

## Attachment 6

### Environmental Mitigation Requirements and Recommendations

Section 3.10 of the SGD describes the elements that each Applicant must submit as part of its EPP. ***In addition to*** each of the elements listed in Section 3.10, the EPP must also include an explanation of how the Applicant will implement each of the environmental mitigation measures that are described in this Attachment. These environmental mitigation measures are intended to establish a set of baseline requirements that are required of each Qualified Project and provide additional guidance to developers on additional measure BPU encourages applicants to employ. The environmental mitigation measures span all phases and components of a Project, including on-shore and off-shore activities, and including pre-construction surveys, construction, operation, and, as applicable, decommissioning. Required mitigation measure are indicated by “shall,” whereas recommended measures that BPU encourages developers to employ or consider are indicated by “should.” If any of the required minimum environmental mitigation measures cannot be implemented or are not applicable to the Applicant’s Project, the EPP must explain why.

Where mitigation measures are not defined for impacts or potential impacts on a specific resource type or activity, it is expected that a Qualified Project shall:

- Work collaboratively with the State, federal agencies, and other stakeholders to identify such impacts and to develop approaches that avoid impacts on the environment, biodiversity and ecosystem services;
- Where avoidance is not possible, minimize such impacts;
- When impacts are predicted to occur notwithstanding the implementation of practical avoidance and mitigation measures, rehabilitate or restore ecosystems; and
- Where significant residual impacts are predicted to remain, offset such impacts.

Qualified Projects, after approval by the Board, shall develop an Adaptive Monitoring Plan in collaboration with the NJBPU, NJDEP, regional science entities, and the National Oceanic and Atmospheric Administration.

Qualified Projects, after approval by the Board, shall develop an Adaptive Environmental Mitigation Plan. This plan will be informed through stakeholdering and in collaboration with the NJBPU and NJDEP.

The requirements and recommendations below are based on the BOEM [COP Guidelines](#), Attachment A, Best Management Practices (“BMPs”), but incorporate updates reflective of evolving BMPs since the initial development of the BOEM BMPs. They are not intended to supplant or alter the federal or state regulatory process or any other requirements under federal, state, and local permit programs.

#### Habitat Avoidance, Minimization and Mitigation

The Qualified Project shall collaborate with state regulatory authorities and key stakeholders to collect data to adequately identify and characterize terrestrial and marine environments.

- Qualified Projects should avoid locating facilities near known sensitive seafloor habitats, such as coral reefs, hard-bottom areas, and chemosynthetic communities. Qualified Projects should avoid anchoring on sensitive seafloor habitats.

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- Qualified Projects should avoid hard-bottom habitats, including seagrass communities and kelp beds, where practicable, and should restore any damage to these communities.
- Qualified Projects should implement turbidity reduction measures to minimize effects to hard-bottom habitats, including seagrass communities and kelp beds.
- Qualified Projects should minimize effects to seagrass and kelp beds by limiting vessels related to project planning, construction, and operation to established traffic routes.
- Qualified Projects should minimize impacts to wetlands by maintaining buffers around wetlands, implementing BMPs from erosion and sediment control, and maintaining natural surface drainage patterns.

### Cable Installation, Burial, and Maintenance

- To minimize the risk of exposure and entanglement, cables shall be buried to a minimum depth of 2 meters. If the 2-meter depth cannot be reached, the developer shall add protective materials over the cable. The developer shall conduct routine surveys or inspections of sub-sea cables and shall conduct a survey or inspection to ensure and correct for cable exposure following hurricane or other major events causing disturbance to the seabed.
- Cables installation and cable maintenance and repair buffer areas shall avoid shipwreck and artificial reef habitats as per N.J.A.C. 7:7- 9.13.
- Siting of export cables should avoid submerged vegetation habitat as per N.J.A.C 7:7-9.6.

### Turbine Foundation Scour

- Lessees and grantees should reduce scouring action by ocean currents around foundations and to seafloor topography by taking all reasonable measures and should employ periodic routine inspections to ensure structural integrity.
- Qualified Projects should assess the use of ecological enhancements for turbine scour protection to provide offsets from potential adverse impacts. Qualified Projects should consider the biological performance of scour and concrete block mattress materials in design of the turbine foundations.

### Lighting Controls

- Qualified Projects shall comply with Federal Aviation Administration and United States Coast Guard requirements for lighting in accordance with BOEM's "[Guidelines for Lighting and Marking of Structures Supporting Renewable Energy Development](#)" and should use light technology that minimizes impacts on avian species.<sup>1</sup>
- Artificial lighting on offshore wind projects shall be reduced to the extent practicable while maintaining human safety and compliance with FAA, U.S. Coast Guard, BOEM and other regulations.

### Avian and Bat Resources

- Qualified Projects should evaluate avian and bat use of the project area and should design the project to minimize or mitigate the potential for bird and bat strikes and habitat loss.

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<sup>1</sup> See <https://www.boem.gov/sites/default/files/documents/renewable-energy/2021-Lighting-and-Marking-Guidelines.pdf>.

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- Permanent physical deterrents to perching shall be implemented if there is demonstrated risk at the site (*e.g.*, perching and roosting on infrastructure is a common occurrence) and to the extent that they do not represent a human safety hazard.
- Siting and construction of nearshore and onshore project components shall be conducted in such a way as to avoid impacts to known nesting beaches of sensitive species during the breeding season, and to minimize the loss or alteration of bird and bat habitat, as well as avoid or minimize disturbance and direct and indirect effects to bird and bat populations and their prey. Nesting beaches, particularly known breeding habitat for listed species, will be subject to timing restrictions for work done during the breeding season (typically March 1<sup>st</sup> to August 31<sup>st</sup>).
- Onshore infrastructure and development activities should: 1) maximize the use of previously developed or disturbed areas, and 2) avoid unique or protected habitats, as well as habitat for key species, where feasible.

### **Noise and Acoustic Impacts**

- Qualified Projects shall plan site characterization surveys by using the lowest sound levels necessary to obtain the information needed.
- Qualified Projects shall take efforts to minimize disruption and disturbance to marine life from sound emissions, such as pile driving, during construction activities.
- Qualified Projects should employ, to the extent practicable, state-of-the-art technologies to minimize operational sound effects.
- Qualified Projects shall not commence activities that generate significant noise, including geophysical survey work and impact pile driving, during poor visibility conditions such as darkness, fog and heavy rain, unless an alternative mitigation monitoring plan does not rely on visual observation has been determined to be effective, to the extent compatible with practicality and worker safety.
- Qualified Projects should consider the potential for sonic testing to affect fish behavior and the potential impact to fishing. Qualified Projects are encouraged to undertake innovative methods to minimize sonic and acoustic impacts during construction and operation of the Project.

### **Marine Mammals and Sea Turtles – Vessel Strikes**

- Vessels related to project planning, construction, and operation shall travel at reduced speeds when cetaceans are observed. Vessels also shall maintain a reasonable distance from whales, small cetaceans, and sea turtles.
- Qualified Projects shall minimize potential vessel impacts to marine mammals and sea turtles. Operators shall undergo training on applicable vessel guidelines.
- Qualified Projects shall avoid and minimize impacts to marine species and habitats in the project area by posting a qualified observer on site during construction activities. This observer shall be approved by BOEM and NMFS.
- Qualified Projects should implement state-of-the-art and innovative technologies to observe and avoid protected species during pre-construction surveys, construction, and operation of the Project.

### **Visual Impacts**

- Qualified Projects shall use appropriate viewshed mapping, photographic and virtual simulations, computer simulation, and field inventory techniques to determine, with reasonable accuracy, the

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visibility of the proposed project. The viewshed impact analysis should identify sensitive and scenic viewpoints. Qualified Projects should identify methods to mitigate adverse viewshed impacts.