#### MEMORANDUM FOR RECORD

### SUBJECT: Department of the Army Public Interest Review, 404(b)(1) Guidelines Evaluation, and Record of Decision for NAN-2020-01079-EME, South Fork Wind, LLC – Offshore Wind Energy Facility

In accordance with 40 C.F.R. § 1505.2, this document constitutes the Record of Decision (ROD) of the Department of the Army, New York District, Corps of Engineers (Corps), for the South Fork Wind, LLC – Offshore Wind Energy Facility (Project) proposed by South Fork Wind, LLC. This document is prepared in accordance with the Council on Environmental Quality's (CEQ) regulations implementing the National Environmental Policy Act (NEPA) (40 C.F.R. Parts 1500-1508). It also constitutes the Clean Water Act (CWA) Section 404(b)(1) Guidelines Evaluation (40 C.F.R. Part 230), and the Public Interest Review (33 C.F.R. § 320.4) under the authority delegated to the District Engineer by 33 C.F.R. § 325.8 and pursuant to Section 404 of the CWA.

This ROD incorporates by reference the U.S. Department of Interior, Bureau of Ocean Energy Management (BOEM) 2021 Draft Environmental Impact Statement (DEIS), and the 2021 Final Environmental Impact Statement (FEIS) for the "South Fork Wind Farm and South Fork Export Cable Project." The Corps has been a Cooperating Agency, with BOEM as Lead Agency, for purposes of complying with the NEPA and for the purposes of complying with the Endangered Species Act (ESA), the National Historic Preservation Act (NHPA), and the Magnuson-Stevens Fishery Conservation and Management Act.

The Corps concurs with BOEM that this project constitutes a major Federal action significantly affecting the human environment, and that an EIS was required. As a Cooperating Agency in accordance with NEPA, the Corps provided appropriate input and review comments during the EIS process. The Corps has independently reviewed the EIS and concludes that its comments and suggestions had been satisfied. The FEIS and associated NEPA documents prepared by BOEM, with referenced materials, and comments received in response to them, are hereby adopted in full and in accordance with 40 C.F.R. §1506.3.

This ROD describes the Corps' decision to authorize discharges of dredged and fill material into waters of the United States (WOTUS), as well as certain structures and work in or affecting navigable waters of the United States, in association with the Project, as detailed in the 2021 FEIS, South Fork Wind, LLC's Department of Army (DA) permit application, and subsequent project design refinements that reduced the amount of Clean Water Act Section 404-

regulated discharge of dredged material. The DA authorization is subject to special conditions and the specified mitigation described in this ROD.

References: References used in this memorandum include the following:

- a. South Fork Wind Farm and South Fork Export Cable Project, Final Environmental Impact Statement (FEIS), OCS EIS/EA BOEM 2020-057 dated August 2021, prepared by U.S. Department of the Interior Bureau of Ocean Energy Management (BOEM);
- b. South Fork Wind Farm and South Fork Export Cable Project Construction and Operations Plan, Joint Record of Decision (ROD), prepared by U.S.
  Department of the Interior Bureau of Ocean Energy Management (BOEM), U.S. Department of Commerce National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS), dated November 24, 2021;
- c. Endangered Species Act Section 7 Consultation Biological Opinion by the National Oceanic and Atmospheric Administration National Marine Fisheries Service's, Greater Atlantic Regional Fisheries Office, dated October 1, 2021;
- d. Correction of Endangered Species Act section 7 consultation for the South Fork project letter by National Oceanic and Atmospheric Administration National Marine Fisheries Service's, Greater Atlantic Regional Fisheries Office dated November 1, 2021;
- e. South Fork Wind Farm and South Fork Electrical Cable Commercial Wind Energy Project letter by United States Department of the Interior, Fish and Wildlife Service dated March 4, 2021;
- f. Marine Mammal Protection Act Incidental Harassment Authorization dated January 3, 2022;
- g. Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Letter by the National Oceanic and Atmospheric Administration National Marine Fisheries Service's, Greater Atlantic Regional Fisheries Office, dated June 7, 2021;

- Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Addendum Letter by the National Oceanic and Atmospheric Administration National Marine Fisheries Service's, Greater Atlantic Regional Fisheries Office, dated August 31, 2021;
- i. National Historic Preservation Act of 1966 (NHPA) Section 106 Memorandum of Agreement (MOA) among the Bureau of Ocean Energy Management, the Massachusetts State Historic Preservation Officer, the Rhode Island State Historic Preservation Officer, the New York State Historic Preservation Officer, and the Advisory Council on Historic Preservation regarding the South Fork Wind Farm and South Fork Export Cable project dated November 23, 2021; and
- j. Memorandum for the Record, Fire Island to Montauk Point, NY Borrow Area 7A Buffer Zone for South Fork Wind Farm dated November 2, 2020.
- **1.0 Introduction and Overview:** Information about the proposal subject to one or more of the Corps' regulatory authorities is provided in Section 1, detailed evaluation of the activity is found in Sections 2 through 11 and findings are documented in Section 12 of this memorandum. Further, summary information about the activity including administrative history of actions taken during project evaluation is attached and incorporated in this memorandum.
- 1.1 Applicant: South Fork Wind, LLC.
- 1.2 Activity locations: Bureau of Ocean Energy Management (BOEM) Renewable Energy Lease Area OCS-A 0517 (known as Deepwater Wind South Fork, LLC lease area), submarine export cable route and landfall in Wainscott, a hamlet of Town of East Hampton, Suffolk County, New York, and Operations and Maintenance facility (O&M facility) in Lake Montauk, Town of East Hampton, Suffolk County, New York.
- 1.3 Description of activity requiring permit:

On December 9, 2020, South Fork Wind, LLC requested Department of the Army authorization for construction of a wind energy project including associated structures and facilities in the Atlantic Ocean and Lake Montauk, Town of East Hampton, Suffolk County, New York.

The applicant requested to construct up to fifteen (15) wind turbine generators (WTGs), approximately 21.4 miles of submarine inter-array cables and an Offshore Substation (OSS) all located within BOEM Lease Area OCS-A 0517, approximately 61.4 miles of submarine export cable making landfall at Beach Lane, Wainscott a hamlet of Town of East Hampton, Suffolk County, New York, and an O&M facility located in Lake Montauk, Town of East Hampton, Suffolk County, New York, that included installation of dock structures and dredging with placement of dredged material at adjacent beach to the west of Lake Montauk Inlet.

In an email dated July 22, 2021, South Fork Wind amended its permit application by informing this office that South Fork Wind would construct no more than 12 WTGs based on the State of Rhode Island Coastal Resources Management Council's (CRMC) completed Coastal Zone Management Act (CZMA) federal consistency review and CRMC's issuance of a conditional concurrence (CRMC File 2018-10-082) dated July 1, 2021.

In an email dated November 24, 2021, South Fork Wind amended its permit application by informing this office that the dredged material at the O&M facility would no longer be placed onto the beach west of Lake Montauk inlet and the resultant 2,500 CY of dredged material would be placed into dredge scows where the material would be decanted of excess water into the waterway and then disposed of at a State approved upland facility outside of Corps Section 404 jurisdiction (upland).

The final work description requiring a permit:

<u>South Fork Wind Farm (SFWF)</u>: Under Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403), construct no more than twelve (12), offshore wind turbine generators (WTGs) each on a 36-foot diameter single steel monopile foundation, via pile driving, with an approximately 225-foot diameter rock scour protection base around each monopile, in up to 15 identified locations within BOEM lease area OCS-A 0517 arranged in a uniform east–west and north–south grid, with 1 nautical mile (nm) by 1 nm spacing between WTG's, and with diagonal transit lanes a minimum of 0.6 nm wide.

Construct an Offshore Substation (OSS) within BOEM lease area OCS-A 0517 on a platform supported by a single 36-foot diameter steel monopile foundation with an approximately 225-foot diameter rock scour protection around the base of the monopile.

Install within BOEM lease area OCS-A 0517, via mechanical cutter, mechanical plow (which may include a jetting system), and/or jet plow, up to approximately 21.4 miles of 12-inch diameter submarine inter-array cables buried to a minimum coverage depth ranging from 4-6 feet measured from the top of the submarine inter-array cable to the seafloor. The total maximum permanent seabed footprint of the submarine inter-array including secondary cable protection (e.g., concrete matting, fronded mattresses, rock bags, or rock placement) within BOEM lease area would be approximately 12.7 acres.

<u>South Fork Export Cable (SFEC)</u>: Under Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403), from the OSS, install approximately 58.3 miles of the total approximately 62 miles, of a 12-inch diameter submarine export cable via mechanical cutter, mechanical plow (which may include a jetting system), jet plow and/or displacement plow, buried to a minimum coverage depth ranging from 4-6 feet measured from the top of the submarine export cable to the seafloor. The total maximum permanent seabed footprint of the submarine export cable including secondary cable protection (e.g., concrete matting, fronded mattresses, rock bags, or rock placement) between BOEM lease area and territorial seas would be approximately 15 acres.

Under Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403) and Section 404 of the Clean Water Act (33 U.S.C. 1344) install approximately 3.36 miles of the total 62 miles of submarine export cable located within territorial seas via mechanical cutter, mechanical plow (which may include a jetting system), jet plow and/or displacement plow buried minimum coverage depth of 6 feet measured from the top of the submarine export cable to the seafloor. The total maximum permanent seabed footprint of the submarine export cable including secondary cable protection within territorial seas would be approximately 0.6 acres.

Install approximately 0.34 miles (approximately 1,800 feet) of the submarine export cable using Horizontal Directional Drilling (HDD) as measured from mean high water (MHW) to the HDD exit location. The sea to shore transition submarine export cable will be buried a minimum depth of 30-feet below the existing beach profile.

At the HDD exit location, construct a temporary 530-foot-long by 185-foot-wide square foot cofferdam to dewater and dredge approximately 26,500 cubic yards of material to depths ranging from 10-17 feet below the existing grade. Discharge the approximately 26,500 cubic yards of dredged material within the cofferdam footprint after the submarine export cable is installed.

<u>Lake Montauk Operations and Maintenance Facility (O&M Facility)</u>: Dredge, with 10-year maintenance, by mechanical clamshell bucket dredge up to approximately 2,500 cubic yards (CY) of sediment from an approximately 18,045 square foot area to a depth of 12 feet below the plane of mean low water (MLW), including a 1-foot

over depth. The dredged material would be placed into dredge scows and decanted of excess water into the waterway and disposed of at a State approved upland facility outside of Corps Section 404 jurisdiction (upland). The permittee will conduct annual dredging and placement in the same locations up to approximately 1,500 cubic yards per event.

From the existing bulkhead at the O&M facility, install perpendicular to the shoreline a four-foot-wide by 28-foot-long ramp leading to a 16-foot-wide by 100-foot-long float in a L shaped configuration supported by five (5), two-foot diameter steel piles; install one (1) two-foot diameter steel monopile with donut fendering and mooring ring on the western terminus of the float. The five (5), steel piles and single monopile will be filled with approximately 13 CY of flowable concrete below the spring high tide line.

1.3.1 Proposed avoidance and minimization measures:

The applicant has stated that unavoidable impacts to waters of the United States, have been minimized and avoided through, but not limited to, the use of micrositing WTG's to minimize substantial adverse impacts to complex habitats identified by National Marine Fisheries, reducing the WTG's from fifteen (15) to twelve (12) based on State of Rhode Island CRMC conditional concurrence (CRMC File 2018-10-082), placing of dredged material from the O&M facility in a State approved upland facility, installing bird deterrent devices on WTG's, incorporating multiple various annual no work windows under Section 7 of the Endangered Species Act and coordination under the Magnuson Stevens Fishery Act for foundation pile driving, cofferdam installation and mooring piles installation activities, incorporating vessel speed requirements (10 knots or less) during construction for all vessel sizes between November 1 to April 30 and while operating in BOEM lease area, along the export cable route, or transit area to and from ports in New York, Connecticut, Rhode Island, and Massachusetts, avoiding dredge and placement activities at the O&M facility between April 15 to July 15 to minimize potential impacts to horseshoe crab spawning, utilizing a temporary cofferdam, and the use of Best Management Practices (BMP's).

BOEM, the lead federal agency, has completed its National Environmental Policy Act (NEPA) review process pursuant to Title 23 of the Code of Federal Regulations (CFR) Part 771 and Title 40 of the CFR Part 1500-1508. BOEM signed a Record of Decision (ROD) on November 24, 2021, that officially documented the selection of its Preferred Alternative and, as appropriate, the mitigation measures to be incorporated into the South Fork Wind, Offshore Wind Energy Project that will avoid, minimize, and/or mitigate adverse impacts. As

mentioned above, the Corps has adopted the EIS in accordance with 40 C.F.R. 1506.3, inclusive of these mitigation measures.

1.3.2 Proposed compensatory mitigation: In accordance with 33 CFR Part 332.3 (a)(1), "the fundamental objective of compensatory mitigation is to offset environmental losses resulting from unavoidable impacts to water of the United States authorized by Department of the Army (DA) permits. The district engineer must determine the compensatory mitigation to be required in a DA permit, based on what is practicable and capable of compensating for the aquatic resource functions that will be lost as a result of the permitted activity."

Compensatory mitigation is not required as the proposed work within the SFWF, along the SFEC and the O&M facility does not fall within any mapped wetlands or special aquatic sites.

- 1.4 Existing conditions and any applicable project history: No work has been conducted within BOEM's Renewable Energy Lease Area OCS-A 0517. The submarine export cable will need to cross over seven (7) existing utilities located within the seabed to make landfall in Wainscott, a hamlet of Town of East Hampton, Suffolk County, New York, and the O&M Facility has an existing bulkhead, and existing dock structures (reference a, South Fork Wind Farm and South Fork Export Cable Project, FEIS).
- 1.5 Permit Authority: Section 10 of the Rivers and Harbors Act (33 USC 403) and Section 404 of the Clean Water Act (33 USC 1344).
- 2.0 Scope of review for National Environmental Policy Act (i.e. scope of analysis), Section 7 of the Endangered Species Act (i.e. action area), and Section 106 of the National Historic Preservation Act (i.e. permit area)
- 2.1 Determination of scope of analysis for National Environmental Policy Act (NEPA):

The scope of analysis includes the specific activity requiring a Department of the Army permit. Other portions of the entire project are also included because the Corps does have sufficient control and responsibility to warrant federal review. In accordance with 33 CFR 325 (Appendix B) (7)(b)(2), factors to be considered in determining whether the U.S. Army Corps of Engineers has sufficient "control and responsibility" include:

(i) Whether or not the regulated activity comprises "merely a link" in a corridor type project (e.g., a transportation or utility transmission project);

(ii) Whether there are aspects of the upland facility in the immediate vicinity of the regulated activity which affect the location and configuration of the regulated activity;

- (iii) The extent to which the entire project will be within Corps jurisdiction; and
- (iv) The extent of cumulative Federal control and responsibility.

Final description of scope of analysis: The final scope of analysis includes BOEM's Renewable Energy Lease Area OCS-A 0517 which consists of up to 12 WTG's, an OSS, and approximately 21.4 miles of submarine inter-array cables. Also included in the final scope of analysis is a 62-mile-long submarine export cable making landfall in Wainscott, a hamlet of Town of East Hampton, Suffolk County, New York and an Operations and Maintenance Facility located within Lake Montauk, Town of East Hampton, Suffolk County, New York.

Here, based on the above four factors, other portions of the entire project are included because USACE does have sufficient control and responsibility to warrant Federal review. BOEM's action associated with the project increases the cumulative Federal control and responsibility over the project. The final scope of analysis was included in the FEIS that BOEM prepared as Lead Federal Agency for this Project, and in which the Corps participated as a Cooperating Agency.

- 2.2 Determination of the "Corps action area" for Section 7 of the Endangered Species Act (ESA):
  - (i) Action area means all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action
  - (ii) Determined scope:

As per the Biological Opinion issued on October 1, 2021, by NOAA-Fisheries, the action area includes the Rhode Island (RI)/Massachusetts (MA) Wind Energy Area (WEA) where project activities will occur and the surrounding areas ensonified by proposed Project noise; the SFEC – Offshore cable route, which extends south to landfall in East Hampton, New York; the areas where HRG and fisheries and benthic resource surveys will take place; the vessel transit areas between the RI/MA WEA and ports in Massachusetts, Rhode Island, New York and Canada; and the routes used by vessels transporting manufactured components from Europe and/or Gulf of Mexico

inclusive of the portion of the Atlantic Ocean that will be transited by those vessels and the territorial sea of nations along the European Atlantic coast from which those vessels will originate.

The USACE action area has been addressed within the larger ESA action area defined by BOEM.

2.3 Determination of permit area for Section 106 of the National Historic Preservation Act (NHPA):

The permit area includes those areas comprising WOTUS that will be directly affected by the proposed work or structures, as well as activities outside of waters of the U.S. because all three tests identified in 33 CFR 325, Appendix C(g)(1) have been met.

The following three tests must all be satisfied for an activity undertaken outside the waters of the United States to be included within the "permit area":

- (i) Such activity would not occur but for the authorization of the work or structures within the waters of the United States:
- (ii) Such activity must be integrally related to the work or structures to be authorized within waters of the United States. Or, conversely, the work or structures to be authorized must be essential to the completeness of the overall project or program; and
- (iii) Such activity must be directly associated (first order impact) with the work or structures to be authorized.

From the November 23, 2021 MOA (reference 2e) "BOEM has defined the area of potential effects (APE) for the undertaking as the depth and breadth of the seabed potentially impacted by any bottom-disturbing activities, constituting the marine archaeological resources portion of the APE (marine APE); the depth and breadth of terrestrial areas potentially impacted by any ground disturbing activities, constituting the terrestrial archaeological resources portion of the APE (terrestrial APE); the viewshed from which offshore or onshore renewable energy structures would be visible, constituting the viewshed portion of the APE (viewshed APE); and any temporary or permanent construction or staging areas that may fall into any of the aforementioned offshore or onshore portions of the APE."

The USACE permit area has been addressed within the larger "area of potential effect" defined by BOEM. The Corps, which participated in the NHPA 106 consultation process, signed the MOA dated November 23, 2021 as a Concurring Party.

Final description of the permit area: The permit area includes up to 12 WTG's, an OSS, and approximately 21.4 miles of submarine inter-array cables. Also included in the final scope of analysis is a 62-mile-long submarine export cable making landfall in Wainscott, a hamlet of Town of East Hampton, Suffolk County, New York and an O&M facility located within Lake Montauk, Town of East Hampton, Suffolk County, New York.

### 3.0 Purpose and Need

- 3.1 Purpose and need for the project as provided by the applicant and reviewed by the Corps: The purpose and need for the project is to develop a commercial-scale offshore wind energy facility in commercial Lease Area OCS-A 0517 with WTGs, an OSS, and one transmission cable making landfall in Suffolk County, New York (reference a).
- 3.2 Basic project purpose, as determined by the Corps: The basic project purpose is wind energy generation.
- 3.3 Water dependency determination: This activity does not require access or proximity to or siting within a special aquatic site to fulfill its basic project purpose. Therefore, it is not water dependent. Under the 404(b)(1) Guidelines, 40 C.F.R. § 230.10(a)(3), if a proposed activity is not water dependent, practicable alternatives not involving special aquatic sites are presumed to be available unless the permittee clearly demonstrates otherwise. Refer to Section 6.0 for evaluation for compliance with the Section 404(b)(1) guidelines.
- 3.4 Overall project purpose, as determined by the Corps: The overall project purpose is the construction and operation of a commercial scale offshore wind energy project for renewable energy generation and distribution to New York State's energy grid.

#### 4.0 Coordination

The FEIS describes the public involvement process for the FEIS, including resource agency roles and coordination meetings, public meetings, public

hearings, consulting parties, and the project website. The comments received on the DEIS and the responses by the Applicant and BOEM are provided in Appendix I of the FEIS.

4.1 The results of coordinating the proposal on Public Notice (PN) are identified below, including a summary of issues raised, any applicant's response and the Corps' evaluation of concerns.

Public notice number NAN-2020-01079-EME, describing the proposed activity and requesting public comment, was published on January 6, 2021, with a comment period ending on February 26, 2021. An electronic version of the Public Notice was posted on USACE's New York District website (http://www.nan.usace.army.mil). 84 printed copies of the Public Notice were sent by regular mail via the applicant and 196 parties were notified by email of a link to the Public Notice on USACE's New York District website. The Public Notices were sent to the adjacent property owners as identified by the applicant, to interested members of the public, and to Federal, state and local officials or agencies included in USACE's New York District computerized public notice mailing list for New York State Department of Environmental Conservation Region 1.

Were comments received in response to the PN? Yes. A total of thirteen (13), written comments were received including four (4) comments from state, local and federal agencies and nine (9) comments from the public.

Was a public meeting and/or hearing requested and, if so, was one conducted? No, there were no requests for a public hearing received by this office. However, this office participated in three (3), joint virtual public hearings with BOEM on February 9, 2021, February 11, 2021 and February 16, 2021. Over 400 people participated and/or submitted verbal comments.

On January 8, 2021 BOEM published a notice of availability for the South Fork Wind Farm and South Fork Export Cable Project Draft Environmental Impact Statement (DEIS) opening a 45-day comment period ending on February 22, 2021, for the public to comment on the DEIS. BOEM received a total of 388 submissions throughout the 45-day comment period.

All comments including the 388 submissions and comments received during the three (3), virtual public hearings can be found in BOEM's Final Environmental Impact Statement (FEIS), Appendix I "Public Comments and Responses".

Comments received in response to public notice: A summary of the comments received, the applicant's response, and the USACE analysis is included in the Public Interest Review Section 7.0 and were analyzed in accordance with the public interest review factors.

There are comments in the record for the FEIS that are about activities which are not within USACE's regulatory jurisdiction. It is the responsibility of BOEM, as lead federal agency for the NEPA EIS, to address such comments as they did, in the FEIS and ROD.

The Corps participated in three (3), virtual public hearings on February 9, 2021, February 11, 2021 and February 16, 2021. BOEM coordinated with EPA to publish a Notice of Availability of the Draft Environmental Impact Statement (DEIS) in the Federal Register on January 8, 2021, which officially opened the 45-day public comment period on the document ending on February 22, 2021.

### Agency Comments:

Written comments were received from the following agencies: National Marine Fisheries Service-Habitat Conservation Division (NMFS-HCD), United States Coast Guard (USCG) Sector Long Island Sound, Environmental Protection Agency (EPA) Region 1 and The Commonwealth of Massachusetts Division of Marine Fisheries. The agencies' comments are addressed in relevant subsequent sections of this document.

Public Comments:

A total of nine (9), written comments were received from the public during the public notice comment period.

Were comments forwarded to the applicant for response? Yes, the thirteen (13) public comments were provided to the applicant on April 7, 2021.

- 4.2 Were additional issues raised by the Corps including any as a result of coordination with other Corps offices? No
- 4.3 Were comments raised that do not require further discussion because they address activities and/or effects outside of the Corps' purview? Yes. See summary and response to comments within the Public Interest Review Section 7.0.

- 5.0 Alternatives Analysis (40 CFR 230.5(c)). An evaluation of alternatives is required under the Section 404(b)(1) Guidelines for projects that include the discharge of dredged or fill material. Under the Guidelines, practicability of alternatives is taken into consideration and no alternative may be permitted if there is a less environmentally damaging practicable alternative.
- 5.1 Site selection/screening criteria: In order to be practicable, an alternative must be available, achieve the overall project purpose (as defined by the Corps after considering the applicant's needs and the type of project being proposed), and be feasible when considering cost, logistics and existing technology.

Criteria for evaluating alternatives as evaluated and determined by the Corps: The Corps has determined that the following criteria apply to any proposed alternative:

- (i) Type of energy. Any proposed alternative must be renewable energy. South Fork Wind is under contractual obligation with the state of New York to contribute to New York's renewable energy requirements along with its contractual commitments to Long Island Power Authority (LIPA) pursuant to a power purchase agreement executed in 2017.
- (ii) The production of renewable energy must be from the use of wind turbines. BOEM has designated these offshore development areas specifically for renewable wind energy, therefore, to evaluate alternatives, all alternatives must consider only renewable wind energy and no other renewable energy producing projects such as solar or hydropower.
- (iii) South Fork Wind's contractual obligation with the state of New York to deliver the generated energy to the New York power grid was used as criteria for the evaluation of alternatives as the ability to deliver to the power grid limits where the project can be located geographically.
- (iv) In addition to supplying power to New York, the project must also deliver a minimum of 130 MW to the New York power grid to meet pre-established agreements.
- (v) Energy production must be located in the area covered by BOEM Renewable Energy Lease Number OCS-A 0517, within which South Fork Wind, LLC holds a lease and the exclusive right to submit a Construction and Operations Plan for activities within the lease area.

#### 5.2 Description of alternatives

BOEM's FEIS considered a total of 22 alternatives during the preparation of the EIS and carried forward for detailed analysis three (3) on-site action alternatives and the no action alternative. Three (3), off-site action alternatives were also considered. However, BOEM determined that all three (3) off-site action alternatives would not meet particular screening criteria nor BOEM's purpose and need to respond to the Project COP and to determine whether to approve, approve with modifications, or disapprove the COP to construct, operate, and conceptually decommission a commercial-scale wind energy facility within Lease Area OCS-A 0517., Therefore, further detailed analysis was not conducted by BOEM. BOEM's regulations require BOEM to analyze SFW's proposal to build a commercial wind energy facility on Lease OCS-A 0517. See South Fork Wind FEIS, section 2-19. Each of the alternatives, including the no action alternative, is detailed below in sections 5.2.1 through 5.2.3. USACE will utilize these alternatives in its alternatives analysis under the Section 404(b)(1) Guidelines.

5.2.1 **No action alternative:** Under this alternative, the project would not be constructed. Any potential environmental and socioeconomic impacts, including benefits, associated with the Project as described under On-Site Action Alternative 1 would not occur.

### 5.2.2 **Off-site action alternatives**

All off-site action alternatives described below are outside of BOEM Lease Area OCS-A 0517.

**Off-site action alternative 1 (Upland Location):** Alternate location of the wind energy facility at an upland site near Town of East Hampton would involve no discharge of dredged or fill material in wetlands and other waters of the United States.

Off-site action alternative 2 (Alternate Location Closer to Shore or Within State Waters): Alternate location of the wind energy facility closer to shore or within state waters. This alternative would also include a submarine export cable and O&M facility.

**Off-site action alternative 3 (Other BOEM Lease Areas):** Alternate location for the wind energy facility outside of Lease Area OCS-A 0517. This alternative would also include a submarine export cable and O&M facility.

#### 5.2.3 **On-site action alternatives**

**On-site action alternative 1:** Under this alternative, the work includes construction and installation of an offshore wind energy facility consisting of up to 15 WTGs out of 18 potential locations in the 6 to 12 MW range with an offshore substation (OSS), submarine inter-array cables, submarine export cable and O&M facility with maintenance dredging. The WTGs would be spaced in a uniform east–west and north–south grid with 1 by 1 nautical-mile (nm) spacing between WTGs and diagonal transit lanes at least 0.6 nm wide through the Lease Area.

**On-site action alternative 2 (Vessel Transit Lane Alternative):** Under this alternative, the work includes construction and installation of an offshore wind energy facility consisting of up to 12 WTGs out of 12 possible locations in the 6 to 12 MW range with an offshore substation (OSS), submarine inter-array cables, submarine export cable and O&M facility with maintenance dredging. The WTGs would be spaced in a uniform east–west and north–south grid with 1 by 1 nautical-mile (nm) spacing between WTGs and a 4-nm wide vessel transit lane through the Lease Area.

**On-site action alternative 3 (Fisheries Habitat Impact Minimization):** Under this alternative, the work includes construction and installation of an offshore wind energy facility consisting of up to 12 WTGs out of 18 potential locations in the 6 to 12 MW range with an offshore substation (OSS), submarine inter-array cables, submarine export cable and O&M facility with maintenance dredging. The WTGs would be spaced in a uniform east–west and north–south grid with 1 by 1 nautical-mile (nm) spacing between WTGs and diagonal transit lanes at least 0.6 nm wide through the Lease Area. Specific WTGs and associated submarine inter-array cable locations would be microsited which is defined as locating away from complex or potentially complex habitat.

5.3 Evaluate alternatives and whether or not each is practicable under the 404(b)(1) Guidelines:

Pursuant to 40 CFR 230.3(q), the term practicable is defined as meaning the alternative is available, and capable of being done after taking into consideration cost, existing technology, and/or logistics in light of the overall project purpose(s).

**No Action Alternative:** USACE determined that the No Action Alternative is not practicable. The No Action Alternative does not meet the criteria to generate renewable energy through WTGs to meet the power purchase agreement of 130

MW of energy to the New York State energy grid from BOEM Lease Area OCS-A 0517. The overall project purpose is the construction and operation of a commercial scale offshore wind energy project for renewable energy generation and distribution to New York State's energy grid. This alternative would result in no construction and operation of a commercial scale offshore wind energy project and therefore does not meet the overall project purpose.

As a result of the information listed above, this alternative has been removed from further consideration.

**Off-site Action Alternative 1 (Upland Location):** USACE determined that Offsite Action Alternative 1 is not practicable. Off-site Action Alterative 1 would meet criteria (i) through (iv) to generate renewable energy through WTGs to meet the power purchase agreement of 130 MW of energy to the New York State power grid. However, it does not meet criteria (v) since the construction of the windfarm would be located outside of BOEM Lease Area OCS-A 0517. The overall project purpose is the construction and operation of a commercial scale offshore wind energy project for renewable energy generation and distribution to New York State's energy grid. This alternative would result in the construction and operation of a commercial scale offshore wind energy project in an upland location and therefore does not meet the overall project purpose.

As a result of the information listed above, this alternative has been removed from further consideration.

**Off-site Action Alternative 2 (Alternate Location Closer to Shore or Within State Waters):** USACE determined that Off-site Action Alternative 2 is not practicable. The overall project purpose is the construction and operation of a commercial scale offshore wind energy project for renewable energy generation and distribution to New York State's energy grid. This alternative would result in the construction and operation of a commercial scale offshore wind energy project. Off-site Action Alterative 2 would meet criteria (i) through (iv) to generate renewable energy through WTGs to meet the power purchase agreement of 130 MW of energy to the New York State power grid. However, it does not meet criteria (v) since the construction of the windfarm would be located outside of BOEM Lease Area OCS-A 0517.

Also, Off-site Action Alternative 2 would potentially have similar types of impacts to physical and biological characteristics of the aquatic ecosystem as compared to On-Site Action Alternative 1; however, the submarine export cable length

would potentially be shorter than On-Site Action Alternative 1. This off-site action alternative would result in the offshore wind farm being closer to the shoreline and more visible to the general public and potentially be an attractive nuisance due to its proximity to the shoreline. Impacts due to discharges from cable installations and monopile scour protections would increase in Section 404 of the Clean Water Act (33 USC 1344)-jurisdictional waters, which extend seaward from the baseline to the three (3), nautical mile mark. The O&M facility would have the same impacts as On-Site Action Alternative 1.

As Off-site Action Alternative 2 is not practicable and does not meet evaluation criteria (v), it has been removed from further consideration.

Off-site Action Alternative 3 (Other BOEM Lease Areas): USACE determined that Off-site Action Alternative 3 is not practicable. The overall project purpose is the construction and operation of a commercial scale offshore wind energy project for renewable energy generation and distribution to New York State's energy grid. This alternative would result in the construction and operation of a commercial scale offshore wind energy project, and Off-site Action Alterative 2 would meet criteria (i) through (iv) to generate renewable energy through WTGs to meet the power purchase agreement of 130 MW of energy to the New York State power grid. However, does not meet criteria (v) since the construction of the windfarm would be located outside of BOEM Lease Area OCS-A 0517. Offsite Action Alternative 3 would potentially have similar types of impacts to physical and biological resources as compared to On-Site Action Alternative 1; however, the submarine export cable length would potentially be longer than On-Site Action Alternative 1. Relocation of the project to a different lease site may result in the submarine export cable route differing in location until the landfall site and could potentially impact special aquatic sites as defined in 40 C.F.R. 230 Subpart E. In addition, the submarine export cable would potentially need to cross other existing BOEM lease areas or be routed in a complex manner in order to avoid other lease areas, resulting in this alternative being impracticable.

As Off-site Action Alternative 3 is not practicable and does not meet evaluation criteria (v), it has been removed from further consideration.

**On-site Action Alternative 1:** USACE determined that On-site Action Alternative 1, is practicable and would meet USACE evaluation criteria (i) through (v) to generate renewable energy through WTGs to meet the power purchase agreement of 130 MW of energy to the New York State energy grid from BOEM Lease Area OCS-A 0517, and the overall project purpose. However, On-site

Action Alternative 1 would potentially have the highest quantitative and qualitative impacts to physical and biological characteristics of the aquatic ecosystem. This action alternative would have the most WTGs, (i.e., up to 15 WTGs with associated scour protection encompassing approximately 596,100 square feet) and longest linear lengths of submarine inter-array cables (i.e., 21.4 miles) where the overall footprint of the project would be the largest in comparison to the On-site Action Alternatives 2 and 3. The highest number of WTGs would result in the most pile driving activities, the highest overall total square footage of scour protection around monopiles, and highest square footage of secondary cable protection covering the submarine inter-array cables. As a result, this would potentially have the highest intensity and duration of noise and turbidity within the water column. It would also potentially have the highest benthic habitat disturbance, affecting species listed under the Endangered Species Act (ESA), and Essential Fish Habitat (EFH) and EFH-listed species and other finfish and invertebrates. This action alternative would not involve the action of micrositing of WTGs and submarine inter-array cables in order to avoid potential impacts to complex or potentially complex habitat.

As a result of the discussion above, this action alternative will be carried forward for further analysis.

### **On-site Action Alternative 2 (Vessel Transit Lane Alternative):**

USACE determined that On-site Action Alternative 2 is not practicable. On-site Action Alternative 2 meets evaluation criteria (i) through (v) and the overall project purpose. However, the removal of the six (6) potential locations for WTGs from the total 18 potential locations to only 12 potential locations and associated submarine inter-array cables eliminates any flexibility of WTG locations and could render the Project logistically infeasible. On-site Action Alternative 2 would potentially have similar types of impacts to physical and biological characteristics of the aquatic ecosystem as compared to On-site Action Alternatives 1 and 3. This action alternative would have fewer WTGs, (i.e., up to 12 WTGs with associated scour protection encompassing approximately 476,880 square feet) and an overall shorter linear length of submarine inter-array cables where the overall footprint of the project would be smaller in comparison to the On-site Action Alternative 1. This action alternative would have the same number of WTGs, (i.e., up to 12 WTGs) and a potentially shorter linear length of submarine inter-array cables where the overall footprint of the project would be potentially smaller in comparison to the On-site Action Alternative 3.

Fewer WTGs would result in less pile driving activities, a smaller overall total square footage of scour protection around monopiles, and smaller square footage of secondary cable protection covering the submarine inter-array cables in comparison to On-site Action Alternative 1. Pile driving activities and overall total square footage of scour protection around monopiles would be the same; however, square footage of secondary cable protection covering the submarine inter-array cables would potentially be less in comparison to On-site Action Alternative 3 due to not utilizing micrositing.

As a result, On-site Action Alternative 2 would have less intensity and duration of noise and turbidity within the water column and less benthic habitat disturbance affecting species listed under the Endangered Species Act (ESA), and Essential Fish Habitat (EFH) and EFH-listed species and other finfish and invertebrates in comparison to On-site Action Alternative 1. It would also potentially have the same intensity and duration of noise and turbidity within the water column and have more qualitative benthic habitat disturbance affecting species listed under the Endangered Species Act (ESA), and Essential Fish Habitat (EFH) and EFH-listed species and turbidity within the water column and have more qualitative benthic habitat disturbance affecting species listed under the Endangered Species Act (ESA), and Essential Fish Habitat (EFH) and EFH-listed species and other finfish and invertebrates in comparison to On-site Action Alternative 3 due to the WTGs and submarine inter-array cables not being microsited.

As a result of the discussion above, this action alternative will not be carried forward for further analysis.

**On-site Action Alternative 3 (Fisheries Habitat Impact Minimization** Alternative): USACE determined that On-site Action Alternative 1, is practicable and would meet USACE evaluation criteria (i) through (v) to generate renewable energy through WTGs to meet the power purchase agreement of 130 MW of energy to the New York State energy grid from BOEM Lease Area OCS-A 0517 and the overall project purpose. On-site Action Alternative 3 would potentially have similar types of impacts to physical and biological characteristics of the aquatic ecosystem as compared to On-site Action Alternatives 1 and 2. This action alternative would have fewer WTGs, (i.e., up to 12 WTGs with associated scour protection encompassing approximately 476,880 square feet) and an overall shorter linear length of submarine inter-array cables where the overall footprint of the project would be smaller in comparison to the On-site Action Alternative 1. This action alternative would have the same number of WTGs, (i.e., up to 12 WTGs) and a potentially longer linear length of submarine inter-array cables. The overall footprint of the project would be potentially slightly larger in comparison to the On-site Action Alternative 2.

Fewer WTGs would result in less pile driving activities, a smaller overall total square footage of scour protection around monopiles, and smaller square footage of secondary cable protection covering the submarine inter-array cables in comparison to On-site Action Alternative 1. Pile driving activities and overall total square footage of scour protection around monopiles would be the same: however, square footage of secondary cable protection covering the submarine inter-array cables would potentially be slightly larger in comparison to On-site Action Alternative 2 since micrositing will be used. As a result, On-site Action Alternative 3 would have less intensity and duration of noise and turbidity within the water column and less benthic habitat disturbance affecting species listed under the Endangered Species Act (ESA), and Essential Fish Habitat (EFH) and EFH-listed species and other finfish and invertebrates in comparison to On-site Action Alternative 1. It would potentially have the same intensity and duration of noise and turbidity within the water column and have less qualitative benthic habitat disturbance affecting species listed under the Endangered Species Act (ESA), and Essential Fish Habitat (EFH) and EFH-listed species and other finfish and invertebrates in comparison to On-site Action Alternative 2 due to the WTGs and submarine inter-array cables using micrositing.

As a result of the discussion above, this action alternative will be carried forward for further analysis.

5.4 Least environmentally damaging and practicable alternative under the 404(b)(1) Guidelines and the environmentally preferable alternative under NEPA:

Of the two (2) alternatives that were determined to be practicable under the 404(b)(1) Guidelines, On-site Action Alternative 1 and On-site Action Alternative 3 (Fisheries Habitat Impact Minimization Alternative), USACE has determined that the least environmentally damaging and practicable alternative is On-site Action Alternative 3 due the following reasons.

On-site Action Alternative 3 would potentially have fewer impacts to physical and biological characteristics of the aquatic ecosystem due to the reduced number of WTGs and its associated scour protection, shorter linear length of submarine inter-array cables and the use of micrositing for WTGs and submarine inter-array cables. This alternative would have three (3) fewer WTGs and associated scour protection around the monopiles and a shorter linear length of submarine inter-array cables. The reduction of the overall square footage of WTGs and associated scour protection from 596,100 square feet to 476,880 square feet (three (3) fewer WTGs) results in a net reduction of approximately 119,200

square feet of potential impacts in the water column and benthic habitat. Fewer WTGs also reduces intensity and duration of pile driving, noise, vibration, and turbidity. Impacts to complex and potentially complex habitat within the Lease Area would be reduced from 16.9 acres to 12.6 acres, a reduction of 4.3 acres In addition, impacts to complex and potentially complex habitat from the installation of submarine inter-array cables would be reduced from 146.8 to 110.1 acres, a reduction of 36.7 acres.

USACE has determined that On-Site Action Alternative 3 (Fisheries Habitat Impact Minimization Alternative) would meet USACE evaluation criteria (i) through (v) to generate renewable energy through WTGs to meet the power purchase agreement of 130 MW of energy to the New York State energy grid from BOEM Lease Area OCS-A 0517 and the overall project purpose for the construction and operation of a commercial scale offshore wind energy project for renewable energy generation and distribution to New York State's energy grid.

Having considered the above alternatives, USACE determines that On Site Alternative 3 (Fisheries Habitat Impact Minimization Alternative) is the environmentally preferrable alternative and the least environmentally damaging alternative.

- **6.0 Evaluation for Compliance with the Section 404(b)(1) Guidelines.** The following sequence of evaluation is consistent with 40 CFR 230.5
- 6.1 Practicable alternatives to the proposed discharge consistent with 40 CFR 230.5(c) are evaluated in Section 5. The statements below summarize the analysis of alternatives.

In summary, based on the analysis in Section 5.0 above, the no-action alternative, which would not involve discharge into waters, is not practicable. It has been determined that there are no alternatives to the proposed discharge that would be less environmentally damaging. (Subpart B, 40 CFR 230.10(a)). The proposed discharge in this evaluation is the practicable alternative with the least adverse impact on the aquatic ecosystem, and it does not have other significant environmental consequences.

6.2 Candidate disposal site delineation (Subpart B, 40 CFR 230.11(f)). Each disposal site shall be specified through the application of these Guidelines:

Discussion: The disposal sites consist of the submarine export cable route from BOEM Lease Area OCS-A 0517 to the Beach Lane landfall site, when the submarine export cable route is landward of the three (3) nautical mile mark and the Lake Montauk O&M facility. The combined size of the disposal sites is approximately 3.3 acres in size. The disposal sites consist of coastal waters in nearshore areas with depths no greater than 98.4 feet. Water temperatures within the disposal sites range between 39-68 Fahrenheit. Salinity within the disposal sites range between 31 and 32 practical salinity scale depending on the season. Turbidity averages between 0.1 to 7.4 milligram per liter (mg/L) total suspended solids (TSS). Habitats within the submarine export cable route vary, but medium to coarse grain sand make up a majority of the submarine export cable route and sand and muddy sand make up the majority of the material located within the Lake Montauk O&M facility. There are no special aquatic sites as defined by 40 C.F.R. Part 230 Subpart E (wetlands, mud flats, vegetated shallows, sanctuaries and refuges, coral reefs, or riffle and pool complexes) located along the submarine export cable route or Lake Montauk O&M facility.

6.3 Potential impacts on physical and chemical characteristics of the aquatic ecosystem (Subpart C 40 CFR 230.20-230.25). See Table 1:

Table 1 – Potential Impacts on Physical and Chemical Characteristics							
Physical and Chemical Characteristics	N/A	No Effect	Negligible Effect	Minor Effect (Short Term)	Minor Effect (Long Term)	Major Effect	
Substrate				Х	Х		
Suspended particulates/ turbidity				Х			
Water			Х				
Current patterns and water circulation		Х					
Normal water fluctuations		Х					
Salinity gradients		Х					

Discussion:

**Substrate:** The discharge of fill from the submarine export cable, secondary cable protection, dredging at the HDD exit pit and work at the O&M facility consisting of

decanting of excess water and filling of steel piles will result in minor-short term and permanent adverse impacts to the existing sandy substrate. The minor shortterm impact is approximately 3.3 acres of predominately sandy substrate. Of the 3.3 acres, approximately 0.4 acres is from installation of the submarine export cable, 0.2 acres from secondary cable protection, 2.3 acres from the dredging of an approximately 530-foot-long by 185-foot-wide square foot temporary cofferdam area, and 0.4 acres from the approximately 18,045 square foot dredging area within Lake Montauk.

Depending on final design the cable will be installed via mechanical cutter, mechanical plow (which may include a jetting system), and/or jet plow. As the cable is laid on the ocean seafloor, the existing sandy substrate will be used to cover the submarine export cable resulting in 0.4 acres of fill material. The proposed discharge of fill material will not change the complex physical, chemical, and biological characteristics of the substrate.

The installation of 0.2 acres of secondary cable protection (e.g., concrete matting, fronded mattresses, rock bags, or rock placement) would temporarily affect bottomdwelling organisms at the project location by smothering immobile benthic organisms or forcing mobile organisms to migrate. However, it is expected that the installation of the secondary cable protection would provide long-term beneficial mobile benthic organisms within the footprint of the concrete mattresses will continue to colonize in the sandy areas adjacent to the secondary cable protection.

The approximately 2.3 acres of dredged material from the HDD exit pit would be temporarily stored on dredge scows until the interconnection of the submarine export cable is complete. Upon completion, the dredged material would then be placed back into the cofferdam. Considering the dredged material is of existing substrate type when in comparison to the ocean seafloor, the proposed discharge of fill material will not change the complex physical, chemical, and biological characteristics of the substrate.

Decanting of approximately 0.4 acres of dredged material at the O&M facility would not change the complex physical, chemical, and biological characteristics of the substrate since the material discharged is of the same substrate type as the existing seafloor within Lake Montauk.

When looking at the overall impacts associated with the discharge of fill material particularly with the installation of the submarine export cable, secondary cable

protection and decanting of dredged material it is expected that there would be minor short-term effects to respective water bodies and the associated aquatic ecosystem.

**Suspended particulates/turbidity:** The installation of the submarine export cable, secondary cable protection (e.g., concrete matting, fronded mattresses, rock bags, or rock placement) and dredging at the HDD exit pit along with the proposed work at the O&M facility consisting of maintenance dredging and filling of steel piles with flowable concrete would have minor short-term effects.

As the submarine export cable is installed, the seabed would be temporarily disturbed resulting in a release of suspended particulates into the water column. The suspended particulates would be dispersed by the current and would settle back to the seabed within minutes to hours of the disturbance since the material is predominately sand. In addition, the placement of 0.2 acres of secondary cable protection (e.g., concrete matting, fronded mattresses, rock bags, or rock placement) would temporarily disturb the seafloor resulting in a release of suspended particulates into the water column. However, it is anticipated that the suspended particulates would settle back to the seabed quickly due to the composition of the material being predominantly sand.

A temporary cofferdam measuring approximately 530-foot-long by 185-foot-wide will be installed at the HDD exit pit where it will then be dewatered and approximately 26,500 CY of dredged material would be temporary removed and stored. After the interconnection of the submarine export cable is completed, the 26,500 CY of dredged material would be placed back into the cofferdam where it would be spread out evenly. After the dredged material is spread the temporary cofferdam will be filled back up with water and the cofferdam would be removed. It is anticipated that once the cofferdam is removed, the seabed would be temporarily disturbed resulting in a release of suspended particulates into the water column. However, considering the fact that suspended particulates would be predominately sand, it is expected the material would settle back to the seabed quickly.

Dredging at the O&M facility would be confined to the overall dredging area which is approximately 18,045 square feet. The dredged material would be placed into dredge scows and decanted of excess water into the waterway resulting in temporary suspended particulates within the water column. It is anticipated that the suspended particulates would settle back to the seabed quickly since the material found within Lake Montauk is also predominately sand. In addition, the applicant

has stated that a turbidity curtain would be installed prior to dredging operations to limit the amount of suspended particulate within Lake Montauk. The placement of 13 CY of flowable concrete within steel piles would result in temporary suspended particulates within the water column. However, it is expected that the suspended particulate would be confined within the inside of the steel piles itself.

**Water:** It is anticipated that the discharge of fill material will result in negligible effects to water. The discharge of fill from the submarine export cable, secondary cable protection, dredging at the HDD exit pit and work at the O&M facility consisting of decanting of excess water and filling of steel piles would not result in changes to the water's clarity, color, odor, or taste. It is also not anticipated that the discharge of fill will result in an addition of contaminants that will result in changes to the water that reduces or eliminates the suitability of the waterbody for populations of aquatic organisms, or for human consumption, recreation, or aesthetics.

**Current patterns and water circulation:** It is anticipated that the discharge of fill material will have no effects to current patterns and water circulation. The discharge of fill from the submarine export cable, secondary cable protection, dredging at the HDD exit pit and work at the O&M facility consisting of decanting of excess water and filling of steel piles is not anticipated to obstruct flow, change the direction or velocity of flow, water circulation, or otherwise change the dimensions of the waterbody.

**Normal water fluctuations:** It is anticipated that the discharge of fill material will have no effects to normal water fluctuations. The discharge of fill will not change the existing tidal fluctuations in the two project areas. The proposed discharge of 2.9 acres of fill material within the Atlantic Ocean is extremely small in comparison to the overall size of the Atlantic Ocean. As a result, normal water fluctuations are expected to stay the same. The same can be said about the discharge of fill at the O&M facility within Lake Montauk.

**Salinity gradients:** There would be no effects to salinity gradients resulting from the discharge of fill material. The discharge of fill material associated with the installation of the submarine export cable, secondary cable protection and dredging at the HDD exit pit location would not change the overall salinity since the overall impacts in comparison to the overall size of the Atlantic Ocean is relatively small. Decanting of excess water and filling of steel piles with flowable concrete at the O&M facility will not change the overall salinity within Lake Montauk.

- 6.4 Potential impacts on the living communities or human uses (Subparts D, E and F):
- 6.4.1 Potential impacts on the biological characteristics of the aquatic ecosystem (Subpart D 40 CFR 230.30). See Table 2:

Table 2 – Potential Impacts on Biological Characteristics							
				Minor	Minor		
Biological	N/A	No	Negligible	Effect	Effect	Major	
characteristics	IN/A	Effect	Effect	(Short	(Long	Effect	
				Term)	Term)		
Threatened and				Х	Х		
endangered species				^	^		
Fish, crustaceans,							
mollusk, and other				Х	Х		
aquatic organisms							
Other wildlife				Х			

Discussion:

**Threatened and Endangered Species:** The discharge of fill material resulting from the installation of the submarine export cable, secondary cable protection (e.g., concrete matting, fronded mattresses, rock bags, or rock placement), dredging at the HDD exit pit and work at the O&M facility consisting of decanting of excess water and filling of steel piles with flowable concrete would have minor short-term effects to threatened and endangered species.

The discharge of approximately 0.6 acres of fill resulting from the installation of the submarine export cable and secondary cable protection is not anticipated to cover or directly kill listed threatened or endangered species within the project area. Federally-listed aquatic species that are considered by BOEM to have potential to occur in the Atlantic Ocean near the project site include Atlantic Sturgeon (*Acipenser oxyrhynchus*), North Atlantic Right Whale (*Eubalaena glacialis*), Fin Whale (*Balaenoptera physalus*), Sei Whale (*Balaenoptera borealis*), Sperm Whale (*Physter macrocephalus*), Kemp's Ridley Sea Turtle (*Lepidochelys kempii*), Leatherback Sea Turtle (*Dermochelys coriacea*), Loggerhead Sea Turtle (*Caretta caretta*), Green Sea Turtle (*Chelonia mydas*). The installation of secondary cable protection is anticipated to be utilized by sea turtles and sturgeon since the secondary cable protection would act as an

artificial reef. This is turn would have minor long-term beneficial effects to some endangered and threatened species. Considering the overall size of the Atlantic Ocean in comparison to the proposed 0.6 acres of fill material, it is expected that the listed species above would avoid the project area during installation and would utilize the area once installation is complete.

The dredging of approximately 26,500 CY of dredged material at the HDD exit pit would be placed temporarily on dredged scows until interconnection of the submarine export cable is complete. Upon completion, the 26,500 CY of dredged material would be placed back within the approximately 530-foot-long by 185-foot-wide cofferdam where it will be spread out evenly to compliment the surrounding seafloor topography. It is anticipated that the listed species above would avoid the area during dredging activities at the HDD exit pit and would return to the area once dredging activities are completed.

Endangered and threatened species differ slightly at the O&M facility considering they're located within Lake Montauk and not the Atlantic Ocean. The following species can be found within Lake Montauk, Atlantic Sturgeon (*Acipenser oxyrhynchus*), Kemp's Ridley Sea Turtle (*Lepidochelys kempii*), Leatherback Sea Turtle (*Dermochelys coriacea*), Loggerhead Sea Turtle (*Caretta caretta*) and Green Sea Turtle (*Chelonia mydas*). Decanting of dredged material would be temporary and result in a small amount of discharge in relation to the overall size of Lake Montauk. It is anticipated that endangered and threatened species impacted by dredging activities and decanting of excess water are unlikely since the species would most likely avoid the area during dredging activities and would return to the area once dredging activities are complete. Filling of steel piles with flowable concrete is not anticipated to impact endangered or threatened species.

**Fish, Crustaceans, mollusk, and other aquatic organisms:** The discharge of fill material resulting from the installation of the submarine export cable, secondary cable protection (e.g., concrete matting, fronded mattresses, rock bags, or rock placement), dredging at the HDD exit pit and work at the O&M facility consisting of decanting of excess water and filling of steel piles with flowable concrete would have minor short-term effects to fish, crustaceans, mollusk, and other aquatic organisms.

The installation of the 0.6 acres of submarine export cable and secondary cable protection would result in the crushing and displacing of epifaunal organisms on the bed surface and liquifying sand from the bed surface to depths of up to 6 feet, killing and displacing benthic infauna within the cable path. This process would

also flatten sand waves and biogenic depressions that provide habitat for fish and invertebrates, including Essential Fish Habitat (EFH) species. However, it is anticipated that benthic epifauna and infauna organisms would recolonize after the installation of the submarine export cable and secondary cable protection is complete. For species such as fish and other mobile organisms, it is anticipated that they would avoid the project area during the installation of the submarine export cable and secondary cable protection and would return once installation is complete. In addition, certain fish and crustacean species may benefit from the placement of fill material to protect the cabling, as rocky habitats create structure preferred by certain fish and crustacean species. The proposed discharge in relation to the overall size of the Atlantic Ocean would have temporary and minor impacts.

Dredging activities associated with the HDD exit pit would result in similar impacts to fish, crustaceans, mollusk and other organisms. Benthic epifauna and infauna organisms would be disturbed and likely destroyed from dredging activities. However, it is anticipated that benthic epifauna and infauna organisms would recolonize once the dredged material is placed back into the cofferdam and the temporary cofferdam is removed. Mobile organisms consisting of fish and certain crustaceans are expected to avoid the area during the installation of the cofferdam. As a result, less impacts are expected to fish and crustaceans.

The proposed work at the O&M facility consists of dredging activities where dredged material would be decanted of excess water and steel piles will be filled with flowable concrete. It is anticipated that the dredging activities would either disturb or destroy epifauna or infauna organisms. The decanting of excess water back into the waterway will cause temporary suspended sediment within the water column which in return could potentially effect finfish. Invertebrates within the Montauk O&M facility footprint would be negatively affected by the annual maintenance dredging of the berthing area. This active commercial moorage is routinely dredged to maintain navigation, and the soft-bottom benthic habitats are subject to regular disturbance. As a result, conditions for invertebrates would not be significantly altered from the annual maintenance could result in impacts to fish, crustaceans, mollusk, and other aquatic organisms.

**Other wildlife:** It is anticipated that the proposed discharge of fill will have minor impacts to other wildlife that has not been considered above. It is anticipated that the project will have minor secondary effects on seals and sea birds, as impacts to fish, crustaceans, and mollusks result in an impact to available forage for

these species. It is not anticipated that any additional species will be directly impacted by the proposed fill, as the location of the proposed fill limits the number of species that may be present.

6.4.2 Potential impacts on special aquatic sites (Subpart E 40 CFR 230.40). See Table 3:

Table 3 – Potential Impacts on Special Aquatic Sites							
Special Aquatic Sites	N/A	No Effect	Negligible Effect	Minor Effect (Short Term)	Minor Effect (Long Term)	Major Effect	
Sanctuaries and refuges		Х					
Wetlands		Х					
Mud flats		Х					
Vegetated shallows		Х					
Coral reefs		Х					
Riffle and Pool Complexes		Х					

Discussion:

**Sanctuaries and Refuges:** There will be no effect to sanctuaries and refuges within the discharge site of the submarine export cable, secondary cable protection, dredging of the HDD exit pit and work associated with the O&M facility consisting of dredging activities and filling of steel piles because the discharge area does not fall within any designated sanctuaries or refuges.

**Wetlands:** There will be no effect to wetlands within the discharge site of the submarine export cable, secondary cable protection, dredging of the HDD exit pit and work associated with the O&M facility consisting of dredging activities and filling of steel piles because the discharge area does not fall within any wetlands.

**Mudflats:** There will be no effect to mudflats within the discharge site of the submarine export cable, secondary cable protection, dredging of the HDD exit pit and work associated with the O&M facility consisting of dredging activities and filling of steel piles because the discharge area does not fall within any mudflats.

**Vegetated Shallows:** There will be no effect to vegetated shallows within the discharge site of the submarine export cable, secondary cable protection, dredging of the HDD exit pit and work associated with the O&M facility consisting of dredging activities and filling of steel piles because the discharge area does not fall within any vegetated shallows.

**Coral Reefs:** There will be no effect to coral reefs within the discharge site of the submarine export cable, secondary cable protection, dredging of the HDD exit pit and work associated with the O&M facility consisting of dredging activities and filling of steel piles because the discharge area does not fall within any coral reefs.

**Rifle and Pool Complexes:** There will be no effect to rifle and pool complexes within the discharge site of the submarine export cable, secondary cable protection, dredging of the HDD exit pit and work associated with the O&M facility consisting of dredging activities and filling of steel piles because the discharge area does not fall within any rifle and/or pool complexes.

Table 4 – Pote	ential I	mpacts	on Human L	Jse Chai	racteristi	CS
Human Use Characteristics	N/A	No Effect	Negligible Effect	Minor Effect (Short Term)	Minor Effect (Long Term)	Major Effect
Municipal and private water supplies		Х			10111)	
Recreational and commercial fisheries				Х		
Water-related recreation		Х				
Aesthetics			Х			
Parks, national and historical monuments, national seashores, wilderness areas, research sites, and similar preserves		х				

6.4.3 Potential impacts on human use characteristics (Subpart F 40 CFR 230.50). See Table 4:

Discussion:

**Municipal and private water supplies:** The discharge of fill from the submarine export cable, secondary cable protection, dredging at the HDD exit pit and work at the O&M facility consisting of decanting of excess water and filling of steel piles will have no effect on municipal or private water supplies. There is no water supply being sourced from the Atlantic Ocean or Lake Montauk within the project area.

**Recreational and commercial fisheries:** The discharge of fill from the submarine export cable, secondary cable protection, dredging at the HDD exit pit and work at the O&M facility consisting of decanting of excess water and filling of steel piles will have minor, short-term effects on recreational and commercial fisheries.

The discharge of approximately 0.6 acres of fill material from the installation of the submarine export cable and secondary cable protection will likely result in the disturbance and possible death of benthic organisms such as non-mobile larvae and eggs. Although the size of the discharge is relatively small in comparison to the size of the Atlantic Ocean, it is anticipated that local fish stock will be temporary impacted. It is expected that after installation is complete, marine organisms would recolonize on the new hard substrate since it will serve as an artificial reef which in turn would attract higher concentrations of fish. Discharge of fill material associated with the dredging activities at the HDD exit pit would have similar impacts to recreational and commercial fisheries as the installation of the submarine export cable and secondary cable protection. It is expected that benthic organisms would recolonize after dredging activities are completed and the cofferdam is removed.

It is expected that the work at the O&M facility consisting of decanting of excess water from dredging and filling of steel piles with flowable concrete would not affect recreational or commercial fisheries. Lake Montauk is not fished commercially and although there may be some recreational fisherman who fish within Lake Montauk, the discharge of fill material is within a commercial mooring facility.

**Water-related recreation:** The discharge of fill from the submarine export cable, secondary cable protection, dredging at the HDD exit pit and work at the O&M facility consisting of decanting of excess water and filling of steel piles will have no effect on water-related recreation. The discharge of fill resulting from the

installation of the submarine export cable, secondary cable protection and dredging at the HDD exit pit would be located on the seabed. Recreational boaters would still have access to the entire water column above the placed fill. In addition, the rest of the surrounding area within the Atlantic Ocean could be used for recreational activities during the installation of the submarine export cable and secondary cable protection. The discharge of fill resulting from the decanting of dredged material and filling of steel piles would have no effect to water-related recreation within Lake Montauk. Lake Montauk is primarily used for mooring of commercial fishing vessels and although recreational boating does take place along with other recreational activities, the suspended sediment from the dredging activities would be confined to just the dredging area due to a turbidity curtain being used during dredging operations.

**Aesthetics:** The discharge of fill from the submarine export cable, secondary cable protection, dredging at the HDD exit pit and work at the O&M facility consisting of decanting of excess water and filling of steel piles will have negligible effects to aesthetics. The installation of the submarine export cable including the secondary cable protection would cause turbidity, however suspended material would be temporary and will be located at depths where it is not visible from the water surface. Although water depths are not as deep at the Lake Montauk O&M facility, suspended material would be temporary and confined to the dredging area using a turbidity curtain. It is anticipated that suspended material would sink to the seafloor after dredging activities and installation of steel piles are complete.

Parks, national and historical monuments, national seashores, wilderness areas, research sites, and similar preserves: The discharge of fill from the submarine export cable, secondary cable protection, dredging at the HDD exit pit and work at the O&M facility consisting of decanting of excess water and filling of steel piles will have no effects on parks, national and historical monuments, national seashores, wilderness areas, research sites, and similar preserves because decanting of excess water and installation of steel piles will occur outside of these listed areas.

6.5 Pre-testing evaluation (Subpart G, 40 CFR 230.60):

The following has been considered in evaluating the biological availability of possible contaminants in dredged or fill material. See Table 5:

Table 5 – Possible Contaminants in Dredged/Fill Material					
Physical characteristics	Х				
Hydrography in relation to known or anticipated sources of contaminants					
Results from previous testing of the material or similar material in the	х				
vicinity of the project	^				
Known, significant sources of persistent pesticides from land runoff or					
percolation					
Spill records for petroleum products or designated (Section 331 of CWA)					
hazardous substances					
Other public records or significant introduction of contaminants from					
industries, municipalities, or other sources					
Known existence of substantial material deposits of substances which					
could be released in harmful quantities to the aquatic environment by					
man-induced discharge activities					

Discussion: Physical characteristics of the fill material were considered as part of pre-testing evaluation. The proposed material to be discharged consists of medium to coarse grain sands and muddy sand that are already present at the site and concrete matting, fronded mattresses, rock bags, or rock placement. All of these materials have minimal ability to carry contaminants. It has been determined that testing is not required for the concrete mattresses as the proposed materials are not likely to be a carrier of contaminants because they are comprised of naturally occurring inert material such as stone. Testing is not required for the same contaminants and have substantially similar materials. Even if the sand material were to carry contaminants, it is not likely to degrade the disposal site due to adjacency.

6.6 Evaluation and testing (Subpart G, 40 CFR 230-61):

Discussion: The permittee performed high-resolution geophysical surveys, geotechnical and sediment sampling surveys along the submarine export cable route and within the confines of the O&M facility located within Lake Montauk.

6.7: Actions to minimize adverse impacts (Subpart H). The following actions, as appropriate, have been taken through application of 40 CFR 230.70-230.77 to ensure minimal adverse effects of the proposed discharge. See Table 6:

Table 6 – Actions to Ensure Adverse Effects are Minimized	
Actions concerning the location of the discharge	Х
Actions concerning the material to be discharged	Х
Actions controlling the material after discharge	Х
Actions affecting the method of dispersion	Х
Actions affecting plant and animal populations	Х
Actions affecting human use	Х

Discussion:

Action concerning location of the discharge: The proposed discharge of fill will occur over a limited area within the Atlantic Ocean (approximately 2.9 acres) and Lake Montauk (approximately 0.4 acres). In comparison to the overall size of the waterbody's the proposed 2.9 acres of fill material in the Atlantic Ocean and 0.4 acres of fill in Lake Montauk is relatively small. The installation of secondary cable protection (e.g., concrete matting, fronded mattresses, rock bags, or rock placement) along the submarine export cable route will only be placed in areas where cable burial depth cannot be reached or where existing utility lines are in place.

Actions concerning the material to be discharged: The proposed material to be discharged consists of medium to coarse grain sands and muddy sand that are already present at the project sites and concrete matting, fronded mattresses, rock bags, rock placement. It has been determined that the concrete mattresses are not likely to be a carrier of contaminants because they are comprised of naturally occurring inert material such as stone. The flowable concrete that is proposed to be placed within the steel piles at the O&M facility will be clean material and will not carry any contaminants. In addition, the flowable concrete is confined within the steel piles.

Actions controlling the material after discharge: The applicant will be responsible for conducting fisheries research and monitoring surveys and benthic surveys for two (2) years post construction per Appendix A of BOEM Joint ROD.

Actions affecting the method of dispersion: The use of a mechanical cutter, mechanical plow (which may include a jetting system), and/or jet plow in comparison to mechanical dredging would reduce the overall impacts to the seabed and turbidity within the water column. A temporary cofferdam is also proposed at the HDD exit pit. This would allow the interconnection of the submarine export

cable while reducing the impacts associated with dredging activities to the confines of the cofferdam. Once the interconnection of the submarine export cable is complete, the dredged material would be placed back into the cofferdam. Dredging activities and decanting of excess water at the Lake Montauk O&M facility would be controlled using a turbidity curtain during operations. This would limit the amount of suspended material to the confines of the dredging area. After dredging operations are completed and the suspended material has settled, the turbidity curtain would be removed.

Actions affecting plant and animal populations: BOEM is the lead federal agency for this project. As a result, it has coordinated with various resource agencies during the preparation of the FEIS and Joint ROD to fulfill its statutory obligations under the ESA and Magnuson Stevens Act; and as a cooperating agency, the Corps has accepted this compliance obtained by BOEM. The applicant has accepted the recommended conservation windows that would restrict regulated activities during specific times of the year to minimize impacts to endangered and threatened species. As discussed later in this decision, the Corps will also require as special conditions certain work restriction windows and mitigation measures to minimize such impacts.

Actions affecting human use: Impacts to human use from the discharge of fill material have been minimized through the following actions. The discharge site will be located on the ocean seabed where the public would not be able to visually see. It is expected that turbidity within the water column will take place but would be temporary and short. The discharge of fill material would be placed outside of any valuable natural aquatic areas and is expected to not be detrimental or increase incompatible human activity.

6.8 Factual Determinations (Subpart B, 40 CFR 230.11). The following determinations are made based on the applicable information above, including actions to minimize effects and consideration for contaminants. See Table 7:

Table 7 – Factual Determinations of Potential Impacts							
Site	N/A No Effect			Minor	Minor		
		No	Negligible	Effect	Effect	Major	
		Effect	Effect	(Short	(Long	Effect	
				Term)	Term)		
Physical substrate				Х			

Table 7 – Factual Determinations of Potential Impacts							
Site	N/A	No Effect	Negligible Effect	Minor Effect (Short Term)	Minor Effect (Long Term)	Major Effect	
Water circulation, fluctuation and salinity		Х					
Suspended particulates/turbidity				Х			
Contaminants		Х					
Aquatic ecosystem and organisms				Х	Х		
Proposed disposal site			Х				
Cumulative effects on				Х			
the aquatic ecosystem				^			
Secondary effects on				х			
the aquatic ecosystem							

Discussion:

**Physical Substrate:** The discharge of fill material from the submarine export cable, secondary cable protection, dredging at the HDD exit pit and work at the O&M facility consisting of decanting of excess water and filling of steel piles will result in minor-short term impacts to the physical substrate. The proposed discharge of fill material associated with the installation of the submarine export cable, dredging at the HDD exit pit and dredging at the Lake Montauk O&M facility will not change the complex physical, chemical, and biological characteristics of the substrate as the material is the same as existing. The installation of 0.2 acres of secondary cable protection (e.g., concrete matting, fronded mattresses, rock bags, or rock placement) will alter the physical substrate on the seabed, however, when comparing the size of discharge to the overall size of the Atlantic Ocean impacts would be minimal and not change the overall substrate type of the Atlantic Ocean. Only 13 CY of flowable concrete is proposed to be used to fill the steel piles. The fill will be discharged within the piles themselves and will not change the overall substrate type of Lake Montauk.

**Water circulation, fluctuation and salinity:** It is anticipated that the discharge of fill material will have no effects to current patterns and water circulation. The

discharge of fill from the submarine export cable, secondary cable protection, dredging at the HDD exit pit and work at the O&M facility consisting of decanting of excess water and filling of steel piles is not anticipated to obstruct flow, change the direction or velocity of flow, water circulation, or otherwise change the dimensions of the waterbody.

It is anticipated that the discharge of fill material will have no effects to normal water fluctuations. The discharge of fill will not change the existing tidal fluctuations in the two project areas. The proposed discharge of 2.9 acres of fill material within the Atlantic Ocean is extremely small in comparison to the overall size of the Atlantic Ocean. As a result, normal water fluctuations are expected to stay the same. The same can be said about the discharge of fill at the O&M facility within Lake Montauk.

There would be no effects to salinity gradients resulting from the discharge of fill material. The discharge of fill material associated with the installation of the submarine export cable, secondary cable protection and dredging at the HDD exit pit location would not change the overall salinity since the overall impacts in comparison to the overall size of the Atlantic Ocean is relatively small. Decanting of excess water and filling of steel piles with flowable concrete at the O&M facility will not change the overall salinity within Lake Montauk.

**Suspended particulates/turbidity:** The installation of the submarine export cable, secondary cable protection (e.g., concrete matting, fronded mattresses, rock bags, or rock placement) and dredging at the HDD exit pit along with the proposed work at the O&M facility consisting of maintenance dredging and filling of steel piles with flowable concrete would have minor short-term effects on suspended particulates/turbidity.

As the submarine export cable is installed, the seabed would be temporarily disturbed resulting in a release of suspended particulates into the water column. The suspended particulates would be dispersed by the current and would settle back to the seabed within minutes to hours of the disturbance since the material is predominately sand. In addition, the placement of 0.2 acres of secondary cable protection (e.g., concrete matting, fronded mattresses, rock bags, or rock placement) would temporarily disturb the seafloor resulting in a release of suspended particulates into the water column. It is anticipated that the suspended particulates would settle back to the seabed quickly due to material being predominantly sand.

A temporary cofferdam measuring approximately 530-foot-long by 185-foot-wide will be installed at the HDD exit pit where it will then be dewatered and approximately 26,500 CY of dredged material would be temporary removed and stored. After the interconnection of the submarine export cable is completed, the 26,500 CY of dredged material would be placed back into the cofferdam where it would be spread out evenly. After the dredged material is spread the temporary cofferdam will be filled back up with water and the cofferdam would be removed. It is anticipated that once the cofferdam is removed, the seabed would be temporarily disturbed resulting in a release of suspended particulates into the water column. However, it is expected that the suspended material would settle back to the seabed quickly since the material is predominately sand.

Dredging at the O&M facility would be confined to the overall dredging area which is approximately 18,045 square feet. The dredged material would be placed into dredge scows and decanted of excess water into the waterway resulting in temporary suspended particulates within the water column. It is anticipated that the suspended particulates would settle back to the seabed quickly since the material found within Lake Montauk is also predominately sand. In addition, the applicant has stated that a turbidity curtain would be installed prior to dredging operations to limit the amount of suspended particulate within Lake Montauk. The placement of 13 CY of flowable concrete within steel piles would result in temporary suspended particulates would be confined within the water column. However, the suspended particulates would be confined within the inside of the steel piles itself.

**Contaminants:** The discharge of fill from the submarine export cable, secondary cable protection, dredging at the HDD exit pit and work at the O&M facility consisting of decanting of excess water and filling of steel piles will result in no effects to contaminants. All materials discharged within the Atlantic Ocean resulting from the installation of the submarine export cable and secondary cable protection would be material that is the same as what's found on the existing seabed and the concrete mattresses are not likely to be a carrier of contaminants because they are comprised of naturally occurring inert material such as stone. In addition, New York State Public Service Commission (NYSPSC) issued a Section 401 WQC for the installation of the submarine export cable ensuring the material being discharged is not contaminated. The discharge of fill resulting from dredging activities and installation of steel piles within Lake Montauk would be material that is the same as what's found on the existing seabed and the flowable concrete that would be discharged would not provide additional contaminants within the aquatic environment. New York State Department of Environmental Conservation (NYSDEC) issued a Section 401 water quality certificate (WQC) for

the dredging activities within Lake Montauk ensuring the material being discharged is not contaminated.

Aquatic ecosystem and organisms: The discharge of fill from the submarine export cable, secondary cable protection, dredging at the HDD exit pit and work at the O&M facility consisting of decanting of excess water and filling of steel piles will result in minor short-term effects on fish, crustaceans, mollusk, and other aquatic organisms.

The discharge of approximately 0.6 acres of fill resulting from the installation of the submarine export cable and secondary cable protection is not anticipated to cover or directly kill listed threatened or endangered species within the project area. Federally-listed aquatic species that are considered by BOEM to have potential to occur in the Atlantic Ocean near the project site include Atlantic Sturgeon (Acipenser oxyrhynchus), North Atlantic Right Whale (Eubalaena glacialis), Fin Whale (Balaenoptera physalus), Sei Whale (Balaenoptera borealis), Sperm Whale (*Physter macrocephalus*), Kemp's Ridley Sea Turtle (Lepidochelys kempii), Leatherback Sea Turtle (Dermochelys coriacea), Loggerhead Sea Turtle (Caretta caretta), Green Sea Turtle (Chelonia mydas). The installation of secondary cable protection is anticipated to be utilized by sea turtles and sturgeon since the secondary cable protection would act as an artificial reef. This is turn would have minor long-term beneficial effects to some endangered and threatened species. Considering the overall size of the Atlantic Ocean in comparison to the proposed 0.6 acres of fill material, it is expected that the listed species above would avoid the project area during installation and would utilize the area once installation is complete.

The dredging of approximately 26,500 CY of dredged material at the HDD exit pit would be placed temporarily on dredged scows until interconnection of the submarine export cable is complete. Upon completion, the 26,500 CY of dredged material would be placed back within the approximately 530-foot-long by 185-foot-wide cofferdam where it will be spread out evenly to compliment the surrounding seafloor topography. It is anticipated that the listed species above would avoid the area during dredging activities at the HDD exit pit and would return to the area once dredging activities are completed.

Endangered and threatened species differ slightly at the O&M facility considering it is located within a different water body. The following species can be found within Lake Montauk, Atlantic Sturgeon (*Acipenser oxyrhynchus*), Kemp's Ridley Sea Turtle (*Lepidochelys kempii*), Leatherback Sea Turtle (*Dermochelys* 

*coriacea*), Loggerhead Sea Turtle (*Caretta caretta*) and Green Sea Turtle (*Chelonia mydas*). Decanting of dredged material would be temporary and result in a small amount of discharge in relation to the overall size of Lake Montauk. It is anticipated that endangered and threatened species impacted by dredging activities and decanting of excess water are unlikely since the species would most likely avoid the area during dredging activities and would return to the area once dredging activities are complete. Filling of steel piles with flowable concrete is not anticipated to impact endangered or threatened species.

The discharge of fill material resulting from the installation of the submarine export cable, secondary cable protection (e.g., concrete matting, fronded mattresses, rock bags, or rock placement), dredging at the HDD exit pit and work at the O&M facility consisting of decanting of excess water and filling of steel piles with flowable concrete would have minor short-term effects to fish, crustaceans, mollusk, and other aquatic organisms.

The installation of the 0.6 acres of submarine export cable and secondary cable protection would result in the crushing and displacing of epifaunal organisms on the bed surface and liquifying sand from the bed surface to depths of up to 6 feet, killing and displacing benthic infauna within the cable path. This process would also flatten sand waves and biogenic depressions that provide habitat for fish and invertebrates, including Essential Fish Habitat (EFH) species. However, it is anticipated that benthic epifauna and infauna organisms would recolonize after the installation of the submarine export cable and secondary cable protection is complete. For species such as fish and other mobile organisms, it is anticipated that they would avoid the project area during the installation of the submarine export cable and secondary cable protection and would return once installation is complete. In addition, certain fish and crustacean species may benefit from the placement of fill material to protect the cabling, as rocky habitats create structure preferred by certain fish and crustacean species. Considering the overall size of the proposed discharge in comparison to the size of the Atlantic Ocean, it is expected that the effects would be minor and temporary.

Dredging activities associated with the HDD exit pit would result in similar impacts to fish, crustaceans, mollusk and other organisms. Benthic epifauna and infauna organisms would be disturbed and likely destroyed from dredging activities. However, it is anticipated that benthic epifauna and infauna organisms would recolonize once the dredged material is placed back into the cofferdam and the temporary cofferdam is removed. Mobile organisms consisting of fish

and certain crustaceans are expected to avoid the area during the installation of the cofferdam. As a result, less impacts are expected to fish and crustaceans.

The proposed work at the O&M facility consists of dredging activities where dredged material would be decanted of excess water and steel piles will be filled with flowable concrete. It is anticipated that the dredging activities would either disturb or destroy epifauna or infauna organisms. The decanting of excess water back into the waterway will cause temporary suspended sediment within the water column which in return could potentially effect finfish. Invertebrates within the Montauk O&M facility footprint would be negatively affected by the annual maintenance dredging of the berthing area. This active commercial moorage is routinely dredged to maintain navigation, and the soft-bottom benthic habitats are subject to regular disturbance. As a result, conditions for invertebrates would not be significantly altered from the annual maintenance dredging. Depending on installation methods for the steel piles noise disturbance could result in impacts to fish, crustaceans, mollusk, and other aquatic organisms.

It is anticipated that the proposed discharge of fill will have minor impacts to other wildlife that has not been considered above. It is anticipated that the project will have minor secondary effects on seals and sea birds, as impacts to fish, crustaceans, and mollusks result in an impact to available forage for these species. It is not anticipated that any additional species will be directly impacted by the proposed fill, as the location of the proposed fill limits the number of species that may be present.

**Proposed disposal site:** The discharge of fill from the submarine export cable, secondary cable protection, dredging at the HDD exit pit and work at the O&M facility consisting of decanting of excess water and filling of steel piles has been minimized to the smallest area practicable that still accomplishes the purposes of the discharges. The dispersion will be conducted in manners that limit the effects of the discharge on the aquatic environment through various best management practices, turbidity control measures, and work window restrictions that limit placement throughout the calendar year. The depth of the water at the designated disposal sites were considered when project design took place. It is anticipated that the secondary cable protection will not disperse within the current after installation is complete.

**Cumulative effects on aquatic ecosystem:** Cumulative impacts are the changes in an aquatic ecosystem that are attributable to the collective effect of several individual discharges of dredged or fill material. While the collective effect

of the discharges is designed to reduce potential damage to the submarine export cable, the cumulative impacts would not adversely affect the aquatic ecosystem because the discharge materials are designed to be compatible with the natural system which will continue to function with the addition of the secondary cable protection. There will be no major impairment of the water resources and no long-term interference with the productivity and water quality of existing aquatic ecosystems.

Cumulative effects attributable to the discharge of dredged or fill material in waters of the United States were evaluated and predicted to the extent reasonable and practical. Cumulative effects attributable to the discharge of fill material include benthic organisms either smothered by the secondary cable protection or removed from dredging activities, but it is expected that the benthic organisms will continue to colonize in the sandy areas outside the footprint of the secondary cable protection. The aquatic ecosystem will not be impaired and will continue to function as expected over the long term in conjunction with the proposed activities. The post fisheries research and monitoring surveys and benthic surveys will ensure that the installation of the export cable and secondary cable protection is functioning as intended and will be adjusted if any unforeseen impacts occur that impair the aquatic ecosystem.

**Secondary effects on the aquatic ecosystem:** Secondary effects are effects on an aquatic ecosystem that are associated with a discharge of dredged or fill materials, but do not result from the actual placement of the dredged or fill material. Secondary effects anticipated include an increased biodiversity of species associated with the introduction of a hard-rocky habitat (e.g., concrete matting, fronded mattresses, rock bags, or rock placement) that will encourage the establishment of encrusting organisms that would facilitate additional recruitment of species to the area.

6.9 Findings of compliance or non-compliance with the restrictions on discharges (40 CFR 230.10(a-d) and 230.12). Based on the information above, including the factual determinations, the proposed discharge has been evaluated to determine whether any of the restrictions on discharge would occur. See Table 8:

Table 8 – Compliance with Restrictions on Discharge				
Subject	Yes	No		
1. Is there a practicable alternative to the proposed discharge that		Х		
would be less damaging to the environment (any alternative with				

Table 8 – Compliance with Restrictions on Discharge		
Subject	Yes	No
less aquatic resource effects, or an alternative with more aquatic		
resource effects that avoids other significant adverse environmental		
consequences?)		
2. Will the discharge cause or contribute to violations of any		х
applicable water quality standards?		^
3. Will the discharge violate any toxic effluent standards (under		х
Section 307 of the Act)?		^
4. Will the discharge jeopardize the continued existence of	X	
endangered or threatened species or their critical habitat?		^
5. Will the discharge violate standards set by the Department of		
Commerce to protect marine sanctuaries?		Х
6. Will the discharge cause or contribute to significant degradation		х
of waters of the U.S.?		^
7. Have all appropriate and practicable steps (Subpart H, 40 CFR		
230.70) been taken to minimize the potential adverse impacts of the	Х	
discharge on the aquatic ecosystem?		

Discussion:

1. Is there a practicable alternative to the proposed discharge that would be less damaging to the environment (any alternative with less aquatic resource effects, or an alternative with more aquatic resource effects that avoids other significant adverse environmental consequences?

No, there is no practicable alternative that would be less damaging to the environment.

2. Will the discharge cause or contribute to violations of any applicable water quality standards?

The proposed discharge will not cause or contribute to violations of any applicable water quality standards. The NYSDEC and NYSPSC issued individual CWA 401 water quality certifications for the project.

3. Will the discharge violate any toxic effluent standards (under Section 307 of the Act)?

The proposed discharge will not violate any toxic effluent standards under section 307 of the CWA.

4. Will the discharge jeopardize the continued existence of endangered or threatened species or their critical habitat?

It has been determined through consultation with U.S. Fish and Wildlife Service and with the NMFS that the proposed discharge will not jeopardize the continued existence of endangered or threatened species or destroy or adversely modify their critical habitat (reference c, d and e). BOEM is the lead federal agency for complying with Section 7 of the ESA with the Corps designated as a cooperating agency. BOEM has completed consultation pursuant to Section 7 of the ESA and USACE finds its work sufficient to compliance with Section 7 of the ESA.

5. Will the discharge violate standards set by the Department of Commerce to protect marine sanctuaries?

The proposed discharge will not occur within any marine sanctuaries and will not violate any standards set by the Department of Commerce.

6. Will the discharge cause or contribute to significant degradation of waters of the U.S.?

The proposed discharge is not anticipated to cause or contribute to significant degradation of waters of the United States.

7. Have all appropriate and practicable steps (Subpart H, 40 CFR 230.70) been taken to minimize the potential adverse impacts of the discharge on the aquatic ecosystem?

All appropriate and practicable steps, including avoidance and minimization of impacts, have been taken to minimize potential adverse impacts of the proposed discharge on the aquatic ecosystem.

### 7.0 General Public Interest Review (33 CFR 320.4 and RGL 84-09)

7.1 All public interest factors have been reviewed and those that are relevant to the proposal are considered and discussed in additional detail. In addition, public comments during the public notice comment period were received and

summarized within each of the public interest review factors. See Table 9 and discussion that follows.

Table 9: Public Interest Factors	Effects					
	None	Detrimental	Neutral (mitigated)	Negligible	Beneficial	Not Applicable
1. Conservation: See below for discussion.	Х					
2. Economics: See below for discussion.				Х	Х	
3. Aesthetics: See below for discussion.				Х		
4. General Environmental Concerns: See below for discussion.				х		
5. Wetlands: See below for discussion.	Х					
6. Historic Properties: See below for discussion.			Х			
7. Fish and Wildlife Values: See below for discussion.			Х			
8. Flood Hazards: See below for discussion.	Х					
9. Floodplain Values: See below for discussion.	Х					
10. Land Use: See below for discussion.				Х		
11. Navigation: See below for discussion.			Х			
12. Shoreline Erosion and Accretion: See below for discussion.	x					
13. Recreation: See below for discussion.				Х	Х	
14. Water Supply and Conservation: See below for discussion.	Х					
15. Water Quality: See below for discussion.			Х			
16. Energy Needs: See below for discussion.					Х	
17. Safety: See below for discussion.				Х		

Table 9: Public Interest Factors			Effe	ects		
	None	Detrimental	Neutral (mitigated)	Negligible	Beneficial	Not Applicable
18. Food and Fiber Production: See below for discussion.	Х					
19. Mineral Needs: See below for discussion.	Х					
20. Consideration of Property Ownership: See below for discussion.	x					
21. Needs and Welfare of the People: See below for discussion.	Х					

Additional discussion of effects on factors above: The following responses to the public notice were reviewed in accordance with 33 CFR 320.4, within the 21 public interest review factors.

<u>Conservation</u>: None of the nine (9) public commenters, commented on the South Fork Wind project and its effects on conservation of natural resources.

Broadly defined, conservation is the planned management of natural resources in order to prevent or minimize exploitation, destruction, or neglect. The proposed project will not result in conservation of land to prevent or minimize exploitation destruction, or neglect nor will the project impact any currently conserved land. The project as proposed will have no effect on conservation.

**Economics:** Four (4) out of the nine (9) public commenters, commented on the South Fork Wind project and its effects on economics. Concerns were in regard to how the duration of the proposed work at the O&M facility would potentially affect commercial fisherman's ability to transit in and out of Lake Montauk due to congestion within the waterbody and that any delay would result in the commercial fisheries inability to conduct their job. In addition, comments were made on the overall price of power in comparison to other offshore wind energy facilities and how the construction of the project would affect jobs whether it be bringing in new jobs to Montauk or reducing the number of jobs for offshore fisherman.

Applicant Response to Comments: BOEM is the lead federal agency for environmental review under NEPA and this topic is addressed in the DEIS (https://www.boem.gov/renewable-energy/state-activities/south-fork) and in the upcoming FEIS. The dredging footprint is located within the basin that is in immediate vicinity to the proposed O&M Facility. Barges will not be fixed within the federal navigation channel and South Fork Wind does not anticipate any impacts to navigation in existing channels. The proposed construction equipment associated with the development of the O&M facility will operate and be stored entirely within the immediate waterfront of the existing property. At no time will any barges, scows, tugs or other vessels associated with the construction activities be spudded, anchored or staged within the federal navigation channel. Tugboats and scows used in the dredging will traverse the federal navigation channel to access the proposed disposal area. However, these vessels will exit the channel and spud/anchor in the immediate vicinity of the disposal area, which is located outside of the federal navigation channel and Lake Montauk. Therefore, neither the initial dredging and construction activities nor the annual maintenance dredging will interfere with or cause delays for vessel traffic in the Lake Montauk inlet or other areas of Lake Montauk. The comment relating to price of power and the comparison to other offshore wind energy facilities and the result of the project bringing on new jobs to Montauk is not relevant to USACE review of this permit application, because it is not relevant to considerations under USACE jurisdiction.

**USACE Overall Analysis on Economics:** The construction of the South Fork Wind Farm would have negligible to minor adverse and minor to moderate beneficial impacts on economics. It is expected that the South Fork Wind farm would take approximately three years to fully construct where local expenditures and employment would occur during the development and construction period. Total jobs from capital expenditures (CapEx) are expected to range from 1.226 to 1,611 full time equivalent jobs over the assumed three-year development period of the project and 47 to 96 jobs during the actual operation of the South Fork Wind farm (reference a). These estimates of the number of jobs created are presented in job-years, which does not account for the timing or the duration of the work. In other words, these job-years would likely be spread over multiple years, which means that fewer people would likely be working at a given time than the numbers presented. Local CapEx for development and construction of the South Fork Wind Farm are expected to inject between \$182.4 and \$246.8 million into the regional economy, including taxes, over a 3-year period beginning in 2021, or \$60.8 to \$82.3 million on an annual basis. The range of estimates

depends primarily on installed capacity of the wind farm, which could be as low as 90 MW or as high as 180 MW.

The applicant will be required to establish compensation/mitigation funds to compensate commercial fisherman for any losses directly related to the Project and mitigate other impacts. The funds would cover two areas, financial compensation for lost income and gear loss and programs to support future compatibility of offshore wind facilities and fishing activity. The state of Rhode Island would receive \$5,200,000 and the state of Massachusetts would receive \$2,600,000 as a result.

Economic benefits are also expected to accrue to ports that undertake improvements to support Project development. Additional shore-based and marine workers would be hired, resulting in a trained workforce for the offshore wind industry and contributing to beneficial local and regional economic activity. Moreover, port improvements would support and enhance other port activities. The applicant would establish a construction schedule to minimize economic impacts to local communities during the summer tourist season.

The proposed dredging work located at the O&M facility would be tucked into the confines of the overall dredging area. Dredge barges will not be fixed within the Lake Montauk Harbor Federal Navigation Channel at any time as the channel is a USACE asset. In addition, dredged material from dredging activities will no longer be transported and disposed of at a local beach to the west of Lake Montauk inlet. The dredged material would be transported to a State approved upland facility.

<u>Aesthetics:</u> One (1) out of the nine (9) public commenters, commented on the South Fork Wind project and its effects on aesthetics. Their concerns and comments spoke on how the O&M facility would have an enormous change in character and visual aesthetics to Lake Montauk with an unsightly crane, large steel building, industrial storage yard, crew transfer vessels, operations and maintenance vessels, bulkheads and dolphin pilings.

**Applicant Response:** BOEM is the lead federal agency for environmental review under NEPA and this topic is addressed in the DEIS (https://www.boem.gov/renewable-energy/state-activities/south-fork) and in the upcoming FEIS. Please see section 3.5.9 of the DEIS.

**USACE Overall Analysis on Aesthetics:** Residents and visitors within the analysis area (40-mile radius) would experience short- and long-term observable changes to the characteristic background landscape and/or seascape during project construction, including the presence of lighting, structural features, vessels, heavy equipment, vehicles, and personnel for the time period of construction. The offshore components of the Project include the WTGs and the OSS, which would be visible from the visually sensitive areas in New York. Connecticut, Rhode Island, and Massachusetts. Based on visual simulations, the WTGs would be visible on the horizon from shore (unobstructed view) within the analysis area. The WTGs (and OSS) would be painted pure white or light grey to blend into the horizon. The effects of sun lighting, shade, and shadows would cause backlit contrasts and higher impacts for onshore and offshore views from the northeast, north, and northwest. The color contrast varies due to sun angles and atmospheric clarity shifting from white WTGs against a blue or gray backdrop to a dark gray WTG against a light gray backdrop. Distance between the viewer and the WTGs, along with the curvature of the Earth affects how much of the WTG is visible from sensitive viewing locations and influences its visible scale and dominance. The 12 WTGs and one OSS would appear generally low on the horizon because of distance and the curvature of the Earth and would be located behind and partially screened or buffered by other lease area WTGs, as viewed from the northern and eastern onshore communities and sensitive viewing locations. The South Fork Wind WTGs would be more visually apparent as viewed from the western communities and sensitive viewing locations (e.g., Block Island, Rhode Island) due to less screening from other lease areas under the foreseeable development scenario. Atmospheric and environmental factors such as haze, sun angle, time of day, cloud cover, fog, sea spray, and wave action would also influence visibility and perceivability from sensitive viewing locations (reference a).

The Montauk O&M facility would include structures for office space (1,000 square feet) and storage space (6,600 square feet) with one 60-foot-tall crane set among other similar active harbor structures and operations. The structures for the O&M facility would include either reuse of the existing structures or replacement in kind of the existing structures.

<u>General Environmental Concerns</u>: Three (3) out of the nine (9) public commenters, commented on the South Fork Wind project and its effects on general environmental concerns. Their concerns regarded the potential damage and/or contamination of the aquifer that is the sole source of drinking water on the east end of Long Island.

**Applicant Response to Comments:** BOEM is the lead federal agency for environmental review under NEPA and this topic is addressed in the DEIS (https://www.boem.gov/renewable-energy/state-activities/south-fork) and in the upcoming FEIS. Please refer to Section 3.3.2 of the DEIS.

**USACE Overall Analysis on General Environmental Concerns:** Any part of the submarine export cable that takes place onshore above the Spring High Tide Line would fall outside of the Corps' Section 404 jurisdiction. The Long Island aguifer supplies groundwater to the onshore analysis area and is designated by the EPA as a sole source aquifer, meaning it serves as a primary drinking water resource. Special Groundwater Preserve Areas, which are critical areas identified by NYSDEC for protection because of their roles in providing drinking water resources, recharging groundwater, or protecting groundwater, are also located in the onshore analysis area. Groundwater is measured at approximately 40 feet below grade at the proposed onshore interconnection facility and is relatively shallower along the onshore submarine export cable route, with the depth to groundwater being approximately 4 to 5 feet around the Beach Lane landing site. The use of Horizontal Directional Drilling (HDD) at the Beach Landing site would negate the need for trenching in areas where shallow groundwater would intersect the trench excavation. Onshore subsurface ground-disturbing activities within Corps jurisdiction would not occur at a depth that could encounter groundwater and would therefore not result in impacts on water quality. In addition, the applicant would develop and implement a HDD inadvertent release plan to minimize the potential risks associated with the release of drilling fluids or frac-out.

**Wetlands:** None of the nine (9) public commenters, commented on the project and its effects on wetlands. The construction and installation of the South Fork Wind Farm consisting of WTGs, OSS, submarine inter-array cables, submarine export cable and O&M facility would have no impacts to wetlands and as a result no concerns were raised by the public. Refer to section 10.9 Corps Wetland Policy (33 CFR 320.4(b)) for further analysis.

**Historic Properties:** one (1) out of the nine (9) public commenters, commented on the South Fork Wind project and its effects on historic properties. They had no immediate concerns regarding the construction of the South Fork Wind project, however requested that should any human remains, archeological properties or other items of historical importance be unearthed while working on the project that the work stops and report any findings to the appropriate authorities.

**Applicant Response to Comment:** As described in the COP, SFW will implement an Unanticipated Discovery Plan that would include stop-work and notification procedures to be followed if a cultural resource is encountered during installation.

**USACE Overall Analysis on Historic Properties:** Refer to Section 10.3 for a discussion regarding the proposed project and the potential impacts to historic properties and cultural resources in accordance with Section 106 of the National Historic Preservation Act of 1966. The Section 106 consultation process was concluded with the execution of a MOA among BOEM the Massachusetts State Historic Preservation Officer, the Rhode Island State Historic Preservation Officer, the New York State Historic Preservation Officer, the Advisory Council on Historic Preservation, and South Fork Wind, LLC on November 23, 2021. USACE signed MOA as a concurring party. The MOA will be binding upon South Fork Wind, and its stipulations will be made conditions of the Corp's authorization.

**Fish and Wildlife Values:** Three (3) out of the nine (9) public commenters commented on the South Fork Wind project and its effects on fish and wildlife values. Their concerns regarded impacts to benthic habitat, Atlantic cod, invertebrates, finfish and Essential Fish Habitat (EFH).

**Applicant Response to Comments:** BOEM is the lead federal agency for environmental review under NEPA and these topics are addressed in the DEIS (https://www.boem.gov/renewable-energy/state-activities/south-fork) and in the upcoming FEIS. Please see Section 3.4.2 for Benthic Habitat, Essential Fish Habitat, Invertebrates, and Finfish and 3.4.5 for Marine Mammals. Also note that additional information about impacts to Atlantic cod are also included in the Essential Fish Habitat Assessment issued by BOEM. South Fork Wind notes that consideration of invertebrate and benthic habitat data is just one of several considerations for micrositing foundation locations. SFW recognizes the importance of minimizing impacts to fisheries habitat and is committed to working with BOEM and the cooperating agencies to identify solutions and practical mitigations. Micrositing the WTGs and associated inter-array cables (within engineering and spacing constraints) to reduce, and in many cases avoid, these negligible to minor impacts to existing complex habitats is a reasonable and feasible mitigation measure.

**USACE Overall Analysis on Fish and Wildlife Values:** The South Fork Wind Farm consisting of WTGs, OSS, submarine-inter-array cables, submarine export

cable and O&M facility would result in increased noise, increased vibration, temporary increase in suspended sediment, crushing, burial, habitat conversion, electromagnetic field and heat effects. However, mitigation measures would be put into place to reduce the overall impacts from the construction of the South Fork Wind Farm and O&M facility on fish and wildlife values.

In the case of WTGs and submarine inter-array cables, the applicant would be required to develop a micrositing plan describing how structures such as WTGs, OSS and submarine inter-array cables will be located into areas outside of complex or potentially complex habitat such as Coxes Ledge. The applicant would be required to develop a plan to monitor Atlantic Cod aggregations that are indicative of spawning behavior during submarine inter-array cable installation and foundation site preparation between November 1 and March 30 of each year. The monitoring plan would help detect when Atlantic cod aggregations take place in the project area so that installation of submarine inter-array cables and foundation site preparation such as scour protection around the bases of WTGs and OSS can be avoided. In addition, the applicant would be required to avoid pile driving of WTGs between December 1 and April 30 and implement soft start techniques for all pile driving activities.

As discussed infra, the Corps will require the applicant's compliance with several conservation recommendations that resulted from EFH consultation under the Magnuson Stevens Act as well as through the Fish and Wildlife Coordination Act. For instance, the applicant would be responsible for developing anchoring plan for all areas where anchoring occurs within 1,640 feet (500 meters) of habitats, resources, and submerged infrastructure that are sensitive, which include hard bottom and structurally complex habitats. All vessels deploying anchors must use mid-line anchor buoys to reduce the amount of anchor chain or line that touches the seafloor, unless the applicant demonstrates, and BOEM accepts for offshore areas only and USACE and NMFS for inshore components, that (i) the use of mid-line anchor buoys to reduce the amount of anchor chain or line that touches the seafloor is not technically and economically feasible; or (ii) a different alternative is as safe and provides the same or greater environmental protection. Further, to reduce impacts to sensitive life history stages of winter flounder and their Essential Fish Habitat, no nearshore dredging and silt producing activities shall take place at the O&M facility between January 1 through May 31, of any calendar year. In addition, the applicant would avoid dredging activities from April 15 to July 15 at the O&M facility in order to avoid impacts to horseshoe crab spawning.

**Flood Hazards:** None of the nine (9) public commenters, commented on the project and it's impacts on flood hazards. The proposed project does not have any components that involve construction, removal, or modification of impoundment structures. Therefore, the project as proposed will have no effect on flood hazards.

**Floodplain Values:** None of the nine (9) public commenters, commented on the project and it's impacts on floodplain values. The proposed project is not located within a floodplain and is not anticipated to have effect on floodplains or their values.

Land Use: Two (2) out of the nine (9) public commenters, commented on the project and its effects on land use. Their concerns were on the zoning of the 6-acre O&M facility, traffic congestion, and New York State Public Service Commission's (NYSPSC) and Town of East Hampton's absence of substantial review of the onshore components of the project. In addition, comments were raised regarding the upgrades to the existing onshore substation and its proximity to the residential neighborhood.

**Applicant Response to Comments:** This comment is not relevant to USACE review of this permit application, because it is not relevant to considerations under USACE jurisdiction. South Fork Wind understands that local permitting will be needed for the Montauk O&M Facility and all necessary local permits will be obtained prior to construction of the facility.

**USACE Overall Analysis on Land Use:** The zoning of the Lake Montauk O&M facility and the upgrades to the existing onshore substation in proximity to a residential neighborhood are concerns outside of the Corp's jurisdiction.

**Navigation:** Two (2) out of the nine (9) commenters, commented on the South Fork Wind project and its effects on navigation. Their concerns were regarding the duration of the proposed work at the O&M facility which would potentially affect commercial fisherman's ability to transit in and out of Lake Montauk due to congestion within the waterbody. Commenters expressed concern regarding the vessel transit lane alternative with a four (4) nautical mile wide transit lane as it could increase vessel collision risk.

**Applicant Response to Comments:** The Bureau of Ocean Energy Management (BOEM) is the lead federal agency for environmental review under the National Environmental Policy Act (NEPA) and this topic [vessel transit lane

alternative] is addressed in the Draft Environmental Impact Statement (DEIS) (https://www.boem.gov/renewable-energy/state-activities/south-fork) and in the upcoming Final Environmental Impact Statement (FEIS).

The dredging footprint is located within the basin that is in immediate vicinity to the proposed O&M Facility. Barges will not be fixed within the federal navigation channel and South Fork Wind does not anticipated any impacts to navigation in existing channels. The proposed construction equipment associated with the development of the O&M facility will operate and be stored entirely within the immediate waterfront of the existing property. At no time will any barges, scows, tugs or other vessels associated with the construction activities be spudded, anchored or staged within the federal navigation channel. Therefore, neither the initial dredging and construction activities nor the annual maintenance dredging will interfere with or cause delays for vessel traffic in the Lake Montauk inlet or other areas of Lake Montauk.

**USACE Overall Analysis on Navigation:** The proposed dredging work located at the O&M facility would be incorporated into the overall dredging area. Dredge barges will not be fixed within the Lake Montauk Harbor Federal Navigation Channel and would be required to move on demand. In addition, dredged material from dredging activities will no longer be transported and disposed of at a local beach to the west of Lake Montauk inlet. The dredged material would be transported to a State approved upland facility.

<u>Shoreline Erosion and Accretion</u>: None of the nine (9) commenters, commented on the South Fork Wind project and its effects on shoreline erosion and accretion. The project, consisting of the construction of the South Fork Wind Farm consisting of WTGs, OSS, submarine export cables and submarine export cable along with work at the O&M facility will not affect shoreline erosion and accretion. The sea-to-shore transition of the submarine export cable will be performed via HDD a minimum of 30 feet below the beach profile. This method of installation would have no effect on shoreline erosion and accretion.

**<u>Recreation</u>**: None of the nine (9) commenters, commented on the South Fork Wind project and its effects on recreation. Due to the onshore components of the project such as the installation of the submarine export cable via HDD, there may be times where workers, equipment, vehicles or debris could temporarily be within the area of the residential neighborhood; however, it will not preclude recreation activities on the local beach. Recreational activities are the highest during spring, summer and fall when weather and water temperatures are its

warmest. Construction activities would be avoided during the summer months where recreational activities are at its highest. The general public would likely not be able to see the full entirety of WTGs and OSS from the beach; however, specific aspects of the WTGs may be seen such as the rotator blades. WTGs and the OSS would appear generally low on the horizon because of distance and the curvature of the Earth.

In-water activities such as installation of WTGs, OSS, submarine inter-array cables and submarine export cable could result in temporary conflicts to recreational boating, fishing, diving, and wildlife and whale watching. Public safety clearance requirements would be put into place during installation of the submarine export cable where boaters would be required to maintain a minimum safe distance from the submarine export cable during installation. A comprehensive communication plan would be implemented during offshore construction to inform all mariners, including commercial and recreational fisherman, and recreational boaters of construction activities and vessel movements. In addition, the applicant will submit information to the USCG so that a Local Notice to Mariners can be issued notifying the public of offshore construction and installation activities.

Scour protection areas could offer beneficial effects to recreational fishing opportunities as the scour protection could provide habitat complexity to the surrounding area.

<u>Water Supply and Conservation</u>: Three (3) out of the nine (9) public commenters, commented on the South Fork Wind project and its effects on water supply and conservation. Their concerns regarded the potential damage and/or contamination of the aquifer which is the sole source of drinking water on the east end of Long Island.

**Applicant Response to Comments:** BOEM is the lead federal agency for environmental review under NEPA and this topic is addressed in the DEIS (https://www.boem.gov/renewable-energy/state-activities/south-fork) and in the upcoming FEIS. Please refer to Section 3.3.2 of the DEIS.

**USACE Overall Analysis on Water Supply and Conservation:** Any part of the submarine export cable that takes place onshore above the plane of Spring High Tide Line would fall outside of the Corp's Section 404 jurisdiction. The Long Island aquifer supplies groundwater to the onshore analysis area and is designated by the EPA as a sole source aquifer, meaning it serves as a primary

drinking water resource. Special Groundwater Preserve Areas, which are critical areas identified by NYSDEC for protection because of their roles in providing drinking water resources, recharging groundwater, or protecting groundwater, are also located in the onshore analysis area. Groundwater is measured at approximately 40 feet below grade at the proposed onshore interconnection facility and is relatively shallower along the onshore submarine export cable route, with the depth to groundwater being approximately 4 to 5 feet around the Beach Lane landing site. The use of HDD at the Beach Landing site would negate the need for trenching in areas where shallow groundwater would intersect the trench excavation. Onshore subsurface ground-disturbing activities within Corps jurisdiction would not occur at a depth that could encounter groundwater and would therefore not result in impacts on water quality. In addition, the applicant would develop and implement an HDD inadvertent release plan to minimize the potential risks associated with the release of drilling fluids or frac-out.

<u>Water Quality:</u> One (1) out of the nine (9) comments addressed the South Fork Wind project and its effects on water quality. This commenter raised concerns regarding how the construction of the South Fork Wind Farm would pollute the Atlantic Ocean.

**Applicant Response to Comment:** BOEM is the lead federal agency for environmental review under NEPA and this topic is addressed in the DEIS (https://www.boem.gov/renewable-energy/state-activities/south-fork) and in the upcoming FEIS.

**USACE Overall Analysis on Water Quality:** The construction and installation of WTGs, OSS, submarine inter-array cables, submarine export cable and work at the O&M facility consisting of dredging activities and installation of structures is expected to cause temporary turbidity within the water column. The use of mechanical cutter, mechanical plow (which may include a jetting system), and/or jet plow to install the submarine inter-array cables and submarine export cable would minimize turbidity and total suspended solids when in comparison to open cut dredging method of installation. Construction vessels will comply with regulatory requirements related to the prevention and control of discharges and accidental spills. Accidental spill or release of oils or other hazardous material will be managed through the Oil Spill Response Plan (OSRP). In addition, an HDD inadvertent Release Plan will minimize the potential risks associated with release of drilling fluids or frac-out.

**Energy Needs:** Three (3) out of the nine (9) comments addressed the South Fork Wind project and its effects on energy needs. Their concerns were in regard to, in their view, the fact that the south shore of Long Island already having enough power. Commenters stated the overall price of power in comparison to other offshore wind energy projects is higher and that the selection of the vessel transit lane alternative would impact the projects energy output and could result in not fulfilling the power purchase agreement of 130MW of energy to the New York State energy grid.

**Applicant Response to Comments:** The Bureau of Ocean Energy Management (BOEM) is the lead federal agency for environmental review under the National Environmental Policy Act (NEPA) and this topic is addressed in the Draft Environmental Impact Statement (DEIS) (https://www.boem.gov/renewableenergy/state-activities/south-fork) and in the upcoming Final Environmental Impact Statement (FEIS). The price of power in comparison to other offshore wind energy facilities is not relevant to USACE review of the permit application.

**USACE Overall Analysis on Energy Needs:** The South Fork Wind Farm will provide 130 MW of renewable energy to the New York State energy grid when operational. It is expected that the additional energy input from the South Fork Wind project will help alleviate the stress on the local power grid on the south shore of Long Island and will have beneficial impacts on energy needs.

<u>Safety:</u> One (1) of the nine (9) commenters, commented on the South Fork Wind project and its effects on safety. They stated that the vessel transit lane alternative would result in congestion of vessels increasing collision risk.

**Applicant Response to Comment:** The Bureau of Ocean Energy Management (BOEM) is the lead federal agency for environmental review under the National Environmental Policy Act (NEPA) and this topic is addressed in the Draft Environmental Impact Statement (DEIS) (https://www.boem.gov/renewable-energy/state-activities/south-fork) and in the upcoming Final Environmental Impact Statement (FEIS).

**USACE Overall Analysis on Safety:** Safety of impoundment structures does not apply to this project. See 33 C.F.R. § 320.4(k).

**Food and Fiber Production:** None of the nine (9) commenters, commented on the South Fork Wind project and its effects on food and fiber production. There are no anticipated effects on food and fiber production resulting from the

construction and installation of the South Fork Wind Farm consisting of WTGs, OSS, submarine inter-array cables, submarine export cable, dredging and installation of structures.

<u>Mineral Needs</u>: None of the nine (9), commenters, commented on the South Fork Wind project and its effects on mineral needs. There are no anticipated mineral needs within the permit area. The proposed construction and installation of the South Fork Wind Farm consisting of WTGs, OSS, submarine inter-array cables, submarine export cable, dredging and installation of structures will have no effects on mineral needs.

**Consideration of Property Ownership:** None of the nine (9) commenters, commented on the South Fork Wind project and its effects on consideration of property ownership. South Fork Wind has obtained a lease from BOEM for Lease Area OCS-A 0517 that grants South Fork Wind exclusive rights to survey and develop the lease site for offshore wind energy production. The lease does not allow South Fork Wind to close the area to other ocean users and the area will remain accessible to the general public once operations commence. There may be periods where safety zones are established to exclude the public during construction, but these are temporary in nature. In addition, South Fork Wind has or will have obtained the proper permissions from local, state and federal agencies required to access and construct the project components prior to start of construction. As a result, there would no effects on the consideration of property ownership.

Needs and Welfare of the People: None of the nine (9) commenters, commented on the South Fork Wind project and its effects on needs and welfare of the people. The project has received approval from New York State Department of Environmental Conservation (NYSDEC), New York State Public Service Commission (NYSPSC), New York State Department of State (NYSDOS) Coastal Zone Management (CZM), Massachusetts Office of CZM, and State of Rhode Island Coastal Resources Management Council (RI CRMC). It is anticipated that the project will be in the interest of the needs and welfare of the people, as the authorization of the project, with required mitigation, will result in increased energy reliability, local economic benefits, and environmental benefits.

7.1.1 Climate Change. The proposed activities within the Corps federal control and responsibility likely will result in a negligible release of greenhouse gases into the atmosphere when compared to global greenhouse gas emissions. Greenhouse

gas emissions have been shown to contribute to climate change. Aquatic resources can be sources and/or sinks of greenhouse gases. For instance, some aquatic resources sequester carbon dioxide whereas others release methane; therefore, authorized impacts to aquatic resources can result in either an increase or decrease in atmospheric greenhouse gas. These impacts are considered de minimis and are negated through compensatory mitigation. Greenhouse gas emissions associated with the Corps federal action may also occur from the combustion of fossil fuels associated with the operation of construction equipment, increases in traffic, etc. The Corps has no authority to regulate emissions that result from the Clean Air Act and/or the Corporate Average Fuel Economy (CAFE) Program. Greenhouse gas emissions from the Corps action have been weighed against national goals of energy independence, national security, and economic development and determined not contrary to the public interest.

BOEM provided the Corps with an analysis of greenhouse gas emissions that they produced for other local, State and/or federal requirements, entitled South Fork Wind Farm and South Fork Export Cable Project FEIS dated August 2021. The portions of the document pertaining to the actions within the Corp's federal control and responsibility are incorporated by reference.

7.2 The relative extent of the public and private need for the proposed structure or work:

As described in Section 3.0, the applicant's stated purpose of this project is to develop a commercial-scale offshore wind energy facility in commercial Lease Area OCS-A 0517 with WTGs, an OSS, and one transmission cable making landfall in Suffolk County, New York. The project will contribute to New York's renewable energy requirements, particularly the state's goal of 9,000 Megawatt (MW) of offshore wind energy generation by 2035. In addition, South Fork Wind's goal is to fulfill its contractual commitments to Long Island Power Authority (LIPA) pursuant to a power purchase agreement executed in 2017 resulting from LIPA's technology-neutral competitive bidding process.

7.3 If there are unresolved conflicts as to resource use, explain how the practicability of using reasonable alternative locations and methods to accomplish the objective of the proposed structure or work was considered.

Discussion: Where there are unresolved conflicts regarding the resource use, USACE has considered the practicability of using reasonable alternative locations and methods to accomplish the objective of the proposed activities. Refer to Section 5.0 for the discussion of alternatives that were analyzed during the review of the permit application.

7.4 The extent and permanence of the beneficial and/or detrimental effects that the proposed work is likely to have on the public and private use to which the area is suited:

Permanent beneficial effects, such as 130 MW of renewable energy to New York States energy grid are expected once the construction of the South Fork Wind project is completed. The construction of the project would lead to reduced emissions from fossil-fuel power generating facilities.

Detrimental effects, such as turbidity, increased noise, and impacts associated with the construction of the various project components would be temporary and limited to the construction period of the proposed project components. Impacts will be offset through the implementation of special conditions to offset the loss of aquatic resource functions (see section 11 below).

### 8.0 Mitigation

8.1 Avoidance and Minimization: When evaluating a proposal including regulated activities in waters of the United States, consideration must be given to avoiding and minimizing effects to those waters. Avoidance and minimization measures are described above in Section 1.3.1. These measures included, but are not limited to, the use of micrositing WTG's and submarine inter-array cables, installing bird deterrent devices, incorporating a no work windows activities, incorporating vessel speed requirements, utilizing a temporary cofferdam and the use of Best Management Practices (BMP's).

Other mitigative actions including project modifications discussed with the applicant implemented to minimize adverse project impacts are described below. (see 33 CFR 320.4(r)(1)(i)).

In an email dated July 22, 2021, South Fork Wind amended its permit application by informing this office that South Fork Wind would construct no more than 12 from the originally proposed 15 WTGs based on the State of Rhode Island Coastal Resources Management Council's (CRMC) completed Coastal Zone

Management Act (CZMA) federal consistency review and CRMC's issuance of a conditional concurrence (CRMC File 2018-10-082) dated July 1, 2021.

In an email dated November 24, 2021, South Fork Wind amended its permit application by informing this office that the dredged material at the O&M facility would no longer be placed onto the beach west of Lake Montauk inlet and the resultant 2,500 CY of dredged material would be placed into dredge scows where the material would be decanted of excess water into the waterway and then disposed of at a State approved upland facility outside of Corps Section 404 jurisdiction (upland).

8.2 No compensatory mitigation is required to offset environmental losses resulting from proposed unavoidable impacts to waters of the United States.

Rationale: Compensatory mitigation is not required because the proposed work within the SFWF, along the SFEC route and the O&M facility does not fall within any mapped wetlands or special aquatic sites.

### 9.0 Consideration of Cumulative Impacts

(40 CFR 230.11(g) and 40 CFR 1508.7, RGL 84-9) Cumulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor direct and indirect but collectively significant actions taking place over a period of time. A cumulative effects assessment should consider how the direct and indirect environmental effects caused by the proposed activity requiring DA authorization (i.e., the incremental impact of the action) contribute to cumulative effects, and whether that incremental contribution is significant or not.

BOEM is the lead federal agency for this project. As mentioned above, USACE independently reviewed the EIS that BOEM prepared as lead federal agency, and, after concluding that its comments and suggestions had been satisfied, adopted the FEIS in accordance with 40 CFR 1506.3. this would include the findings of BOEM's cumulative impacts assessment within FEIS.

#### 10.0 Compliance with Other Laws, Policies, and Requirements

10.1 Section 7(a)(2) of the Endangered Species Act (ESA): Refer to Section 2.2 for description of the Corps action area for Section 7.

10.1.1 BOEM is the lead federal agency for complying with Section 7 of the ESA with the Corps designated as a cooperating agency. BOEM has completed consultation pursuant to Section 7 of the ESA. The Corps finds the consultation to be sufficient to ensure the activity requiring DA authorization is in compliance with Section 7 of the ESA.

The following actions below document this compliance with Section 7:

On January 8, 2021, BOEM submitted a Biological Assessment titled "South Fork Wind Farm and South Fork Export Cable – Development and Operation Biological Assessment" to USFWS. In a letter dated March 4, 2021, USFWS, concurred with BOEM's determination. USFWS addressed each component of the overall project separately as follows:

For the SFEC onshore component and O&M facility, USFWS concurred with BOEM's determination "that SFEC onshore activities "may affect, but are not likely to adversely affect", roseate terns, piping plovers, red knots, seabeach amaranth, and northern long-eared bats and will have no effect on sandplain gerardia."

For the offshore export cable installation, construction and pile driving, and decommissioning component, USFWS concurred with BOEM's determination "that this activity "may affect but is not likely to adversely affect" roseate terns, piping plovers, red knots, and northern long-eared bats."

For the lighting component, USFWS concurred with BOEM's determination "that WTG and construction vessel lighting "may affect, but is not likely to adversely affect", roseate terns, piping plovers, and/or red knots."

For the risk of collision with WTG's component, USFWS concurred with BOEM's determination "that the Project "may affect, but is not likely to adversely affect", roseate terns, piping plovers, and/or red knots."

On January 8, 2021, BOEM submitted a Biological Assessment titled "South Fork Wind Farm and South Fork Export Cable Biological Assessment" to NMFS. On October 1, 2021, NMFS provided National Marine Fisheries Service Endangered Species Act Section 7 Consultation Biological Opinion. The Biological Opinion concluded "that the proposed action may adversely affect but is not likely to jeopardize the continued existence of fin, sei, sperm, or North Atlantic right whales or the Northwest Atlantic distinct population segment (DPS) of loggerhead sea turtles, North Atlantic DPS of green sea turtles, Kemp's ridley or leatherback sea turtles, or any of the five DPSs of Atlantic sturgeon."

The Biological Opinion also concluded "that the proposed action is not likely to adversely affect blue whales, Rice's whales, Giant Manta Ray, hawksbill sea turtles, smalltooth sawfish, gulf sturgeon, Nassau grouper, Oceanic whitetip sharks, the Northeast Atlantic DPS of loggerhead sea turtles, six species of ESA listed corals or shortnose sturgeon."

The Biological Opinion concluded "that the proposed action will have no effect on the Gulf of Maine DPS of Atlantic salmon, and critical habitat designated for the North Atlantic right whale, the New York Bight or Chesapeake Bay DPS of Atlantic sturgeon or the Northwest Atlantic DPS of loggerhead sea turtles."

The USACE will incorporate the following special condition within the Department of the Army (DA) Authorization:

The permittee shall comply with all Reasonable and Prudent Measures and Terms and Conditions within the October 1, 2021, Biological Opinion titled "National Marine Fisheries Service Endangered Species Act Section 7 Consultation Biological Opinion" as amended on November 1, 2021, and any future amendments in order to avoid, minimize, and/or mitigate for adverse effects to endangered species or their critical habitat.

In compliance with NMFS Biological Opinion, the below special condition will be incorporated within the DA Authorization.

The permittee shall comply with all measures in the final Marine Mammal Protection Act (MMPA) Incidental Harassment Authorization (IHA) dated January 3, 2022 and published in the Federal Register on January 6, 2022 (87 FR 806) and any future amendments.

# 10.2 Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), Essential Fish Habitat (EFH).

10.2.1 BOEM is the lead federal agency for complying with the EFH provisions of the Magnuson-Stevens Act with the Corps designated as a cooperating agency. BOEM has completed consultation pursuant to Magnuson-Stevens Act. The following actions below document compliance with the Magnuson-Stevens Act and are sufficient to ensure the activity(s) requiring DA authorization is in compliance with Magnuson-Stevens Act:

In a letter dated February 25, 2021, National Marine Fisheries Service (NMFS) provided comments to USACE on USACE's public notice number NAN-2020-01079-EME. NMFS-HCD stated "the essential fish habitat (EFH) consultation under the MSA has not yet been initiated [by BOEM]. As a result, it is premature

for us to offer any project specific EFH conservation recommendations at this time."

On April 7, 2021, BOEM provided an EFH Assessment to NMFS initiating consultation. In a letter dated June 7, 2021, NMFS provided a total of 13 EFH conservation recommendations (CRs) and one (1) Fish and Wildlife Coordination Act (FWCA) conservation recommendation to BOEM to be incorporated into the project authorization to offset adverse impacts to federally managed species. In a letter dated, August 31, 2021, NMFS provided an addendum to their June 7, 2021 EFH conservation recommendation letter including two (2) additional EFH CR's for a total of 15 EFH CR's.

In a letter dated October 7, 2021, to NMFS, BOEM stated that they will adopt, or partially adopt specific EFH CRs that are within their jurisdiction (i.e., offshore waters seaward of the three nautical mile mark) and will not adopt specific EFH CRs and FWCA conservation recommendations because the implementation and enforcement of these CRs are outside of BOEM's jurisdictional authority (i.e., inshore waters landward of the three nautical mile mark).

Of the total 15 EFH CR's, BOEM stated that they would fully adopt five (5), partially adopt seven (7), and will not adopt three (3) EFH CRs. In addition, BOEM stated that they would not adopt the one (1) FWCA conservation recommendation.

One (1) of the seven (7) EFH CR's that BOEM would partially adopt is within offshore waters seaward of the three nautical mile mark and inshore waters landward of the three nautical mile mark. BOEM stated that they would adopt the EFH CR for areas in their jurisdictional authority and will not adopt the EFH CR for areas outside of their jurisdictional authority. The EFH CR is as follows:

"Given the extent of complex habitats in the project areas, BOEM should require the applicant to develop an anchoring plan to ensure anchoring is avoided and minimized in complex habitats during construction and maintenance of the project. This plan should specifically delineate areas of complex habitat around each turbine and cable locations, and identify areas restricted from anchoring. Anchor chains should include mid-line buoys to minimize impacts to benthic habitats from anchor sweep where feasible. The habitat maps and inshore maps delineating eelgrass habitat adjacent to the O&M facility should be provided to all cable construction and support vessels to ensure no anchoring of vessels be done within or immediately adjacent to these complex habitats. The anchoring plan should be provided for our review and comment prior to BOEM approval."

In order to avoid, minimize, and mitigate adverse effects to EFH and EFH managed species the following special condition will be incorporated into any DA authorization.

The permittee shall be responsible for developing and submitting an anchoring plan specifically delineating areas of complex habitat around the submarine export cable and identifying areas restricted for anchoring within 3 nautical miles of the shoreline. Anchor chains should include midline buoys to minimize impacts to benthic habitats from anchor sweep where feasible. The habitat maps and inshore maps delineating eelgrass habitat adjacent to the O&M facility, should be provided to all construction and support vessels to ensure no anchoring of vessels be done within or immediately adjacent to these complex habitats. The anchoring plan must be submitted to this office and National Marine Fisheries Service (NMFS) 90 days prior to construction allowing the Corps and NMFS 30 calendar days to review and comment. The permittee is responsible for addressing all comments if received before construction activities can begin.

One (1) out of the three (3) EFH CR's that BOEM has stated they would not adopt falls within inshore waters landward of the three nautical mile mark and therefore is outside of BOEM's jurisdictional authority. The EFH CR is as follows:

"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."

In order to avoid, minimize, and mitigate adverse effects to EFH and EFH managed species the following special condition will be incorporated into any DA authorization.

The permittee shall avoid nearshore dredging and silt producing activities associated with the sea-to-shore submarine export cable installation and proposed O&M improvements that occur at or adjacent to water depths 5 meters or less, from January 1 to May 31 of any calendar year to protect sensitive life history stage winter flounder Essential Fish Habitat (EFH).

BOEM stated that it would not adopt the one (1) FWCA CR as it falls outside of BOEM's jurisdictional authority. The FWCA CR is as follows:

"Avoid dredging and placement between April 15 to July 15 minimizes potential impacts to horseshoe crab spawning. Dredge disposal/placement may result in the loss of horseshoe crabs and their eggs and larvae, and their habitat, resulting

in a reduction in prey species for several federally managed species and adverse effects to their EFH. As noted in the EFH assessment, horseshoe crabs are known to occur within Lake Montauk."

In order to avoid, minimize, and mitigate adverse effects to EFH and EFH managed species the following special condition will be incorporated into any DA authorization.

# The permittee shall avoid dredging and placement of dredged material at the O&M facility between April 15 to July 15 of any calendar year to minimize impacts to horseshoe crab spawning.

In two (2), response letters dated December 23, 2021, sent to BOEM and NMFS, respectively, USACE stated it would adopt and include as special conditions within the DA authorization the three (3) CRs listed above within inshore waters (i.e., the territorial seas). The remaining 13 EFH CRs and one (1) EFH CR partially adopted by BOEM for the offshore components of the project also fall under USACE Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) jurisdiction. USACE has determined that BOEM's consultation resulting in these CRs, including its action to either fully adopt, partially adopt or not adopt is them, is sufficient to ensure the activity requiring DA authorization is in compliance with the EFH provisions of the Magnuson-Stevens Act.

- 10.3 **Section 106 of the National Historic Preservation Act (Section 106):** Refer to Section 2.3 for permit area determination.
- 10.3.1 BOEM is the lead federal agency for complying with Section 106 of the National Historic Preservation Act with the Corps designated as a cooperating agency. BOEM has completed consultation pursuant to Section 106 of the National Historic Preservation Act. Consultation has been completed and found to be sufficient to confirm Section 106 compliance for this DA permit authorization, and additional consultation is not necessary.

The following actions below document compliance with the Section 106 of the National Historic Preservation Act and are sufficient to ensure the activity(s) requiring DA authorization is in compliance with Section 106 of the National Historic Preservation Act:

On November 23, 2021, a National Historic Preservation Act of 1966 (NHPA) Section 106 Memorandum of Agreement (MOA) among the Bureau of Ocean Energy Management, the Massachusetts State Historic Preservation Officer, the Rhode Island State Historic Preservation Officer, the New York State Historic

Preservation Officer, and the Advisory Council on Historic Preservation regarding the South Fork Wind Farm and South Fork Export Cable project was executed. USACE is a concurring party and has signed the MOA.

The MOA determined that the project would have adverse effects on these 10 aboveground historic properties: Block Island Southeast Lighthouse National Historic Landmark (NHL), Old Harbor Historic District, Spring House Hotel, Spring House Hotel Cottage, Spring Street Historic District, Capt. Mark L. Potter House, Vaill Cottage, Gay Head Lighthouse, Vineyard Sound and Moshup's Bridge Traditional Cultural Property and five (5) ancient, submerged landforms and features (ASLFs). The MOA incorporates measures to avoid, minimize, and mitigate adverse effects to the listed historic properties above. The applicant will be required to adhere to these mitigation measures during construction, operation and maintenance of the South Fork Wind facility.

In order to avoid, minimize, and mitigate adverse effects to the identified 10 aboveground historic properties and the five (5) ASLFs the following special condition will be incorporated into any DA authorization.

The permittee shall comply with the November 23, 2021 Memorandum of Agreement titled "Memorandum of Agreement Among the Bureau of Ocean Energy Management, The Massachusetts State Historic Preservation Officer, The Rhode Island State Preservation Officer, The New York State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding the South Fork Wind Farm and South Fork Export Cable Project" in order to avoid minimize and/or mitigate for adverse effects to historic properties.

### 10.4 Tribal Trust Responsibilities

10.4.1 BOEM is the lead federal agency for government-to-government consultation with Federally recognized Tribe(s). Government-to-government consultation was conducted by BOEM with federally-recognized Tribes including: Mashantucket Pequot Tribal Nation, Mohegan Tribe of Indians of Connecticut, Narragansett Indian Tribe, Mashpee Wampanoag Tribe, Shinnecock Indian Nation, Delaware Tribe of Indians, Delaware Nation, and Wampanoag Tribe of Gay Head (Aquinnah). USACE has determined that BOEM's consultation with federallyrecognized Tribes is sufficient and additional consultation by USACE is not necessary.

### 10.5 Section 401 of the Clean Water Act – Water Quality Certification (WQC)

10.5.1 Two (2) individual Section 401 WQCs are required and have been issued by the appropriate agencies.

The permittee received New York State Department of Environmental Conservation (NYSDEC) Excavation & Fill in Navigable Waters Permit ID 1-4724-00371/00039, Water Quality Certification Permit ID 1-4724-00371/00040, Tidal Wetlands Permit ID 1-4724-00371/00041, and Docks, Platforms & Moorings Permit ID 1-4724-00371/00042 with an effective date of November 16, 2021.

The permittee received New York State Public Service Commission (NYSPSC) Water Quality Certification (Case 18-T-0604) dated November 22, 2021. "This Certification is issued in conjunction with the NYS Public Service Law Article VII Certificate of Environmental Compatibility and Public Need ("CECPN") sought by Deepwater Wind South Fork, LLC ("DWSF") in, and based on the record of, Case 18-T-0604."

The Water Quality Certifications from NYSDEC and NYSPSC will be incorporated within the DA authorization.

### 10.5.2 401(a)(2) Process

The United States Environmental Protection Agency made a negative determination that the discharge 'may affect' water quality in a neighboring jurisdiction.

On November 17, 2021, USACE provided EPA Region 2 a copy of the issued Water Quality Certification from NYSDEC for determination of effects on neighboring jurisdiction pursuant to 40 CFR 121.12.

In an email dated December 3, 2021, EPA stated "EPA has decided that it will not send the notification to neighboring jurisdictions referenced in CWA 401(a)(2), based on the location of the project, the 401 certification conditions, and the information available to EPA regarding the discharge. Consequently, processing of the license or permit may proceed without awaiting further action from EPA pursuant to CWA 401(a)(2)."

On November 22, 2021, USACE provided EPA Region 2 a copy of the issued Water Quality Certification from NYSPSC for determination of effects on neighboring jurisdiction pursuant to 40 CFR 121.12.

In an email dated December 3, 2021, EPA stated "EPA has decided that it will not send the notification to neighboring jurisdictions referenced in CWA 401(a)(2), based on the location of the project, the 401 certification conditions,

and the information available to EPA regarding the discharge. Consequently, processing of the license or permit may proceed without awaiting further action from EPA pursuant to CWA 401(a)(2)."

### 10.6 Coastal Zone Management Act (CZMA)

10.6.1 Three (3) individual CZMA consistency concurrences are required and have been issued by the appropriate agencies.

Pursuant to 15 CFR 930 Subparts A through I, the permittee and their designated contractors shall be responsible for, and shall comply with, all of the conditions and stipulations contained within the New York State Department of State (NYSDOS) issued Coastal Zone Management Concurrence with consistency certification F-2021-0043 dated May 27, 2021, the Massachusetts Office of Coastal Zone Management issued concurrence #18265 dated July 15, 2021, and the State of Rhode Island Coastal Resources Management Council issued conditional concurrence 2018-10-082 dated July 1, 2021 and all amendments, thereto.

### 10.7 Wild and Scenic Rivers Act

10.7.1 The project is not located in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system.

### 10.8 Effects on Corps Civil Works Projects (33 USC 408)

10.8.1 Does the applicant also require permission under Section 14 of the Rivers and Harbors Act (33 USC 408) because the activity, in whole or in part, would alter, occupy or use a Corps Civil Works project? No.

The proposed wind turbine structures in BOEM Renewable Energy Lease Area OCS-A 0517 would not be located near any Corps Civil Works project. The export cables will pass just west of the Atlantic Ocean sand borrow area 7a for the Fire Island Inlet to Montauk Point Hurricane and Shore Protection Flood Risk Management Project, NY with appropriate set back from the edge of the borrow area to not alter the borrow area as shown on the attachment to CENAN-EN-MC Memorandum For Record, Subject: Fire Island Inlet to Montauk Point, NY Borrow Area 7A Buffer Zone for South Fork Wind Farm dated 2 November 2020.

The Corps Civil Works project, Fire Island Inlet to Montauk Point Hurricane and Shore Protection Flood Risk Management Project, includes the sand beach shoreline location where the export cables will arrive on land. As being requested by the subject permit applicant, the export cables should be installed under the shoreline by horizontal directional drilling beneath the current and future improved shoreline not compromising the Corps Civil Works project's flood risk reduction shore protection shoreline profile as shown on the attachment to CENAN-EN-MC Memorandum For Record, Subject: Fire Island Inlet to Montauk Point, NY Borrow Area 7A Buffer Zone for South Fork Wind Farm dated 2 November 2020.

Reference is made to CENAN-EN-MC Memorandum For Record, Subject: Fire Island Inlet to Montauk Point, NY Borrow Area 7A Buffer Zone for South Fork Wind Farm dated 2 November 2020 and its attachment which provides details and is an enclosure to this Record of Decision.

# 10.9 Corps Wetland Policy (33 CFR 320.4(b))

10.9.1 The project does not impact wetlands.

### 10.10 Other (as needed):

- 10.10.1 In response to USACE public notice number NAN-2020-01079-EME dated January 6, 2021, United States Coast Guard (USCG) provided a letter dated February 22, 2021 requesting that any issued Department of the Army permit contain the following requirements as special conditions:
  - 1. "Submit the following information, at a minimum, to the First Coast Guard District for publication in the Local Notice to Mariners before starting operations which may impact navigation:

Date of submission Name, phone number, and email address of project point of contact Company Name Type of Work Waterway and location where work will be done Latitude & Longitude of work area (Degrees, Minutes, Thousandths of seconds) Work Start & Stop dates and Hours of Operation Equipment on scene Passing Arrangements / Time to move vessels to not impede navigation VHF Radio Channel monitored

Disposal Site (if used) NOAA Chart Number for the area

This information must be emailed to <u>D1LNM@uscg.mil</u> a minimum of fourteen days before starting operations.

- 2. Contact our Aids to Navigation Officer at (203) 468-4454 to request the movement of any Federal Channel marker buoys a minimum of 30 days in advance if necessary for the completion of this project.
- 3. Notify the National Oceanic and Atmospheric Administration of the project completion and specifications so they may initiate the appropriate chart and Coast Pilot corrections. This must be submitted online at https://nauticalcharts.noaa.gov/charts/docs/charts-updates/Permit-Public-Notice.pdf and include a copy of the USACE permit.
- 4. For waterfront structures, ensure any current, or future, outdoor lighting is located or shielded so that it is not confused with any aids to navigation and does not interfere with navigation on the adjacent waterway. If installed, the lights must be white and non-flashing.
- Contact First Coast Guard District Private Aids to Navigation (PATON) Officer at (617) 223-8347 if any privately owned buoys need to be disestablished or moved."

In accordance with Title 33 of the Code of Federal Regulations Part 325.2(a)(3), an email was sent to the applicant on April 7, 2021 to request a written response regarding the listed Special Conditions above. In an email dated May 11, 2021, the applicant accepted these Special Conditions.

USACE Determination: Upon review of USCG comments and the applicant's acceptance of the below special conditions which would be incorporated into any permit issued no further action is required by USACE to address USCG concerns.

The permittee shall submit the following information, at a minimum, to First Coast Guard District by email D1LNM@uscg.mil a minimum of 14 days before starting operations for publication in the Local Notice of Mariners. Date of Submission Name, Phone Number, Email Address of Project Point of Contact Company Name Type of Work Waterway and Location (where work will be done)

Latitude and Longitude of Work Area (Degrees, Minutes, Thousandths of Seconds) Work Start and Stop Dates and Hours of Operation Equipment on Scene Passing Arrangements/Time to Move Vessel to Not Impede Navigation VHF Radio Channel Monitored, Disposal Site (if used) NOAA Chart Number for the Area.

The permittee shall contact USCG Aids to Navigation Officer at (203)-468-4454 to request the movement of any Federal Channel marker buoys a minimum of 30 days in advance if necessary, for the completion of the project.

The permittee shall notify the National Oceanic and Atmospheric Administration of the project completion and specifications so they may initiate the appropriate char and Coast Pilot corrections. This must be submitted online at https://nauticalcharts.noaa.gov/charts/docs/chartsupdates/Permit-Public-Notice.pdf and include a copy of the USACE permit.

The permittee shall ensure any current, or future, outdoor lighting on waterfront structures is located or shielded so that it is not confused with any aids to navigation and does not interfere with navigation on the adjacent waterway.

The permittee shall contact First Coast Guard District Private Aids to Navigation (PATON) at (617)-223-8347 if any privately owned buoys need to be disestablished or moved.

### **11.0 Special Conditions**

- 11.1 Are special conditions required to protect the public interest, ensure effects are not significant and/or ensure compliance of the activity with any of the laws above? Yes
- 11.2 Required special condition(s)
  - (A) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the U.S. Army Corps of Engineers, to

remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

- (B) The permittee shall comply with all mitigation and monitoring measures specified within "Appendix A – Environmental Mitigation and Monitoring Measures" on pages 25-67 of BOEM's Record of Decision (ROD).
- (C) The permittee shall comply with all Reasonable and Prudent Measures and Terms and Conditions within the October 1, 2021, Biological Opinion titled "National Marine Fisheries Service Endangered Species Act Section 7 Consultation Biological Opinion", as amended November 1, 2021, and any future amendments in order to avoid, minimize, and/or mitigate for adverse effects to endangered species or their critical habitat.
- (D) The permittee shall comply with all measures in the final Marine Mammal Protection Act (MMPA) Incidental Harassment Authorization (IHA) dated January 3, 2022 and published in the Federal Register on January 6, 2022 (87 FR 806) and any future amendments.
- (E) The permittee shall comply with all measures relevant to this DA authorization in the final Marine Mammal Protection Act Incidental Harassment Authorization dated January 3, 2022 and published in the Federal Register on January 6, 2022 (87 FR 806) and any future amendments.
- (F) The permittee shall comply with the November 23, 2021 Memorandum of Agreement titled "Memorandum of Agreement Among the Bureau of Ocean Energy Management, The Massachusetts State Historic Preservation Officer, The Rhode Island State Preservation Officer, The New York State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding the South Fork Wind Farm and South Fork Export Cable Project".
- (G)The permittee shall submit the following information, at a minimum, to First Coast Guard District by email D1LNM@uscg.mil a minimum of 14 days before starting operations for publication in the Local Notice of Mariners.

Date of Submission Name, Phone Number, Email Address of Project Point of Contact Company Name Type of Work

Waterway and Location (where work will be done) Latitude and Longitude of Work Area (Degrees, Minutes, Thousandths of Seconds) Work Start and Stop Dates and Hours of Operation Equipment on Scene Passing Arrangements/Time to Move Vessel to Not Impede Navigation VHF Radio Channel Monitored, Disposal Site (if used) NOAA Chart Number for the Area.

- (H) The permittee shall contact USCG Aids to Navigation Officer at (203)-468-4454 to request the movement of any Federal Channel marker buoys a minimum of 30 days in advance if necessary, for the completion of the project.
- (I) The permittee shall notify the National Oceanic and Atmospheric Administration of the project completion and specifications so they may initiate the appropriate char and Coast Pilot corrections. This must be submitted online at https://nauticalcharts.noaa.gov/charts/docs/chartsupdates/Permit-Public-Notice.pdf and include a copy of the USACE permit.
- (J) The permittee shall ensure any current, or future, outdoor lighting on waterfront structures is located or shielded so that it is not confused with any aids to navigation and does not interfere with navigation on the adjacent waterway.
- (K) The permittee shall contact First Coast Guard District Private Aids to Navigation (PATON) at (617)-223-8347 if any privately owned buoys need to be disestablished or moved.
- (L) The permittee shall be responsible for developing and submitting an anchoring plan specifically delineating areas of complex habitat around the submarine export cable and identifying areas restricted for anchoring within 3 nautical miles of the shoreline. Anchor chains should include mid-line buoys to minimize impacts to benthic habitats from anchor sweep where feasible. The habitat maps and inshore maps delineating eelgrass habitat adjacent to the O&M facility, should be provided to all construction and support vessels to ensure no anchoring of vessels be done within or immediately adjacent to these complex habitats. The anchoring plan must be submitted to this office and National Marine Fisheries Service (NMFS) 90 days prior to construction

allowing the Corps and NMFS 30 calendar days to review and comment. The permittee is responsible for addressing all comments if received before construction activities can begin.

- (M)The permittee shall avoid nearshore dredging and silt producing activities associated with the sea-to-shore submarine export cable installation and proposed O&M improvements that occur at or adjacent to water depths 5 meters or less, from January 1 to May 31 of any calendar year to protect sensitive life history stage winter flounder Essential Fish Habitat (EFH).
- (N) The permittee shall avoid dredging and placement of dredged material at the O&M facility between April 15 to July 15 of any calendar year to minimize impacts to horseshoe crab spawning.
- (O) The permittee shall submit to the Corps within 90 days post submarine export cable installation, a high precision, and high accuracy, sub-meter GPS, asbuilt survey, prepared and certified by a state-certified and licensed professional engineer or surveyor. The survey shall be between and from the offshore substation to landfall, and must show the cable burial depth, accurate to + or – 12 inches, not less than every 50 horizontal feet.
- (P) The permittee shall submit all required information to New York District Army Corps of Engineers, Regulatory Branch with a hard copy to U.S. Army Corps of Engineers, N.Y. District, Attn: Regulatory Branch, Room 16-406, 26 Federal Plaza, New York, NY 10278. The permittee shall also submit all required information via email to CENAN-R-Permit-App@usace.army.mil.

### **12.0** Findings and Determinations

12.1 Section 176(c) of the Clean Air Act General Conformity Rule Review: The proposed permit action has been analyzed for conformity applicability pursuant to regulations implementing Section 176(c) of the Clean Air Act. It has been determined that the activities proposed under this permit will not exceed de minimis levels of direct or indirect emissions of a criteria pollutant or its precursors and are exempted by 40 CFR Part 93.153. Any later indirect emissions are generally not within the Corps' continuing program responsibility and generally cannot be practicably controlled by the Corps. For these reasons a conformity determination is not required for this permit action.

- 12.2 Presidential Executive Orders (EO):
- 12.2.1 EO 13175, Consultation with Indian Tribes, Alaska Natives, and Native Hawaiians: This action has no substantial effect on one or more Indian tribes, Alaska or Hawaiian natives.
- 12.2.2 EO 11988, Floodplain Management: This action is not located in a floodplain.
- 12.2.3 EO 12898, Environmental Justice: The Corps has determined that the proposed project would not use methods or practices that discriminate on the basis of race, color or national origin nor would it have a disproportionate effect on minority or low-income communities.
- 12.2.4 EO 13112, Invasive Species: There are no invasive species issues involved in this proposed project.
- 12.2.5 EO 13212 and EO 13302, Energy Supply and Availability: The review was expedited and/or other actions were taken to the extent permitted by law and regulation to accelerate completion of this energy related project while maintaining safety, public health and environmental protections.
- 12.3 Compliance with the Section 404(b)(1) Guidelines: The proposed discharge complies with the Guidelines, with the inclusion of the appropriate and practicable special conditions to minimize pollution or adverse effects to the affected ecosystem.
- 12.4 Compliance with NEPA: The proposed action is in compliance with NEPA. The FEIS was completed to evaluate a reasonable range of alternatives and the direct, indirect, and cumulative effects associated with a reasonable range of alternatives. The Corps followed the NEPA process identified in 40 C.F.R. Part 1500 et seq., 33 C.F.R. Part 230, and 33 C.F.R. Part 325 Appendix B, by participating in the EIS process as a Cooperating Agency. As mentioned above, the FEIS is being adopted and utilized to make a permit decision on the proposed Project. Signature of the ROD by the deciding official completes the Corps' NEPA requirements and responsibilities.

12.5 Public interest determination: Having reviewed and considered the information above, I find that the proposed project is not contrary to the public interest.

I find that the issuance of the Corps permit, as described by regulations published in 33 CFR Parts 320 through 332, with the scope of work as described in this document, is based on a thorough analysis and evaluation of all issues set forth in this ROD. There are no less environmentally damaging, practicable alternatives available to South Fork Wind, LLC to construct the Project than under On-Site Action Alternative 3 (Fisheries Habitat Impact Minimization Alternative). The issuance of this permit is consistent with statutes, regulations, guidance, and policy and on balance, issuance of a Corps' permit to construct the South Fork Wind Project is not contrary to the public interest. As explained above, all practicable means to avoid and/or minimize environmental harm from the selected, permitted alternative have been adopted and required by terms and conditions of this permit.

PREPARED BY:

ROBERT T. VIETRI PROJECT MANAGER EASTERN PERMITS SECTION REVIEWED BY:	Date:
STEPHAN A. RYBA CHIEF, REGULATORY BRANCH	Date:
THOMAS M. CREAMER CHIEF, OPERATIONS READINESS AND REGULATORY FUNCTIONS DIVISION	Date:
APPROVED BY: MATTHEW W. LUZZATTO COLONEL, U.S. ARMY COMMANDER AND DISTRICT ENGINEER	Date: