whereas in other portions of Assessment, they are not. It appears these words are primarily used in cases that dilute impacts of the Proposed Action, and not when they could indicate increased severity of impacts. If effects descriptors are used in the EFH Assessment to refine the severity of the adverse effects, the terms identified in the EFH Final Rule (50 CFR Part 600) should be used and they should be applied consistently to all adverse effects identified. For example, “negligible” is not a word used in the EFH regulations to define the severity of an adverse effect. Further, the terms “temporary”, “short-term”, “long-term”, and “permanent” are all used within this Assessment, but no definitions are provided. The EFH Assessment should use the terms our agencies agreed upon in the [BOEM- NMFS EFH Assessment Template](#) which are defined as follows:

- 1) Short-term - less than 2 years
- 2) Long-term - 2 years to < life of the project
- 3) Permanent - life of the project or longer.

¹ The Wells Reserve is one of the 30 areas in the National Estuarine Research Reserve System.
<https://coast.noaa.gov/nerrs/reserves/wells.html>

² Casco Bay and Piscataqua Region are two of the 28 estuaries designated as National Estuary Programs by the U.S EPA.
<https://www.epa.gov/nep/individual-estuary-program-websites>

Effects of Site Assessment and Site Characterization Activities

There are many important habitats and sensitive life stages for federally managed fish species in the GOM which overlap the Project area. This includes offshore and inshore/estuarine rocky habitats, submerged aquatic vegetation (SAV), wetlands, benthic features (e.g., ledges, banks, shoals, basins), areas with dense aggregations of biota (e.g., shellfish beds), and live bottom areas with particularly sensitive species (e.g., deep-sea corals). These habitats are more vulnerable to adverse impacts from site assessment and characterization activities both directly (e.g., placement of anchors, wire burial, chain sweep) and indirectly (e.g., turbidity and sedimentation from bottom disturbance). As such, placement of site assessment equipment (met buoys, PAM buoys, and ADCPs and wires) should avoid being placed in these sensitive habitats, particularly hard bottom habitats that are vulnerable to permanent impacts and support sensitive biota, including deep sea corals. Deep sea corals are fragile and slow growing, making them particularly vulnerable to anthropogenic impacts. Given the extent of complex habitats in the GOM, sufficient evaluation of the seafloor will be necessary to ensure impacts to deep sea corals from site assessment and characterization (See *Habitat Data Collection*).

Fish with swim bladders, particularly aggregate and soniferous species such as Atlantic cod (*Gadus morhua*), are vulnerable to noise impacts from site assessment and characterization activities such as High-Resolution Geophysical (HRG) surveys and vessel traffic. Atlantic cod are a species of extraordinary ecological, economic and cultural significance to this region. Despite recent emergency management actions and severe reductions in fishery resource allocations, the latest stock assessment for the GOM Atlantic cod estimates biomass at five percent of the target for maximum sustainable yield (NEFSC 2022). The Assessment downplays potential noise impacts from HRG surveys and vessel traffic on EFH species and does not directly discuss impacts to Atlantic cod. While knowledge of impacts to fisheries-based resources from HRG surveys are limited (Mooney et al. 2020), the Proposed Action includes sub-bottom profiling survey activities that use sparkers and boomers that produce lower frequencies within the hearing range of fish. Fishes with hearing specializations such as Atlantic cod may be more susceptible to behavior impacts from these activities. Should these activities occur during the spawning season, spawning activity may be disrupted by increased stress, masking of communication and/or, physical disruption of aggregations that may affect reproductive success (de Jong et al. 2020; Stanley et al. 2017). Due to the vulnerability of spawning aggregations to disturbance and their high-site fidelity for spawning sites, we strongly recommend temporal restrictions on noise generating activities including HRG surveys in known spawning areas during the spawning season.

We also note that Section 6.1 of the Assessment indicates that standard operating conditions (SOCs) will focus on avoidance of sensitive habitat. However, the SOCs (incorporated by referenced from Appendix H of the EA) do not include any conditions to avoid or minimize impacts to benthic habitat. As such, the CRs we have provided below should be considered as SOCs for this project. Further, additional habitat data should be collected as discussed in the following section, to ensure the sensitive areas referenced in Section 6.1 are adequately characterized and avoided.

Habitat Data Collection

We remain concerned about the limited amount of habitat data in the GOM, and that bathymetric and benthic surveys/data are being considered too late in the process to avoid adverse impacts to sensitive and ecologically valuable habitat. We appreciate that the Assessment indicates the use of multibeam backscatter and side-scan data from HRG surveys to characterize seafloor habitats. However, we recommend all project areas (100% coverage) be comprehensively mapped using multibeam backscatter and side-scan data to identify the extent and variations in habitat types, as well as inform a targeted sampling approach to ground-truth the acoustic data. Due to the lack of both broad and fine scale habitat data and maps in the GOM, full coverage habitat mapping and characterization of the seafloor is necessary to ensure that sensitive habitats are accurately identified and used to inform avoidance and minimization measures for future wind energy development in the GOM. The Assessment describes only one benthic sample per kilometer along the transmission cable corridor, three benthic samples at each wind turbine generator, and one benthic sample at each met buoy and PAM buoy site. These amounts and frequencies are much lower than our recommendations as outlined in our [Updated Recommendations for Mapping Fish Habitats](#) which state that in order to provide adequate sampling within the acoustically derived delineated areas, multiple stations (i.e. sites/sampling locations) should be sampled. In areas of potential complex habitats (i.e., intermediate and high acoustic return delineations) we recommend a minimum of three stations per delineation with a greater number of replicate samples per station (e.g., 10-15) and/or the use of video transects (50m or greater in length). Additional targeted sampling and visual surveys are necessary for the GOM given the extensive complex habitats and deep sea corals present in this region.

As part of site characterization activities, we recommend reconnaissance surveys (e.g., video surveys) be conducted prior to full coverage acoustic data so that cable corridors can be re-routed or modified to avoid sensitive habitats. We acknowledge that BOEM has stated visual surveys for each bottom contact sampling methodology would not be economically feasible. However, visual surveys should be conducted prior to finalizing the location and deployment of met buoys and ADCPs that require multiple large anchors (and associated chain sweep) or wire burial that could result in direct and indirect adverse impacts on benthic habitats. All bottom disturbing site assessment or characterization activities in areas where complex habitats are present and deep-sea corals have been historically observed, should incorporate visual reconnaissance surveys to ensure direct impacts to deep-sea corals are avoided.

As stated in our [Habitat Mapping Recommendations, Information Needs to Assess Essential Fish Habitat Impacts from Offshore Wind Energy Projects Along the U.S. Atlantic](#) document, and through regular communication with BOEM, early coordination in the consultation process, particularly for projects at the size and scale of offshore wind development, is essential. As we have previously discussed, early coordination on proposed habitat mapping procedures, including: 1) data collection (sampling design, sites, replication, and sampling methodology); 2) data processing and interpretation; and 3) the development of maps that accurately characterize and delineate fish habitat, benefits all parties and will help avoid unnecessary delays in project development and consultations. It is critical that the data being collected can be used to accurately characterize and delineate fish habitat within the lease area and cable corridors to ensure we can differentiate areas of sensitive and complex habitats and provide site-specific conservation recommendations. Adjustments to early survey plans based on our input will likely

result in significantly better habitat data and ultimately streamline project review. Moving forward with habitat mapping efforts without sufficient coordination may result in the need for additional field seasons/sampling to collect and interpret additional data to accurately map fish habitat for consultation purposes.

EFH Conservation Recommendations

In order to avoid, minimize, and offset significant impacts to EFH and Habitats of Particular Concern (HAPCs) as a result of the proposed project, pursuant to Section 305(b)(4)(A) of the MSA, we recommend that you adopt the following EFH CRs:

1. Acoustic data (multibeam backscatter, bathymetry, and side-scan sonar) and targeted seafloor sampling (including visual surveys), should be collected and used to inform locations of site assessment equipment (met buoys, PAM buoys, ADCPs and associated anchor systems and wires) to verify sensitive benthic habitats³ are avoided. High-resolution, comprehensive (100% coverage) habitat mapping should be conducted in any areas with potential bottom impacts (e.g., anchoring and chain sweep of met buoys, ADCP installation and wire burial). The results of these mapping efforts should be shared with NMFS HESD as soon as practicable for review.
2. Based on acoustic data collected by the *R/V Connecticut*, there are areas of sensitive habitat within OCS-A 0567 and OCS-A 0568 that we recommend avoiding the placement of site assessment equipment, such as met buoys, PAM buoys, ADCPs, and associated anchor systems and wires. This includes areas within or immediately adjacent to Franklin Swell (located near the southwestern end of OCS-A 0568 and extending into OCS-A 0569), and the northern portion of OCS-A 0567 which contains distinct benthic features and historic coral observations, as well as distinct bathymetric features which are likely to support deep sea coral. Visual surveys should be conducted adjacent to these areas to ensure sensitive habitats, including deep-sea corals, are avoided.
3. Avoid conducting HRG survey activities (i.e. medium-penetration sub-bottom profilers, sparkers) within the GOM Cod Protection Closure Areas during periods of spawning activity for Atlantic cod (McBride and Smedbol 2022):
 - a. GOM Cod Protection Closure I (May 1-May 31)
 - b. GOM Cod Protection Closure II (June 1- June 30)
 - c. GOM Cod Protection Closure III (November 1- January 31)
 - d. GOM Cod Protection Closure IV (October 1 - October 31)
 - e. GOM Cod Protection Closure V (March 1- March 31)

Please note that Section 305(b)(4)(B) of the MSA requires you to provide a written response to us within 30 days after receiving our EFH conservation recommendations. The response must be provided to us at least 10 days before the signing of the Finding of No Significant Impact (FONSI) or a Record of Decision (ROD) to allow time for dispute resolution if necessary. The

³ The term “**sensitive benthic habitats**” will be used to encompass: complex habitats and benthic features (defined as coarse unconsolidated mineral substrates [i.e. substrates containing 5% or greater gravels], rock substrates [e.g. bedrock], and associated biota (e.g. deep-sea corals, sponges), and shell substrates [e.g. mussel reef] consistent with CMECS definitions as well as vegetated habitats [e.g. SAV] and as defined described in our 2021 Recommendations for Mapping Fish Habitat), bathymetric features (such as lumps, banks, and scarps) and other areas of high habitat heterogeneity (diversity of structural elements including bathymetric features) and complexity

response must include a description of measures proposed for avoiding, mitigating, or offsetting the impact of the activity on EFH, as required by section 305(b)(4)(B) of the MSA and 50 CFR 600.920(j). In the case of a response that is inconsistent with our conservation recommendations you must explain your reasons for not following the recommendations, including the scientific justification for any disagreements with us over the anticipated effects of the action or the measures needed to avoid, minimize, mitigate, or offset such effects.

Please also note that a distinct and further EFH consultation must be initiated pursuant to 50 CFR 600.920(j) if new information becomes available or if the project is revised in such a manner that affects the basis of our determination above. As stated through previous communications, we understand that BOEM has chosen not to include fisheries surveys as part of the site characterization activities under the Proposed Action. However, based on our experience with other site assessment and characterization projects of this nature for offshore wind energy lease areas, fisheries surveys are a reasonably foreseeable activity. As such, we emphasize that should these surveys occur, an additional EFH consultation must be initiated, as well as supplemental NEPA analysis and appropriate consultation under the ESA.

Conclusion

We look forward to the opportunity to review and comment on future related actions to ensure our concerns and information needs are addressed early in the process. Our staff is committed to full coordination on surveys, monitoring plans, and other material associated with this and other offshore wind projects moving forward. Should you have any questions about this matter, please contact Kendra Babcock at kendra.babcock@noaa.gov. If you have any questions regarding ESA coordination, please contact Julie Crocker at julie.crocker@noaa.gov.

Sincerely,



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

cc: Brian Hooker, BOEM
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