MEMORANDUM FOR RECORD:

SUBJECT: Department of the Army Record of Decision and Statement of Findings for the Above-Referenced Standard Individual Permit Application

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 Sunrise Wind (SRW or the Project) proposed by Ørsted/Sunrise 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) 2022 Draft Environmental Impact Statement (DEIS), the 2023 Final Environmental Impact Statement (FEIS), and ROD for the "Sunrise Wind 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.

References used in this memorandum include the following:

a. Final Environmental Impact Statement (FEIS) for the Sunrise Wind Project, OCS EIS/EA BOEM 2023-056 dated December 2023, prepared by U.S. Department of the Interior Bureau of Ocean Energy Management (BOEM);

b. Sunrise Wind Project Construction and Operations Plan Joint Record of Decision (ROD), prepared by U.S. Department of the Interior Bureau of Ocean Energy Management (BOEM) and U.S. Department of Commerce National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS), dated March 25, 2024;

c. Endangered Species Act Section 7 Consultation "Biological Opinion on the Effects of the Sunrise Wind Farm and Sunrise Wind Export Cable – Development and Operation on Federally Listed Species within the Jurisdiction of the Long Island Field Office, New York", prepared by the U.S. Fish and Wildlife Service, and dated June 2023;

d. Endangered Species Act Section 7 Consultation "National Marine Fisheries Service Endangered Species Act Section 7 Consultation Biological Opinion", prepared by the National Marine Fisheries Service, and dated September 28, 2023;

e. National Historic Preservation Act of 1966 (NHPA) Section 106 Memorandum of Agreement (MOA), entitled “Memorandum of Agreement among the Bureau of Ocean Energy Management, the Mashpee Wampanoag Tribe, the Mashantucket (Western) Pequot Tribal Nation, and the Wampanoag Tribe of Gay Head (Aquinnah), the Massachusetts State Historic Preservation Officer, the Rhode Island State Historic Preservation Officer, the New York State Historic Preservation Officer, the Connecticut State Historic Preservation Officer, Sunrise Wind LLC, and the Advisory Council on Historic Preservation regarding the Sunrise Wind farm (Lease Number OCS-A 0487) that was fully executed on March 25, 2024;

f. Applicant Alternatives Table from application “Table 3.3-1 Cable Landfall and Submarine Export Cable Route Alternative Comparison”; and

g. Section 408 Record of Determination - Sunrise Wind by Ørsted/Sunrise Wind LLC; 408-NAN-2023-0004).

1.0 Introduction and Overview

Information about the proposal subject to one or more of the United States Army Corps of Engineers’ (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 (ORM2 Summary) and incorporated in this memorandum.

1.1 Applicant name

Ørsted/Sunrise Wind LLC

1.2 Activity location

BOEM Renewable Energy Lease Area OCS-A 0487 with a submarine export cable route through the Atlantic Ocean, with landfall at Fire Island, Town of Brookhaven, Suffolk County, New York.

1.3 Description of activity requiring permit

The applicant, Ørsted/Sunrise Wind, LLC, has requested Department of the Army authorization for the construction of an offshore wind energy farm, referred to as Sunrise Wind Farm at the BOEM Renewable Energy Lease Area OCS-A 0487 with a submarine export cable making landfall on Fire Island, Town of Brookhaven, Suffolk County, New York. The project description below is the description in the application as it was submitted to USACE on August 5, 2022. The final project description begins on page 6:

Sunrise Wind Offshore Lease Area:
Under Section 10 of the Rivers and Harbors Act of 1899 (33 CFR U.S.C. 403), construct up to 94 offshore wind turbine generators (WTGs) on steel monopile foundations at 102 locations with scour protection and cable protection system (CPS) stabilization around the base of the WTGs, one (1) offshore converter station (OCS-DC) on a piled jacket foundation with scour protection and CPS stabilization around the base of the foundation, approximately 180 miles (mi) of submarine inter-array cables (IAC) connecting the WTGs to the OCS–DC, and one (1) temporary wave buoy located in the Atlantic Ocean on the Outer Continental Shelf (OCS) within the approximately 109,952-acre (ac) BOEM Renewable Energy Lease Area OCS-A 0487, located approximately 18.9 mi south of Martha's Vineyard, Massachusetts, approximately 30.5 mi east of Montauk, New York, and approximately 16.7 mi from Block Island, Rhode Island.

Each monopile foundation diameter will be up to approximately 39 ft in diameter and installed via pile driving with a hydraulic hammer. Each monopile foundation may be protected with approximately 1.03 ac of rock scour protection, if necessary. Additional CPS stabilization may be used where the IAC are pulled into the foundation, which would require additional rock cover on top of the scour protection. The maximum footprint for each monopile foundation, including scour protection and CPS stabilization, will be approximately 1.06 ac totaling 99.64 ac for the entire lease area.

The OCS-DC will be constructed on a piled jacket foundation which will consist of up to four legs with up to two pin piles per leg. Both leg and pin pile diameters are 8 ft. The OCS-DC foundation may be protected with approximately 0.89 ac rock scour protection, if necessary. Additional CPS stabilization may be used where the IAC and export cable are pulled into the foundation, which would require additional rock cover on top of the scour protection. The maximum footprint for the OCS-DC piled jacket foundation, including scour protection and CPS stabilization, will be approximately 2.64 ac.

The IAC between the WTGs and the OCS-DC will consist of up to 180 mi of 66 -161 kilovolt (kV), 200-mm-diameter high voltage alternating current (HVAC) cables. The cables will have a target burial depth of 3 to 7 ft below the seafloor measured from the top of the IAC. If additional protection is required post-installation, cable protection measures would be used. It is estimated that up to 15 percent of the IAC (approximately 27 mi) may require cable protection. Secondary cable protection may include rock placement, mattressing, rock filter bags or grout bags. The IAC will also cross existing telecommunications cables. A rock berm or concrete mattress separation layer and cover layer may be installed at seven (7) known crossing locations. The total maximum footprint of the IAC including secondary cable protection and cable crossing protection will be 154 ac.

In certain areas along the IAC, boulder removal and sand wave leveling may need to take place prior to installation. Boulder removal will either be via boulder grab or boulder plow method. Sand wave leveling will either include dredging via suction hopper dredger or controlled flow excavation within the cable corridor. It is estimated that up to 10% of the IAC route (approximately 18 mi) may require boulder removal, and up to 5% (approximately 9 mi) may require sand wave leveling.

A wave buoy will be installed within the lease area proximate to the WTGs in the eastern region of the windfarm and will remain in place during the installation and potentially after windfarm commissioning. The mooring configuration will be dependent on buoy type, water depth, and environmental considerations, but generally consists of an anchor weight (approximately 2,600 lbs.), mooring line, and are equipped with navigational lighting.

Sunrise Wind Export Cable (SRWEC–OCS):
Under Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403), from the OCS–DC, install approximately 99.4 mi of the total 104.6 mi within federal waters, two (2) approximately 200-mm-diameter, 320-kV submarine export cables and a fiber optic cable bundled together located within one approximately 98-ft-wide cable corridor. The SRWEC–OCS will be buried to a minimum coverage depth ranging from 3 to 7 ft measured from the top of the SRWEC–OCS to the seafloor. It is estimated that up to 5 percent of the SRWEC–OCS route (approximately 5 mi) may require secondary cable protection. The SRWEC–OCS will also cross existing telecommunications cables. A rock berm or concrete mattress separation layer and cover layer may be installed at seven (7) known and two (2) unknown crossing locations. The total maximum permanent footprint of the SRWEC–OCS, including secondary cable protection and cable crossing protection, between the OCS–DC and the New York State waters boundary will be approximately 52.7 acres.

In certain areas along the SRWEC–OCS route, boulder removal and sand wave leveling may need to take place prior to installation. Boulder removal will either be via boulder grab or boulder plow method. Sand wave leveling will either include dredging via suction hopper dredger or controlled flow excavation within the cable corridor. It is estimated that up to 5% of the SRWEC–OCS route (approximately 5 mi) may require boulder removal, and up to 10% (approximately 10 mi) may require sand wave leveling.

Sunrise Wind Export Cable – New York State (SRWEC–NYS):
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 5.2 mi of the total 104.6 mi within New York State waters (SRWEC–NYS), two (2) approximately 200-mm-diameter, 320-kV submarine export cables and a fiber optic cable bundled together located within one approximately 98-ft-wide cable corridor. In addition, sections of duct will be maneuvered offshore.

The SRWEC–NYS will enter NYS territorial waters at a point 3 nautical miles (nm) offshore and will be routed in NYS territorial waters for up to 4.8 mi in a northwest direction toward Smith Point County Park (SPCP) in Town of Brookhaven, Suffolk County, New York. Exclusive of the portion of the cable installed via horizontal directional drill (HDD), the SRWEC–NYS cables will be buried to a minimum depth of 6 ft measured from the top of the cable below the seabed. It is estimated that up to 5 percent of the SRWEC–NYS route (approximately 0.24 mi) may require secondary cable protection. In cases where target burial depth cannot be achieved, secondary cable protection (e.g., 9.8-ft-wide by 19.6-ft-long by 0.9-ft-high marine mattresses with either rock or concrete) may be installed totaling

approximately 2,346 cubic yards for all secondary cable protection. The total maximum permanent footprint of the SRWEC–NYS including secondary cable protection will be approximately 2.3 ac.

In certain areas along the SRWEC–NYS route, boulder removal may need to take place prior to installation. Boulder removal will either be via boulder grab or boulder plow method. It is estimated that up to 30% of the SRWEC–NYS route (approximately 1.4 mi) may require boulder removal. No sand-wave leveling will occur within New York State waters.

In addition, a wave buoy and up to three Acoustic Doppler Current Profiler's (ADCPs) will be installed nearshore along the SRWEC–NYS near the HDD exit location and will remain in place during the cable installation process. The wave buoy mooring configuration will be dependent on buoy type, water depth, and environmental considerations, but generally consists of an anchor weight (approximately 1,765 lbs.), mooring line, and are equipped with navigational lighting. The ADCP may be either an upward facing ADCP mounted on a seabed frame (approximately 220 to 1,100 lbs.) with a surface marker buoy or an acoustic system to release floats, or a bottom-mounted ADCP installed on the lower part of the submerged hull of a standard wave buoy.

Horizontal Directional Drilling (HDD):
Under Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403) the two (2) segments of the SRWEC will be installed via HDD from the HDD entry pit located at SPCP to the HDD exit pit located offshore in the Atlantic Ocean. The borehole will be approximately 44 inches (in) in diameter and will consist of three (3), HDPE conduits measuring approximately 3,290 feet long (0.6 mi). The HDD exit pit is located approximately 2,225 ft seaward of the Mean High-Water Line [MHWL]. At the offshore HDD Exit Pit, approximately 4,900 CY of material will be excavated from within an approximate 164-ft x 49-ft x 16-ft area (8,036 sq ft) area. In order to ensure the excavated pit does not naturally backfill, a trench box, approximately 20ft by 50ft in size (1,000 sq ft) will be placed within the 8,036 square foot excavated area.

Onshore Sunrise Wind Export Cable (Onshore SRWEC):
The Onshore SRWEC is approximately 17.5 mi in length and will cross two waterways, the Long Island Intracoastal Waterway (LIIW) and the Carman's River waterway.

Under Section 10 of the River and Harbors Act of 1899 (33 U.S.C. 403) install approximately 2,640 feet (0.4 mi) of the two (2) segments of the onshore SRWEC under the LIIW from the upland entry point located at SPCP to the upland punchout point at Smith Point Marina. The borehole will be approximately 36 inches in diameter and will consist of six (6) HDPE conduits. The cables will be installed approximately 42 feet below the existing seabed of the waterway. The 2nd waterway crossing at Carman's River will consist of installing approximately 36 feet of the onshore SRWEC via HDD. The cable will be installed a minimum of 40 feet below an existing culvert located within the waterway.

Temporary Landing Structure: 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), a temporary fixed pier will be installed within the LIIW to support the transport of heavy construction materials to SPCP. The fixed pier will be approximately 16-feet-wide by 242-feet-long and will be secured to the seabed by approximately 21 steel piles each measuring 16 inches in diameter. It is anticipated that approximately 4.35 CY of flowable concrete will be installed within the steel pipes below the plane of Spring High Water over an approximate 150 square foot area. The piles will be placed using a crane barge with 4 spuds each with a diameter of 30 inches.

On April 5, 2024, the applicant submitted revised plans indicating a change in the width of the temporary pier which is now proposed to be 18-feet wide. Additionally on April 11, 2024, a final set of plans reflecting project refinements and updated impact quantities as the project advanced through further design phases, the EIS process, and BOEM's alternative selection in the ROD, which included reduction from 94 WTGs to 84 WTGs and associated reduction in total impacts from scour and interarray cables.

The final work description requiring a permit is as follows:

Sunrise Wind Offshore Lease Area

Construct a wind farm in the Atlantic Ocean on the Outer Continental Shelf (OCS) within the approximately 67,252-acre BOEM Renewable Energy Lease Area OCS-A 0487. Lease Area OCS-A 0487 is located approximately 18.9 statute miles south of Martha's Vineyard, Massachusetts, approximately 30.5 miles east of Montauk, New York, and approximately 16.7 miles from Block Island, Rhode Island. The wind farm will consist of up to eighty-four (84) offshore wind turbine generators (WTGs) on steel monopile foundations located at up to eighty-seven (87) potential locations, scour protection and a cable protection system (CPS) around the base of the WTGs, up to approximately 180 miles of submarine inter-array cables (IAC) connecting the WTGs and one (1) offshore converter substation (OCS-DC) on a piled jacket foundation with associated scour protection and CPS stabilization around the base of the OCS-DC foundation. Each monopile foundation diameter will be up to approximately 39 feet in diameter and installed via pile driving with a hydraulic hammer. Each monopile foundation would be protected with approximately 1.03 acres of rock scour protection. Additional CPS stabilization may be used where the IAC are pulled into the foundation, which would require additional rock cover on top of the scour protection. The maximum footprint for each monopile foundation, including scour protection and CPS stabilization, will be approximately 1.06 acres totaling 89.04 acres for the entire Lease Area. The OCS–DC will be constructed on a piled jacket foundation that will consist of up to four (4) legs with up to two (2) pin piles per leg. Both leg and pin pile diameters are 8 feet. The OCS–DC foundation may be protected with approximately 0.75 acres of rock scour protection, if necessary. Additional CPS stabilization may be used where the IAC and export cable are pulled into the foundation, which would require additional rock cover on top of the scour protection. The maximum footprint for the OCS–DC piled jacket foundation, including scour protection and CPS stabilization, will be approximately 1.39 acres.

The submarine IAC between the WTGs and the OCS–DC will consist of up to 180 miles of 161-kilovolt (kV), 200-millimeter diameter high voltage alternating current (HVAC) cables. The cables will be buried to a minimum burial depth of four feet beneath the existing stable seabed as measured from the top of the cable. If the four-foot burial depth is not achievable, secondary cable protection measures will be used. It is estimated that up to 15 percent of the IAC (approximately 27 miles) may require cable protection. Secondary cable protection may include rock placement, mattressing, rock filter bags or grout bags. The IAC will also cross existing telecommunications cables. A rock berm or concrete mattress separation layer and cover layer may be installed at seven (7) known crossing locations. The total maximum footprint of the IAC including secondary cable protection and cable crossing protection will be 139.4 acres.

In certain areas along the IAC, boulder relocation and/or removal and sand wave leveling may need to take place prior to installation. Boulder removal will either be via boulder grab or boulder plow method. Sand wave leveling will either include dredging via suction hopper dredger or controlled flow excavation within the cable corridor. It is estimated that up to 10% of the IAC route (approximately 18 miles) may require boulder removal, and up to 5% (approximately 9 miles) may require sand wave leveling.

A wave buoy will be installed within the Lease Area proximate to the WTGs in the eastern region of the windfarm and will remain in place during the installation and potentially after windfarm commissioning. The mooring configuration will be dependent on buoy type, water depth, and environmental considerations, but generally consists of an anchor weight (approximately 2,600 lbs.), mooring line, and would be equipped with navigational lighting.

Sunrise Wind Export Cables (Ocean)
Install a cable bundle comprised of two (2) approximately 200-mm-diameter 320-kV HVAC submarine export cables and an associated fiber optic cable. The submarine export cables would be approximately 104.6 miles long within a single cable corridor, approximately 98-feet-wide, from the OCS-DC to the cable landfall location at SPCP on Fire Island in the Town of Brookhaven, New York. Approximately 99.4 miles would be in federal waters, and approximately 5.2 miles would be in waters jurisdictional for the State of New York. The cable will be buried to a minimum depth of 6 feet below the stable seabed within state waters (three nautical miles from shore) and buried to a minimum depth of 4 feet below the stable seabed within federal waters (outside of the three nautical mile mark) as measured from the top of the cables. If the 4-foot or 6-foot minimum burial depth in the respective portions of the ocean, is not achievable, cable protection measures will be used. It is estimated that up to 5 percent of the offshore export cable (approximately 5 miles in federal waters and approximately 0.24 miles in NYS waters) may require secondary cable protection. In cases where target burial depth cannot be achieved, secondary cable protection will be used. The offshore export cables will cross nine (9) existing telecommunications cables. A rock berm or concrete mattress separation layer and cover layer may be installed at seven (7) of these locations. The total maximum permanent footprint of the export cables, including

secondary cable protection and cable crossing protection, between the OCS–DC and the NYS boundary will be approximately 52.7 acres. The total maximum permanent footprint of the export cable, including secondary cable protection and cable crossing protection, between within federal waters will be approximately 52.7 acres. Cable protection within NYS waters would consist of approximately 2,346 cubic yards (CY) of fill, which would be discharged. Cable protection would consist of marine mattresses (approximately 9.8 feet wide by 19.6 feet long by 0.9 feet high). The total maximum permanent footprint of the export cable including secondary cable protection, will be approximately 2.3 acres in NYS waters.

In certain areas along the export cable route, boulder relocation and/or removal and sand wave leveling may need to take place prior to installation. Boulder removal will either be via boulder grab or boulder plow method. Sand wave leveling will either include dredging via suction hopper dredger or controlled flow excavation within the cable corridor. Within federal waters, it is estimated that up to 5% of the export cable route (approximately 5 miles) may require boulder removal, and up to 10% (approximately 10 miles) may require sand wave leveling. Within NYS waters it estimated that up to 30% (approximately 1.4 miles) of the export cable route may require boulder removal.

Sunrise Wind Landfall at Smith Point County Park
The two (2) segments of the SRWEC will be installed via horizontal directional drill (HDD) from the HDD entry pit located at Smith Point County Park to the HDD exit pit located offshore in the Atlantic Ocean. The borehole will be approximately 44 inches in diameter and will consist of three (3) high density polyethylene (HDPE) conduits measuring approximately 3,290 feet long (0.6 miles). The HDD exit pit is located approximately 2,225 feet seaward of the Mean High-Water Line (MHWL). At the offshore HDD Exit Pit, approximately 4,900 CY of material will be excavated from within an approximate 164-ft x 49-ft x 16-ft area (8,036 square foot) area. To ensure the excavated pit does not naturally backfill, a trench box, approximately 20-feet by 50-feet in size may be placed within the 8,036 square foot excavated area.

In addition, a wave buoy and up to three Acoustic Doppler Current Profilers (ADCPs) will be installed nearshore along the export cable route near the HDD exit location and will remain in place during the cable installation process. The wave buoy mooring configuration will be dependent on buoy type, water depth, and environmental considerations, but generally consists of an anchor weight (approximately 1,765 lbs.), mooring line, and are equipped with navigational lighting. The ADCP may be either an upward facing ADCP-mounted on a seabed frame (approximately 220 to 1,100 lbs.) with a surface marker buoy or an acoustic system to release floats, or a bottom-mounted ADCP installed on the lower part of the submerged hull of a standard wave buoy.

Sunrise Wind Export Cable (Onshore)
The onshore export cable is approximately 17.5 miles in length and will cross two waterways, the Long Island Intracoastal Waterway (LIIW) and the Carmans River.

Via HDD, install approximately 2,640 feet (0.4 miles) of the two (2) segments of the onshore export cable under the LIIW from the upland entry point located at SPCP to the upland punchout point at Smith Point Marina. The borehole will be approximately 36 inches in diameter and will consist of six (6) HDPE conduits. The cables will be installed a minimum of 42 feet below the existing seabed of the waterway.

The second crossing at the Carmans River will consist of installing via HDD approximately 36 feet of the export cables beneath the Carmans River. The cable will be installed a minimum of 40 feet below an existing culvert located within the waterway.

Temporary Landing Structure
Construct a temporary fixed pier in the LIIW to support the transport of heavy construction materials to SPCP. The fixed pier will be approximately 18-feet-wide by 242-feet-long and will be secured to the seabed by approximately 21 steel piles each measuring 16 inches in diameter and four (4) fender piles each measuring 18-in in diameter to allow barges to connect to the pier. It is anticipated that approximately 4.35 CY of flowable concrete will be installed within the steel pipes below the plane of Spring High Water over an approximate 150 square foot area. The piles will be placed using a crane barge with four (4) spuds each with a diameter of 30 inches. The pier will be removed following completion of construction.

1.3.1 Proposed avoidance and minimization measures

The applicant has designed the project to avoid and minimize impacts to waters of the United States. No impacts to onshore wetlands are proposed as part of the Project. Impacts are anticipated to consist of temporary structures, fills, and construction impacts with no permanent losses of waters of the United States. Best Management Practices including turbidity reduction measures will be utilized to minimize impacts. Timing restrictions for in-water work will be implemented as specified by permit conditions and/or in coordination with state and federal agencies.

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 March 26, 2024, that officially documented the selection of its Preferred Alternative and, as appropriate, the minimization measures to be incorporated into the Sunrise Wind Farm Project that will avoid and minimize adverse impacts. As mentioned above, the Corps has adopted the EIS in accordance with 40 C.F.R. 1506.3, inclusive of these avoidance and minimization 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 waters 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 because of the permitted activity."

Compensatory mitigation is not required as the proposed work within the SRW portion of the lease area, along the export cable route and at the landfall location does not fall within any wetlands or special aquatic sites.

1.4 Existing conditions and any applicable project history

On July 31, 2013, BOEM auctioned the Massachusetts and the Rhode Island Wind Energy Areas, announcing Deepwater Wind New England, LLC as the winner of both. BOEM issued Renewable Energy Lease Area OCSA 0487 (Lease Area) to the Applicant on October 1, 2013.

On August 3, 2020, Deepwater Wind New England, LLC assigned Lease OCS-A 0487 to Sunrise Wind LLC (Sunrise Wind). Sunrise Wind submitted its initial Construction and Operations Plan (COP) to BOEM on September 1, 2020. On September 3, 2020, Bay State Wind LLC assigned 100 percent of its record title interest in a portion of Lease OCS-A 0500, which BOEM designated OCS-A 0530, to Sunrise Wind LLC. The effective date of Lease OCS-A 0487 remains as October 1, 2013. On December 18, 2020, Sunrise Wind submitted an updated COP to BOEM.

On March 15, 2021, BOEM completed the consolidation of Lease OCS-A 0530 into Lease OCSA 0487. The resulting OCS-A 0487 Lease Area is 109,952 acres (445.0 km2). Sunrise Wind proposes to develop the entire Lease Area except for the isolated aliquot cluster in OCS block 3959.

The proposed cable landfall location at SPCP is within the Fire Island National Seashore (FINS). This location at SPCP has been utilized in historically for international telecommunication cables including a new telecommunication cable installed in 2022.

Past Permitting Relevant to the Project:
Various types of sampling activities have occurred within BOEM's Renewable Energy Lease Area OCS-A 0487 by the applicant to collect necessary data for the proposed construction of the Sunrise Wind project. Most sampling activities within the lease area on the OCS are not jurisdictional under Section 10 of the RHA. Additional sampling including geotechnical work has been conducted by the applicant along potential export cable routes and near the lease area. A prior Nationwide Permit 6 verification issued to the applicant for various sampling activities and geotechnical work within state waters include NAN-2020-00608.

1.4.1 Jurisdictional Determination

Is this project supported by a jurisdictional determination? No Jurisdictional Determination was requested by the applicant. No wetlands or special aquatic sites are proposed to be impacted by the project.

1.5 Permit authority

Table 1 – Permit Authority	
Section 10 of the Rivers and Harbors Act (33 USC 403)	X
Section 404 of the Clean Water Act (33 USC 1344)	X
Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 USC 1413)	

USACE's Section 10 authority covers structures or work in or affecting navigable waters of the United States. Section 10 permits are required for the construction of artificial islands, installations, and other devices on the seabed on the OCS under the Outer Continental Shelf Land Act (OCSLA). USACE's Section 404 authority does not extend to the OCS and is limited to activities within the three nautical mile mark also referred to in this document as State Waters.

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 always includes the specific activity requiring a Department of the Army permit that is located within the Corps' geographic jurisdiction. In addition, we have applied the four factors test found in 33 CFR Part 325, Appendix B to determine if there are portions of the larger project beyond the limits of the Corps' geographic jurisdiction where the federal involvement is sufficient to turn these portions of an essentially private action into a federal action.

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.

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Based on our application of the guidance in Appendix B, we have determined that the scope of analysis for this review includes the Corps geographic jurisdiction and upland

portions beyond the Corps geographic jurisdiction.

Upland components of this project include components between the landfall of the export cables and the final Point of Interconnection (POI). Other portions of the entire project are included because USACE does have sufficient control and responsibility to warrant Federal review. These components have been determined to be within our scope of analysis as the extent of federal involvement is sufficient to turn these portions of an essentially private action into a federal action with the resulting environmental consequences of the larger project essentially being products of the Corps' permit action.

The final scope of analysis includes BOEM's Renewable Energy Lease Area OCS-A 0487 that will be impacted by the installation of WTGs, inter-array cables, scour protection, an OCS-CC, the export cables, the onshore transmission cable route, onshore substation and the final POI at the Holbrook substation. In addition, under NEPA reasonably foreseeable activities within the larger overall wind energy area were considered to account for potential cumulative effects. BOEM's FEIS is inclusive of the reasonably foreseeable environmental effects associated with the commercial wind lease and related activities .

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 NMFS Biological Opinion (BO), entitled "National Marine Fisheries Service Endangered Species Act Section 7 Consultation Biological Opinion", dated September 28, 2023, the action area includes the WDA where construction, operations and maintenance, and decommissioning activities will occur and the surrounding areas ensonified by noise from project activities; the cable corridors; and the areas where HRG and biological resource surveys will take place. Additionally, the action area includes the U.S. Exclusive Economic Zone (EEZ) along the Atlantic coast between Norfolk, VA and the Maine/Canada border; this includes the vessel transit routes between the WDA and ports in Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Maryland, and Virginia. As explained below, it does not include the portion of the vessel transit routes between the WDA and ports in Canada and Europe outside the U.S. EEZ as we have determined that the effects of vessel transit from those ports are not effects of the proposed action as defined in 50 CFR 402.17.

Additionally, as per the USFWS BO, entitled "Biological Opinion on the Effects of the Sunrise Wind Farm and Sunrise Wind Export Cable – Development and Operation on Federally Listed Species within the Jurisdiction of the Long Island Field Office, New York.", prepared by the USFWS, and dated June 2023, the Action Area for this project includes the wind lease area, offshore cable alignment, OCS-DC, cable landfall location,

onshore cable route, and onshore substation, as described in BOEM's Biological Assessment (BA) dated December 15, 2022. The BOEM BA states that the action area includes upland and coastal nearshore habitats on eastern Long Island and adjacent New York State (NYS) waters, and ocean habitats in the RI-MA WEAs on the OCS offshore of New York, Rhode Island, and Massachusetts. Although most activities would occur on the lease and along the proposed cable routes, vessels would travel locally between ports and the SRWF. The Proposed Action would use existing port facilities located in New York, Rhode Island, Connecticut, Massachusetts, Maryland, New Jersey, and/or Virginia for offshore construction, staging and fabrication, crew transfer, and logistics support. Modifications of these ports specifically for the Project are not anticipated.

The "USACE action area" for Section 7 of the ESA includes all areas in the NEPA scope of analysis. The action area includes all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action. USACE designated BOEM as the lead federal agency for Section 7 consultation and BOEM completed consultation with both USFWS and NMFS.

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

The permit area includes those areas comprising waters of the United States 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 March 26, 2024 MOA, "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 the 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 visual portion of

the APE (visual 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 for Section 106 of the NHPA includes those areas comprising waters of the United States, navigable waters of the United States, and the OCS that will be directly affected by the proposed work or structures, as well as activities outside of these waters because all three tests identified in 33 CFR Part 325, Appendix C § 1 (g)(1) have been met. The permit area includes the Sunrise Wind lease area which includes the WTGs, inter-array cables, scour protection, and an OSS, in addition to the export cables, the onshore transmission cable route, onshore substation and the final POI at the Holbrook substation.

USACE designated BOEM as the lead federal agency for complying with Section 106 of the NHPA. The USACE permit area has been addressed within the "area of potential effect" (APE) defined by BOEM in the FEIS.

This office concurs with the stipulations of the Memorandum of Agreement among the Bureau of Ocean Energy Management, the Mashpee Wampanoag Tribe, the Mashantucket (Western) Pequot Tribal Nation, and the Wampanoag Tribe of Gay Head (Aquinnah), the Massachusetts State Historic Preservation Officer, the Rhode Island State Historic Preservation Officer, the New York State Historic Preservation Officer, the Connecticut State Historic Preservation Officer, Sunrise Wind LLC, and the Advisory Council on Historic Preservation regarding the Sunrise Wind Project executed on March 25, 2024.

3.0 Purpose and Need

3.1 Project purpose and need

Project purpose and need for the project as provided by the applicant and reviewed by the Corps:

The purpose of the Sunrise Wind Project is to develop a commercial-scale offshore wind energy facility in Lease Area OCS-A 0487 (Lease Area) with wind turbine generators, an offshore substation, and electric transmission cables making landfall on Fire Island, Town of Brookhaven, Suffolk County, New York to support the achievement of New York's renewable energy goals.

3.2 Basic project purpose

The basic project purpose is offshore wind energy generation.

3.3 Water dependency determination under 404(b)(1) Guidelines

This activity does not require access or proximity to or siting within a special aquatic site to fulfill its basic project purpose. By definition, offshore wind would be located in water

and would require access or proximity to or siting within water but not specifically within special aquatic sites. The project's onshore components which entail transmission of the wind energy generated from the project to the state power grid does not require access or proximity to a special aquatic site and is therefore 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. There are no proposed discharges of dredged or fill material proposed into a special aquatic site. Refer to Section 6.0 for evaluation for compliance with the Section 404(b)(1) guidelines.

3.4 Overall project purpose

The overall project purpose is the construction and operation of a commercial scale offshore wind energy project for renewable energy generation and distribution to NYS'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 O of the FEIS.

4.0 Coordination

4.1 Public Notice Results

The results of coordinating the proposal on public notice are identified below, including a summary of issues raised, any applicant response and the Corps' evaluation of concerns.

Public notice number NAN-2022-00776-EVI, describing the proposed activity and requesting public comment, was published on December 16, 2022, with a comment period ending on February 14, 2023. An electronic version of the Public Notice was posted on USACE's New York District website (http://www.nan.usace.army.mil). 884 printed copies of the Public Notice were sent by regular mail and 173 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 (NYSDEC) Region 1.

On December 16, 2022, BOEM published a Notice of Availability (NOA) for the Sunrise Wind Farm DEIS opening a 60-day comment period ending on February 14, 2023, for the public to comment on the DEIS. BOEM received a total of 284 submissions during

the comment period. The comments received on the DEIS and the responses by the Applicant and BOEM are provided in Appendix O of the FEIS.

Were comments received in response to the public notice?

Yes, one comment was received from Cultural Heritage Partners.

Were comments forwarded to the applicant for response?

No

Was a public meeting and/or hearing requested, and if so, was one conducted?

No, no public hearing or meeting was requested. However, this office participated in three (3) joint virtual public hearings with BOEM on January 18, 2023, January 19, 2023, and January 23, 2023. Twenty-five (25) verbal comments were made over the course of the three public hearings.

Comments received in response to public notice:

Comment 1: Cultural Heritage Partners (CHP) commented the USACE should not make any decision on a permit until BOEM has corrected the deficiencies in the Draft Environmental Impact Statement and related documents that consulting parties have pointed out, and that USACE should assist them in declassifying material they believe was improperly classified.

Applicant's response: N/A

Corps' Evaluation: A permit decision was not made and would not be made until BOEM satisfied all Section 106 requirements. Additionally, the USACE decision document is not made public until after BOEM published their FEIS, their ROD as well as the final execution of the Section 106 MOA. Many items as part of Section 106 consultation are classified. Given that USACE is not the lead on Section 106, USACE does not have the authority to direct BOEM to declassify information.

USACE would include mitigation measures that were developed and incorporated through the various consultations completed by BOEM into any permit decision, including those as a result of Section 106 consultation.

Agency Comments:

On February 16, 2023, NMFS provided a technical assistance letter in response to the public notice. The purpose of this letter was to highlight information that NMFS would be looking for in the Essential Fish Habitat and Endangered Species Act consultations. This technical assistance letter was provided to the applicant and BOEM to ensure that issues raised in the letter were addressed.

4.2 Additional issues raised by the Corps.

N/A

4.3 Comments regarding activities and/or effects outside of the Corps' scope of review

N/A. See Public Interest Review Section 7.0 for further summary.

5.0 Alternatives Analysis

(33 CFR Part 325 Appendix B, 40 CFR 230.5(c), 40 CFR 1501, and RGL 88-13). An evaluation of alternatives is required under NEPA for all jurisdictional activities. NEPA requires discussion of a reasonable range of alternatives, including the no action alternative, and the effects of those alternatives. An evaluation of alternatives is required under the Section 404(b)(1) Guidelines for projects that include the discharge of dredged or fill material to waters of the United States. Under the Section 404(b)(1) 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) and be feasible when considering cost, logistics and existing technology.

Criteria for evaluating alternatives as evaluated and determined by the Corps:

The proposed discharges of dredged and fill material are directly related to the installation and protection of the export cable route through state waters and its approach to the cable landfall per the NY State agreement. The specific routing and siting specific information would determine how much of the cables would require the discharge of fill for secondary cable protection and the location of the cable landfall.

Depending on the alternative, there could also be non-tidal waters or wetland impacts associated with the onshore work. USACE has determined that any alternative regarding the cable route and associated onshore work must meet the following criteria:

(i) Type of energy. Any proposed alternative must be renewable energy. Ørsted/Sunrise Wind, LLC is under contractual obligation with the state of New York to contribute to New York's renewable energy pursuant to a power purchase agreement awarded on February 29, 2024.

(ii) Energy production must be located in the area covered by BOEM Renewable Energy Lease Number OCS-A 0487, within which Ørsted/Sunrise Wind, LLC holds a lease and the exclusive right to submit a Construction and Operations Plan for activities

within the lease area.

(iii) 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.

(iv) Sunrise 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.

(v) In addition to supplying power to New York, the project must also deliver a minimum of 924 MW to the New York power grid to meet pre-established agreements.

(vi) Within tidal waters, any alternative must have geological substrate characteristics that would allow for adequate burial of the cable below the substrate. However, it is expected that there would be a small percentage of the route that might not allow for adequate burial.

Furthermore, as it pertains to specific project components, the following criteria were also used and considered to refine and screen out alternatives:

Wind Turbine Generators and Offshore Substations

- It is outside the jurisdiction of the Lead Agency, including resulting in activities that are not allowed under the lease (e.g., requiring locating part or all of the wind energy facility outside of the Lease Area, or constructing and operating a facility for another form of energy).
- It would not respond to the purpose and need of BOEM's action, including not furthering the United States' policy to make OCS energy resources available for expeditious and orderly development, subject to environmental safeguards.
- It would require a major change to an existing law, regulation, or policy.
- It would not be responsive to the Applicant's goals, lease constraints, and obligations, such as alternatives that would:
    - Partially or completely relocate the Project outside of the defined geographic area where it was proposed; or
    - Result in the development of a Project that would not allow the developer to satisfy contractual obligations (e.g., resulting in a Project with a nameplate capacity that is less than what is required under a Power Purchase Agreement; result in significant implementation delays that would prevent the Project from initiating commercial operations by the contractually required date in the Power Purchase Agreement).
- It is technically infeasible, meaning implementation of the alternative is unlikely given past and current practice, technology (e.g., experimental turbine design or

foundation type), or site conditions (e.g., presence of boulders) as determined by BOEM's technical experts.
- It is economically infeasible, meaning implementation of the alternative is unlikely due to unreasonable costs as determined by BOEM's technical experts; while this does not require cost-benefit analysis or speculation about an applicant's costs and profits, there must be a reasonable basis.
- It cannot be analyzed because its implementation is remote or speculative, or it is too conceptual in that it lacks sufficient detail to meaningfully analyze impacts.
- It is substantially similar in design to an alternative that is or will be analyzed in detail.
- It is environmentally infeasible, meaning implementation of the alternative would not be allowed by another agency from which a permit or approval is required, or implementation results in an obvious and substantial increase in impacts on the human environment.
- It does not address a specific environmental or socioeconomic concern or issue.

Point(s) of Interconnection (POI)
- Capable of accepting all or a portion of the power from the Project with minimal upgrades.
- Located within close proximity of the coastline to minimize environmental impacts and optimize cable route length.
- Avoid or minimize impacts to environmental features (e.g., critical habitat, wetlands, cultural resources, existing contamination).
- Consistency with, and reduced or low potential impacts on, adjacent land uses.
- Constructability (e.g., land use, slopes, access, temporary staging areas, and utility locations).
- Availability of suitable landfall locations (i.e., those that minimize environmental impacts and are within close proximity of the POI).

Export Cable Landfall(s) (landfall)
- Avoid or minimize impacts to environmental features (e.g., critical habitat, shellfish lease areas, fish spawning areas, cultural resources, and existing contamination) by leveraging existing conditions (i.e., existing roadways or parking lots or previously disturbed areas)
- Prioritize property availability, including State- and county-owned roadways, and existing utility ROW.
- Consistency with, and reduced or low potential impacts on, adjacent land uses.
- Constructability (e.g., land use, slopes, access, temporary staging areas, and utility locations)
- Optimization of cable route lengths
- Availability of suitable landfall locations (i.e., are within close proximity of the POI/substation to minimize onshore impacts to local communities and sensitive natural resources)
- Use of existing ROWs to access the water when a parcel for the landfall location was not adjacent to the water.

Offshore Export Cable Route within NY State Waters

- Minimize extreme changes in slope and water depths.
- Coarse grain sediments of sufficient depth to meet target cable burial depths while avoiding pockets of contaminated sediments and organic sediments.
- Optimization of cable route lengths
- Avoid or limit crossing navigation channels and anchorage areas.
- Avoid known submerged shipwrecks and other cultural resources.
- Avoid mining and or dredge spoil areas.
- Minimize number of infrastructure (e.g., utility) crossings
- Minimize impacts to aquatic communities and sensitive habitats.
- Constructability (e.g., habitat type, depths, slopes, access, and utility locations)

Onshore Export Cable Route

- Minimize extreme changes in slope.
- Prioritize property availability, including State- and county-owned roadways, and existing utility ROW.
- Avoid known Superfund Sites or sites designated as hazardous.
- Avoid known locations of historic or archaeological resources.
- Avoid or minimize number of infrastructure (e.g., roads, bridges, culverts) crossings to reduce impacts to existing onshore infrastructure.
- Minimize impacts to wetlands and floodplains.
- Minimize the overall length of the route to minimize impacts to terrestrial communities, wildlife species, and sensitive habitats.
- Minimize impacts to aesthetic resources.
- Minimize impacts to sensitive receptors such as hospitals, schools, and Churches.

5.2 Description of alternatives

BOEM's FEIS considered a total of two (2) alternatives with one (1) alternative including three (3) sub-alternatives, that were analyzed in detail in addition to the no action alternative. An additional twelve (12) alternatives were considered but not analyzed in detail. Alternatives not analyzed in detail included alternatives related to wind turbine technology, offshore export cables, alternative landfalls, and onshore export cables.

BOEM determined that all 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 0487. Therefore, further detailed analysis was not conducted by BOEM. BOEM's regulations require BOEM to analyze Sunrise Wind, LLC's proposal to build a commercial wind energy facility on Lease OCS-A 0487. See Sunrise Wind FEIS, Section 2. Each of the alternatives, including the no action alternative, is detailed below in sections 5.2.1 through 5.2.3.

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 the proposed action would not occur.

As described in BOEM's FEIS & ROD, under the No Action Alternative, BOEM would not approve the COP; the Project construction and installation, O&M, and conceptual decommissioning would not occur; and no additional permits or authorizations for the Project would be required. Any potential environmental and socioeconomic impacts, including benefits, associated with the Project as described under the Proposed Action would not occur. However, all other past and ongoing impact-producing activities would continue. The current resource condition, trends, and impacts from ongoing activities under the No Action Alternative serve as the existing baseline against which the direct and indirect impacts of all action alternatives are evaluated.

Over the life of the proposed Project, other reasonably foreseeable future impact-producing offshore wind and non-offshore wind activities would be implemented, which would cause changes to the existing baseline conditions even in the absence of the Proposed Action. The continuation of all other existing and reasonably foreseeable future activities described in the Final EIS, Appendix E (Planned Activities Scenario) without the Proposed Action serves as the baseline for the evaluation of cumulative impacts.

5.2.2 Off-site alternatives

No off-site action alternatives were considered given the constraints to a federally issued lease by BOEM and designation of interconnection points by New York State.

5.2.3 On-site alternatives

Alternative 1 (BOEM FEIS – Alternative B – Proposed Action)

Under Alternative B, the construction, O&M, and conceptual decommissioning of up to a 1,034MW wind energy facility consisting of up to 94 WTGs within 102 potential positions, one OCSDC, and inter-array cables linking the individual WTGs to the OCS-DC would be developed in the Lease Area. The Lease Area is approximately 16.4 nm (18.9 mi, 30.4 km) south of Martha's Vineyard, Massachusetts; approximately 26.5 nm (30.5 mi, 48.1 km) east of Montauk, New York; and approximately 14.5 nm (16.7 mi, 26.8 km) from Block Island, Rhode Island. One export cable would connect to the onshore export cable systems which would connect to the onshore converter station (OnCS-DC) in the Town of Brookhaven, Long Island, New York at the Union Avenue site. Development of the wind energy facility would occur within the range of design parameters outlined in the COP (Sunrise Wind 2023), subject to applicable mitigation measures.

Alternative 2 (BOEM FEIS – Alternative C1 – Fisheries Habitat Impact Minimization)

Under Alternative C, the construction, O&M, and eventual decommissioning of up to a 1,034MW wind energy facility consisting of up to 94 WTGs within 102 potential positions, one OCS-DC, and inter-array cables linking the individual WTGs to the OCS-DC would be developed in the Lease Area. The Wind Energy Area would occur within the range of the design parameters outlined in the COP, subject to applicable mitigation measures. However, this alternative considered and prioritized contiguous areas of complex bottom habitat to be excluded from development to potentially avoid and/or minimize impacts to complex fisheries habitats, while still meeting BOEM's purpose and need for the project. Each of the sub-alternatives outlines below may be individually selected or combined with any or all other alternatives or sub-alternatives, subject to the combination meeting the purpose and need.

- Alternative C-1: A total of 94 WTGs would be developed under this alternative that prioritizes relocating WTGs out of the Priority Areas identified by NMFS. Areas for prioritization were identified by NMFS on May 2, 2022, based upon the proximity of Atlantic cod spawning activity in the vicinity of the Project Area, assumed hard bottom complex substrate, and the presence of large boulders. This alternative would result in the exclusion of up to 8 WTG positions from development within the identified Priority Areas. The specific 8 WTG positions that would be excluded from the identified Priority Areas are informed through the impact analysis described in Final EIS Chapter 3. Alternative C-1 was determined to be infeasible through the EIS process as data was further collected and analyzed. However, BOEM determined that including all variants of Alternative C in Final EIS, Section 2.1 provided important context regarding the development of the Preferred Alternative C-3(b). Additional information is provided in Final EIS, Section 2.1.3 and Chapter 3 regarding the variants of Alternative C.

- Alternative C-2: Up to a total of 94 WTGs would be developed under this alternative that prioritizes relocating WTGs out of the Priority Areas identified by NMFS. This alternative would exclude up to 8 WTG positions identified in Alternative C-1 from development, and up to an additional 12 WTG positions would be removed from the Priority Areas and relocated to the eastern side of the Lease Area. The specific WTG positions that would be excluded from the identified Priority Areas are informed through the impact analysis described in Final EIS Chapter 3. Alternative C-2 was determined to be infeasible through the EIS process as data was further collected and analyzed. However, BOEM determined that including all variants of Alternative C in Final EIS, Section 2.1 provided important context regarding the development of the Preferred Alternative C-3(b). Additional information is provided in Final EIS, Section 2.1.3 and Chapter 3 regarding the variants of Alternative C.

- Alternative C-3: Up to a total of 87 WTGs would be developed under this alternative that prioritizes relocating WTGs out of the Priority Areas identified by NMFS, while considering feasibility due to pile refusal risk from the presence of

glauconite sands in the southeastern portion of the Lease Area. Sub-alternatives C-3a, C-3b (Preferred Alternative), and C-3c consider different WTG configurations to avoid sensitive habitats and engineering constraints while still meeting the minimum capacity required by the NYSERDA OREC of 880 MW. Final EIS Sections 2.1.3.3 and 3.7.8 provide additional details on the number of WTG positions and layouts considered for each of the sub-alternatives for Alternative C-3.

As documented in the BOEM ROD, BOEM decided to approve with modifications, the COP for Sunrise Wind adopting the Preferred Alternative (Alternative C-3b), referred to by BOEM as the “selected alternative”. This alternative would allow for the construction, operation, maintenance, and eventual decommissioning of a 924 MW wind energy facility consisting of 84 WTGs and one OCS-DC within Lease Area OCS-A 0487 and associated export cables, which would occur offshore New York within the range of design parameters outlined in the COP, subject to applicable mitigation measures.

5.3 Alternatives evaluation under the Section 404(b)(1) guidelines and NEPA

Any discharge of dredged or fill material into waters of the United States authorized under Section 404 of the CWA must comply with guidelines established by the Administrator of the US EPA under Section 404(b)(1) of the CWA (the 404(b)(1) Guidelines) in 40 CFR Part 230. For the proposed project, USACE has determined that the activities in waters of the United States regulated under Section 404 of the CWA include the following: 1) the discharge of fill material for secondary cable protection over the export cables along the export cable corridor located within the 3 nautical mile limit of the territorial seas, 2) sidecasting of excavated/dredged material from HDD pits, 3) pre-sweep/pre-clearing activities along the cable route including boulder relocation and/or removal, and 4) discharge of fill material into piles associated with the temporary landing pier.

Except as provided under section 404(b)(2) of the CWA, no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences. An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

This 404(b)(1) Guidelines alternatives analysis is not identical to the NEPA alternatives analysis discussed in the BOEM FEIS and ROD. The 404(b)(1) Guidelines only look at alternatives to a discharge of dredged or fill material in waters of the United States regulated by USACE under Section 404 of the CWA. Alternative placements of turbines on the OCS analyzed under NEPA are not subject to the 404(b)(1) Guidelines analysis because activities on the OCS do not involve a discharge of dredged or fill material into waters of the United States, including within the 3 nautical mile limit of the territorial seas.

The applicant prepared a cable landfall and submarine export cable route alternative comparison table comparing six (6) alternative landfall locations including the proposed landfall at SPCP. This table considers a number of factors including logistics, cost, impacts to the aquatic environment, impacts to USACE Civil Works Projects, and Impacts to Special Aquatic Sites. This table, based on the variety of factors considered identified the proposed alternative is the most practicable alternative. USACE concurs with this assessment that the proposed alternative is the practicable alternative based on the technological, cost, and logistical factors in addition to the factors described above. It is noted that the proposed route would require landfall within a National Seashore, but due to additional constraints including locations of sand borrow areas and other feasibility factors, this alternative is the most practicable. It is additionally noted that the proposed landfall location at SPCP has been utilized by other utility cables in the past.

Additionally, the associated fill activities do not result in permanent losses of waters of the United States. While there will be discharge of fill into the piles for the pier resulting in a loss of water columns, the piles and pier structure will be removed following construction completion and would therefore be temporary. The cable protection measures are a result of discharges of fill but would not result in a complete loss of aquatic resources as portions of the remaining water column will remain open waters. Additionally, as noted in this decision document, the associated rock or concrete mattressing can provide different substrate habitat and could potentially be used by species similarly to an artificial reef.

5.4 Least environmentally damaging practicable alternative under the Section 404(b)(1) Guidelines

In Section 5 of the Record of Decision, BOEM concludes that Alternative C-3b, (referred to by BOEM as the “selected alternative”) would result in fewer impacts than other action alternatives considered and was determined to be consistent with the purpose and need. This office concurs with the findings of BOEM’s analysis.

The proposed action as described in the USACE application, and subsequent supplements, for a DA Permit, reflects this combination and selection of this alternative. All environmental impacts of the BOEM selected alternative were addressed in the NEPA process by BOEM in the FEIS, which USACE has adopted. The other cable route alternatives were not carried forward for analysis under NEPA. They were not permittable by USACE under Section 404 of the CWA because they were not the LEDPA.

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

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 above, the no-action alternative, which would not involve discharge into waters of the United States, is not practicable.

For those projects that would discharge into a special aquatic site and are not water dependent, the applicant has demonstrated there are no practicable alternatives that do not involve special aquatic sites.

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 has more adverse impacts on the aquatic ecosystem than other practicable alternative(s), but those other alternative(s) would have other significant adverse environmental consequences. (Subpart B, 40 CFR 230.10(a)).

6.2 Candidate disposal site delineation (Subpart B, 40 CFR 230.11(f))

Each disposal site shall be specified through the application of these Section 404(b)(1) Guidelines:

The disposal site consists of the submarine export cable route from BOEM Lease Area OCS-A 0487 to the landfall location at SPCP on Fire Island in the Town of Brookhaven, New York. Crushed stone and/or concrete mattressing will be utilized in areas where burial depth cannot be achieved, when crossing existing utilities, and at the HDD exit pit where dredged/excavated material would be sidecasted. Additional activities resulting in discharge along the cable route would include pre-sweeping of the cable route which could include boulder relocation and/or removal. Finally, fill would be put into piles of the temporary pier in the LIIW. Activities on the OCS are not included in this 404(b)(1) analysis as USACE’s jurisdiction on the OCS is limited to Section 10 activities as described in 33 CFR 322.3(b) which discusses Section 10 jurisdictional activities on the OCS per the OCSLA).

General characteristics of the disposal sites consist of coastal waters south of the east end of Long Island, New York extending to the lease area just south of Martha’s Vineyard. Water temperatures within the disposal sites generally range from 44-70 degrees Fahrenheit. Salinity within the disposal sites range between 30 and 35 parts per thousand (ppt).

There are no special aquatic sites (SAS) 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. The portion of the

export cable that will be installed using HDD under the (LIIW) is proximal to special aquatic sites but is not expected to impact any WOTUS or SAS given the installation methodology.

6.3 Potential impacts on physical and chemical characteristics of the aquatic ecosystem (Subpart C, 40 CFR 230.20-40 CFR 230.25)

The following has been considered in evaluating the potential impacts on physical and chemical characteristics (see Table 2):

Table 2 – 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				X	X	
Suspended particulates/ turbidity				X		
Water			X			
Current patterns and water circulation		X				
Normal water fluctuations		X				
Salinity gradients		X				

Discussion:

Substrate: The discharge of fill associated with the submarine export cable, secondary cable protection, pre-sweeping/boulder relocation and/or removal, sidecasting of dredged/excavated material from the cable landfall HDD exit pit, and fill into piles will result in minor-short term and long-term permanent adverse impacts to the existing substrate. Impacts would include disturbance of predominantly sandy substrate along the export cable with the placement of rock cover and/or concrete mattressing for cable protection. The pre-sweeping/boulder relocation and/or removal and sidecasting of the dredged material of the HDD exit pits would be temporary. Boulder relocation and/or removal is anticipated to have minimal impacts and the HDD exit pit is expected to naturally backfill with sidecasted material.

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 substrate will be used to cover the submarine export cable. The proposed discharge of fill material will not change the complex physical, chemical, and biological characteristics of the substrate.

The installation of secondary cable protection measures (e.g., concrete mattressing or rock placement) would temporarily affect bottom-dwelling 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 benefits for mobile benthic organisms within the footprint of the concrete mattresses as this will diversify benthic habitat and overall organism diversity in the sandy areas adjacent to the secondary cable protection.
When looking at the overall impacts associated with the discharge of fill material particularly with the installation of the submarine export cable, it is expected that secondary cable protection would create only minor short-term effects to the associated aquatic ecosystem.

Suspended particulates/turbidity: The installation of the submarine export cable, secondary cable protection (e.g., concrete mattressing or rock placement) and HDD receiving pit offshore at SPCP 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 secondary cable protection (e.g., concrete mattressing 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 turbidity curtain would be utilized as practicable for the installation of the temporary pier at SPCP to minimize the spread of turbidity in the waterway.

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, pre-sweeping/boulder relocation and/or removal, sidecasting of dredged/excavated material from the cable landfall HDD exit pit, and fill into piles would not result in changes to the water's clarity, color, odor, or taste. The discharge of fill is not expected to release any additional contaminants that would result in water quality changes that could eliminate or reduce the suitability of the waterbody for populations of aquatic organisms, or affect their suitability for human consumption, recreation, or aesthetics. It is noted that the existing sediment contains various levels of contaminants.

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, pre-sweeping/boulder relocation and/or removal, sidecasting of dredged/excavated material from the cable landfall HDD exit pit, and fill into 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 approximately 2.3 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.

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, pre-sweeping/boulder relocation and/or removal, sidecasting of dredged/excavated material from the cable landfall HDD exit pit, and fill into piles would not change the overall salinity since the overall impacts in comparison to the overall size of the Atlantic Ocean is relatively small.

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)

The following has been considered in evaluating the potential impacts on biological characteristics (see Table 3):

Table 3 – Potential Impacts on Biological Characteristics

Biological Characteristics	N/A	No Effect	Negligible Effect	Minor Effect (Short Term)	Minor Effect (Long Term)	Major Effect
Threatened and endangered species				X	X	
Fish, crustaceans, mollusks, and other aquatic organisms				X	X	
Other wildlife				X		

Discussion:

Threatened and Endangered Species: Where consultation with the Secretary of the Interior occurs under section 7 of the Endangered Species Act, the conclusions of the Secretary concerning the impact(s) of the discharge on threatened and endangered species and their habitat shall be considered final. In the immediate vicinity of project components and construction activities, habitat alterations associated with discharges are anticipated to be permanent but strictly localized having a minor effect on threatened and endangered species. See Endangered Species Act Consultation in Section 2.2 and Section 10.1 of this ROD for more information about impacts to ESA listed species.

The discharge of fill material resulting from the installation of the submarine export cable and secondary cable protection (e.g., concrete mattressing or rock placement) within the 3 nautical mile limit of jurisdiction, in addition to the pre-sweeping/boulder relocation and/or removal, sidecasting of dredged/excavated material from the cable landfall HDD exit pit, and fill into piles would have minor short-term effects to threatened and endangered species.

The discharge 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 within the action area in the Atlantic Ocean include blue whale, fin whale, sei whale, sperm whale, North Atlantic right whale, loggerhead sea turtle, green sea turtle, Kemp's ridley sea turtle, leatherback sea turtle, shortnose sturgeon, Atlantic sturgeon, giant manta ray, hawksbill sea turtle, oceanic whitetip shark, and Atlantic salmon. Additionally, federally listed terrestrial species that were considered include roseate tern, eastern black rail, northern long-eared bat, seabeach amaranth, rufa red knot, piping plover, tricolored bat, and monarch butterfly.

The installation of secondary cable protection could be utilized by sea turtles and sturgeon since the secondary cable protection could potentially act as an artificial reef like structure. This in 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 areas of fill, it is expected that the listed species above would avoid the project area during installation and would utilize the area once installation is complete.

Fish, Crustaceans, mollusk, and other aquatic organisms: The discharge of fill material resulting from the installation of the submarine export cable and secondary cable protection (e.g., concrete mattressing or rock placement) within the 3 nautical mile limit of jurisdiction, in addition to the pre-sweeping/boulder relocation and/or removal, sidecasting of dredged/excavated material from the cable landfall HDD exit pit, and fill into piles would have minor short-term effects to fish, crustaceans, mollusk, and other aquatic organisms.

The installation of the submarine export cable and secondary cable protection would result in the crushing and displacing of epifaunal organisms on the seabed surface and liquifying sand from the bed surface to depths, killing and displacing benthic infauna within the cable path. The pre-sweeping/boulder relocation and/or removal process could also lead to disturbances to 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 species 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.

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)

The following has been considered in evaluating the potential impacts on special aquatic sites (see Table 4):

Table 4 – 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		X				
Wetlands		X				
Mud flats		X				
Vegetated shallows		X				
Coral reefs		X				
Riffle pool complexes		X				

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, HDD exit pit, and temporary pier 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, HDD exit pit, and temporary pier 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, HDD exit pit, and temporary pier 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, HDD exit pit, and

temporary pier because the discharge area does not fall within any vegetated shallows. It is noted that submerged aquatic vegetation is mapped in proximity to the activities on the LIIW, but as currently proposed no work would occur within these areas. BMPs are proposed to minimize potential impacts to these nearby areas.

Coral Reefs: There will be no effect to coral reefs within the discharge site of the submarine export cable, secondary cable protection, HDD exit pit, and temporary pier 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, HDD exit pit, and temporary pier because the discharge area does not fall within any rifle and/or pool complexes.

6.4.3 Potential impacts on human use characteristics (Subpart F, 40 CFR 230.50)

The following has been considered in evaluating the potential impacts on human use characteristics (see Table 5):

Table 5 – Potential Effects on Human Use Characteristics

Human Use Characteristics	N/A	No Effect	Negligible Effect	Minor Effect (Short Term)	Minor Effect (Long Term)	Major Effect
Municipal and private water supplies		X				
Recreational and commercial fisheries				X		
Water-related recreation			X			
Aesthetics				X		
Parks, national and historical monuments, national seashores, wilderness areas, research sites, and similar preserves				X		

Discussion:

Municipal and private water supplies: The discharge of fill material resulting from the installation of the submarine export cable and secondary cable protection (e.g., concrete mattressing or rock placement) within the 3 nautical mile limit of jurisdiction, in addition to the pre-sweeping/boulder relocation and/or removal, sidecasting of dredged/excavated material from the cable landfall HDD exit pit, and fill into piles would have no effect on municipal and private water supplies. There is no water supply being

sourced from the Atlantic Ocean within the project area.

Recreational and commercial fisheries: The discharge of fill material resulting from the installation of the submarine export cable and secondary cable protection (e.g., concrete mattressing or rock placement) within the 3 nautical mile limit of jurisdiction, in addition to the pre-sweeping/boulder relocation and/or removal, sidecasting of dredged/excavated material from the cable landfall HDD exit pit, and fill into piles would have minor, short-term effects on recreation and commercial fishing. Recreational and commercial fisheries will be subjected to a period of adjustment to navigating around the discharges to access some of the prime fishing grounds that may be within state waters or on the OCS. The proposed discharge of fill to protect the cable could ensnare or damage fishing gear. To offset potential losses, the applicant has committed to establishing a compensation program for impacted fisherman. See Section 3.14 of the BOEM FEIS for an in-depth analysis of impacts to commercial fisheries and for-hire recreational fishing from the proposed cable protection.

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 temporarily 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. Placed stone fills for cable protection have the potential to accrue offsetting benefits as they may attract and supplement marine life communities. Fish may be negatively affected by the discharges of fill, as non-mobile larvae and eggs cannot disperse to avoid smothering. However, there will be permit conditions requiring seasonal restrictions on the proposed discharges of dredged and fill material in state waters to lessen those impacts.

Water-related recreation: The discharge of fill material resulting from the installation of the submarine export cable and secondary cable protection (e.g., concrete mattressing or rock placement) within the 3 nautical mile limit of jurisdiction, in addition to the pre-sweeping/boulder relocation and/or removal, sidecasting of dredged/excavated material from the cable landfall HDD exit pit, and fill into piles would have negligible impacts on water-related recreation. The placement of fill over the cables for secondary cable protection would only have a short-term effect on the navigation of recreational boaters while the work vessel was performing the fill. There would be no change in the ability of vessels to utilize the waters above the fill once it has been placed over the cable. Also, the proposed discharge of fill could provide structure to the substrate in areas currently consisting of soft sediments which could have a minor, positive effect on recreational fishing.

Aesthetics: The discharge of fill material resulting from the installation of the submarine export cable and secondary cable protection (e.g., concrete mattressing or rock placement) within the 3 nautical mile limit of jurisdiction, in addition to the pre-sweeping/boulder relocation and/or removal, sidecasting of dredged/excavated material from the cable landfall HDD exit pit, and fill into piles would have short term minor impacts on aesthetics. Any turbidity impacts are anticipated to be minor and short in

duration. A barge may be visible from the shore while construction activities are occurring but that would be a short-term minor impact. Once the secondary cable protection is discharged, it would be located at sufficient depths such that it would not be visible from the water surface.

Parks, national and historical monuments, national seashores, wilderness areas, research sites, and similar preserves: The discharge of fill material resulting from the installation of the submarine export cable and secondary cable protection (e.g., concrete mattressing or rock placement) within the 3 nautical mile limit of jurisdiction, in addition to the pre-sweeping/boulder relocation and/or removal, sidecasting of dredged/excavated material from the cable landfall HDD exit pit, and fill into piles would have minor impacts to the Fire Island National Seashore (FINS). The proposed export cable would traverse through the Atlantic Ocean, make landfall via HDD into the SPCP parking lot (which is located within the FINS) and then under the LIIW via HDD to Smith Point on Long Island. The discharges associated with the receiving pit in the Atlantic Ocean would be submerged and not visible from the areas. The jacking and receiving pits for the HDD operation under the LIIW are completely terrestrial. As mentioned above, a barge may be visible from the shoreline of these areas while construction activities are occurring but that would be a short-term minor impact. Fill activities occurring within the FINS boundary would include the discharge of fill into piles on the LIIW which are temporary and will be removed following construction completion.

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 6):

Table 6 – Possible Contaminants in Dredged/Fill Material	
Physical substrate characteristics	X
Hydrography in relation to known or anticipated sources of contaminants	X
Results from previous testing of the material or similar material in the vicinity of the project	X
Known, significant sources of persistent pesticides from land runoff or percolation	X
Spill records for petroleum products or designated hazardous substances (Section 311 of the Clean Water Act)	
Other public records or significant introduction of contaminants from industries, municipalities, or other sources	X
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 materials to be discharged consists of concrete mattressing,

clean rock, or sandy materials which will be side casted in the adjacent sandy areas. Through preliminary sediment testing the applicant determined that the dredged/excavated material at the HDD exit pit appears to be suitable for beneficial reuse and is therefore proposed to be sidecasted adjacent to the exit pit. If future testing determines the material is contaminated it will be disposed of at an approved upland facility. Even if the sand material were to carry contaminants, it is not likely to degrade the disposal site due to adjacency. It has been determined that testing is not required for the concrete mattresses clean stone, and fill used in the piles as the proposed materials are not likely to be a carrier of contaminants because they are comprised of naturally occurring inert material. 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)

The permittee performed high-resolution geophysical surveys, geotechnical and sediment sampling surveys along the submarine export cable route. Through sediment testing the applicant anticipates that the dredged/excavated material at the HDD exit pits will be acceptable for beneficial reuse and is therefore proposed to be sidecasted and used as backfill.

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 no more than minimal adverse effects of the proposed discharge (see Table 7):

Table 7 – Actions to Minimize Adverse Effects	
Actions concerning the location of the discharge	X
Actions concerning the material to be discharged	X
Actions controlling the material after discharge	X
Actions affecting the method of dispersion	X
Actions related to technology	X
Actions affecting plant and animal populations	X
Actions affecting human use	X
Other actions	

Discussion:

Actions concerning the location of the discharge: The applicant has sited the cable, and therefore cable protection, in mostly soft sediments to the degree practicable to limit impacts to complex habitat. The applicant has sited the cable route and landfall to avoid special aquatic sites.

Actions concerning the material to be discharged: The cable protection materials would consist of clean rock and/or concrete mattresses. The side casted material from the dredging/excavation of the HDD pits and the pre-sweeping/boulder relocation and/or removal would consist of the same material in the adjacent areas.

Actions controlling the material after discharge: The applicant will be responsible for conducting surveys to ensure the discharges post construction are functioning properly and not becoming hazards to navigation.

Actions affecting the method of dispersion: Side casting of the material dredged/excavated from HDD receiving pit offshore at SPCP is proposed. This is anticipated to be performed by divers using jetting and airlift tools which will minimize dispersal.

Actions related to technology: Micrositing of the export cables and therefore the secondary cable protection will be incorporated. Micrositing can be utilized to avoid sensitive habitats and other features that could pose hazards. Micrositing may also allow for the cable to be routed to avoid the need for secondary protection, minimizing the amount of fill to be discharged.

Actions affecting plant and animal populations**:** BOEM as the lead federal agency for this project, has coordinated with various resource agencies during the preparation of the FEIS and Joint ROD (BOEM, NPS, and NMFS) 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. As discussed in Section 10 of this ROD, 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.

Other actions: N/A

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 8):

Table 8 – Factual Determinations of Potential Effects

Site	N/A	No Effect	Negligible Effect	Minor Effect (Short Term)	Minor Effect (Long Term)	Major Effect
Physical substrate			X			
Water circulation, fluctuation and salinity		X				

Table 8 – Factual Determinations of Potential Effects						
Site	**N/A**	**No Effect**	**Negligible Effect**	**Minor Effect (Short Term)**	**Minor Effect (Long Term)**	**Major Effect**
Suspended particulates/turbidity				X		
Contaminants		X				
Aquatic ecosystem and organisms					X	
Proposed disposal site					X	
Cumulative effects on the aquatic ecosystem					X	
Secondary effects on the aquatic ecosystem				X		

Discussion:

Physical substrate determination: Based on the evaluation in Sections 6.2-6.8, USACE anticipates that the discharges of dredged and fill material within the 3 nautical mile limit of jurisdiction would have a negligible effect on the physical substrate.

Water circulation, fluctuation, and salinity determination: Based on the evaluation in Sections 6.2-6.8, USACE anticipates that the discharges of dredged and fill material within the 3 nautical mile limit of jurisdiction would have no effect on water circulation, fluctuation, and salinity.

Suspended particulate/turbidity determination: Based on the evaluation in Sections 6.2-6.8, USACE anticipates that the discharges of dredged and fill material within the 3 nautical mile limit of jurisdiction would have a minor short-term effect on suspended particulates and turbidity.

Contaminant determination: The proposed discharge of fill consists of the placement of rock and concrete mattresses and side casting of sand from sand waves. Neither of these discharges should introduce contaminants. Therefore, based on the evaluations in Sections 6.2-6.8, USACE anticipates that the proposed discharges will have no effect on contaminants.

Aquatic ecosystem and organism determination: Based on the evaluation in Sections 6.2-6.8, USACE anticipates that the discharges of dredged and fill material within the 3 nautical mile limit of jurisdiction would have a minor long-term effect on the aquatic ecosystem and organisms.

Proposed disposal site determination: Based on the evaluations in Sections 6.2-6.8, USACE anticipates that the discharges of dredged and fill material within the 3 nautical mile limit of jurisdiction would have a minor long-term effect on the disposal site.

Determination of cumulative effects on the 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.

USACE has authorized numerous permits for discharges associated with utility lines and cable installation including secondary cable protection. The proposed cable route for this project requires the crossing of 7 known and 2 unknown existing cables between the lease area and the landfall at SPCP. Typically, cables have been sited within soft sediments for ease of burial and to limit the amount of needed cable protection. This would be anticipated to occur on future cable projects as well. Siting in soft sediments limits impacts to complex habitats preferred by many fish species. Typically, cables have not been sited within special aquatic sites as the 404(b)(1) Guidelines would require evaluating alternative routes that do not include special aquatic sites. This would be anticipated to occur on future cable projects as well. Most cables require at least a small percentage of cable protection due to burial challenges. The applicant in this case anticipates up to 5% of the entire export cable would require secondary cable protection in addition to the mattressing and protection required for crossing other existing utilities. When cable protection is necessary it typically consists of clean materials such as rock or concrete mattresses as these are the industry standard. It is anticipated that this would be the case on future cable projects. The impacts from cable protection, while long-term, do not cause a loss of waters of the United States. Due to state coastal management plans, future development within the three nautical mile limit of jurisdiction involving loss of waters of the United States would be extremely limited. Therefore, USACE anticipates that cumulatively there would be long-term minor impacts to the aquatic ecosystem.

Determination of 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 mattressing or rock placement) that will encourage the establishment of encrusting organisms that would facilitate additional recruitment of species to the area.

Other secondary effects could consist of short-term elevated turbidity levels in the nearby water column. Secondary effects from the placement of rock and concrete mattresses for secondary cable protection would include a change in the aquatic organisms that would utilize the substrate. USACE anticipates there would be minor short-term secondary effects on the aquatic ecosystem.

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 9):

Table 9 – Compliance with Restrictions on Discharge

Subject	Yes	No
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?)		X
2. Will the discharge cause or contribute to violations of any applicable water quality standards?		X
3. Will the discharge violate any toxic effluent standards (under Section 307 of the Clean Water Act)?		X
4. Will the discharge jeopardize the continued existence of endangered or threatened species or their critical habitat?		X
5. Will the discharge violate standards set by the Department of Commerce to protect marine sanctuaries?		X
6. Will the discharge cause or contribute to significant degradation of waters of the United States?		X
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?	X	

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 New York State Public Service Commission (NYSPSC) issued individual CWA 401 water quality certification for the project. See Section 10.5 below.

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?

No. BOEM as the lead federal agency completed Section 7 consultation under the ESA for the overall project. USFWS issued a BO for terrestrial species in June 2023 and NMFS issued a BO on September 28, 2023, for marine species. Both BOs indicated that the overall project would not jeopardize the continued existence of threatened and endangered species and/or their critical habitat and BOEM and USACE agreed with these opinions. The proposed discharges of dredged and fill material within the 3 nautical mile limit of jurisdiction are a subset of the overall project and were therefore considered within the BOs.

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. Special conditions will be included in any permit authorization to minimize and mitigate for potential impacts associated with the discharges of fill material associated with the project including time of year restrictions to avoid impacts to fish and other species. Additionally, the project has been designed to avoid special aquatic sites.

7.0 General Public Interest Review (33 CFR 320.4 and Regulatory Guidance Letter 84-09)

The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest as stated at 33 CFR 320.4(a). To the extent appropriate, the public interest review below also includes consideration of additional policies as described in 33 CFR 320.4(b) through (r). The benefits which reasonably may be expected to accrue from the proposal are balanced against its reasonably foreseeable detriments.

7.1 Public interest factors review.

All public interest factors have been reviewed and those that are relevant to the proposal are considered and discussed in additional detail (see Table 10):

Table 10 – Public Interest Factors

Factor	None	Detrimental	Neutral (mitigated)	Negligible	Beneficial	Not Applicable
1. Conservation:	X					
2. Economics:					X	
3. Aesthetics:		X				
4. General Environmental Concerns:					X	
5. Wetlands:	X					
6. Historic Properties:			X			
7. Fish and Wildlife Values:			X			
8. Flood Hazards:				X	X	
9. Floodplain Values:	X					
10. Land Use:				X	X	
11. Navigation:			X			
12. Shoreline Erosion and Accretion:	X					
13. Recreation:				X	X	
14. Water Supply and Conservation:	X					
15. Water Quality:			X			
16. Energy Needs:					X	
17. Safety:				X		
18. Food and Fiber Production:		X	X			

Table 10 – Public Interest Factors						
Factor	None	Detrimental	Neutral (mitigated)	Negligible	Beneficial	Not Applicable
19. Mineral Needs:				X		
20. Consideration of Property Ownership:	X					
21. Needs and Welfare of the People:					X	

Additional discussion of effects on factors above:

1. Conservation: USACE anticipates that the project would have no effect on conservation. 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. The project will also not impact any currently conserved land both on and offshore. It is anticipated that applicants on other offshore wind projects will also try to avoid conservation land when looking for a landing site and an over land cable route to connect to existing power grids because it can be a challenge to obtain an easement to disturb these areas. Therefore, when considering past, present, and reasonably foreseeable future offshore wind projects, it is anticipated that these projects will have no effect on conservation either. When looking for a landing site and an over land cable route to connect to existing power grids, it is anticipated that applicants will try to avoid conservation land as it can be a challenge to obtain an easement to disturb these areas. No marine sanctuaries will be crossed or impacted by the project.

2. Economics: USACE anticipates that the project would have a minor beneficial impact on economics. The project will employ a considerable workforce during construction, as well as during operations and maintenance of the project. When also considering past, present, and reasonably foreseeable future offshore wind projects, USACE anticipates that the cumulative impacts to economics would also be minor long-term beneficial. See Section 3.16 of the FEIS for an in-depth analysis of all relevant factors related to Demographics, Employment and Economics.

3. Aesthetics: USACE anticipates that the project would result in long term moderate adverse to long term major adverse impacts to 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 and after project construction, including the presence of the WTG's and OSS. Due to the lease area's location offshore from Marthas Vineyard, Block Island and Montauk Point, the offshore components of the Project, including the WTGs and the OSS, would be visible from the visually sensitive areas in New York, Rhode Island, Massachusetts, and Connecticut. The visual impacts would be substantial to dominant for the life of the project (up to 35 years), but the resource would be expected to recover completely after

decommissioning. When also considering past, present, and reasonably foreseeable future offshore wind projects, USACE anticipates that the cumulative visual impacts would range from negligible to major adverse, as future offshore wind projects are developed, although the impacts would end after decommissioning of the projects. Many future offshore wind projects are located further offshore than the Sunrise Wind Project. See Sections 3.15, 3.18, 3.19, and 3.21 of the FEIS for an in-depth analysis of all relevant factors. Additionally, Section Mitigation measures are included in the Section 106 Memorandum of Agreement in addition to applicant proposed mitigation measures included in the ROD to minimize visual aesthetic impacts.

4. General Environmental Concerns: USACE anticipates that the project would result in beneficial impacts to general environmental concerns. At full operation, Sunrise Wind would produce at least 924 MW of renewable energy for the New York power grid. The addition of this energy would reduce emissions produced by current energy production methods and contribute towards New York's mandate of 9,000 MW of offshore wind energy by 2035, as outlined in the New York State Climate Leadership and Community Protection Act (Climate Act), enacted in 2019.

Per the BOEM FEIS, the Proposed Action would result in annual avoided emissions ranging between 1,380 and 2,548 tons of NOX, 377 to 696 tons of PM2.5, 1,227 to 2,266 tons of SO2, and 2.1 to 3.8 million tons of CO2. A reduction in carbon emissions and other greenhouse gas emissions has the potential to contribute towards the slowing of climate change and sea level rise, both of which could impact multiple environmental factors including environmental justice. When also considering past, present, and reasonably foreseeable future offshore wind projects, USACE anticipates that the cumulative impacts would be beneficial as well.

5. Wetlands: The Project does not involve wetland impacts that would require a permit from USACE under Section 404 of the CWA or Section 10 of the RHA. When also considering past, present, and reasonably foreseeable future offshore wind projects, USACE anticipates that the adverse cumulative impacts would be minor. It is anticipated that future offshore wind project would attempt to avoid wetlands and other special aquatic sites. However, impact-producing factors discussed in the FEIS include accidental spills and impacts to a wetland from soil disturbance activities outside of the wetland but nearby, neither of which trigger USACE jurisdiction.

6. Historic Properties: USACE anticipates that the project would result in major impacts on historic properties. Section 3.15 of the FEIS contains an in-depth analysis of relevant factors. USACE anticipates that the majority of adverse impacts- which are visual in nature- would cease after project decommissioning. When also considering past, present, and reasonably foreseeable future offshore wind projects, USACE anticipates that there would be negligible to major negative cumulative impacts. Impacts to historic properties were also required to be assessed under Section 106 of the NHPA. As the lead federal agency BOEM has completed consultation and concluded that Section 106 of the NHPA has been sufficiently addressed. In BOEM's ROD dated March 26, 2024, BOEM indicated the adverse effects were resolved via the MOA. This office concurs

with the stipulations of the Memorandum of Agreement among the Bureau of Ocean Energy Management, the Mashpee Wampanoag Tribe, the Mashantucket (Western) Pequot Tribal Nation, and the Wampanoag Tribe of Gay Head (Aquinnah), the Massachusetts State Historic Preservation Officer, the Rhode Island State Historic Preservation Officer, the New York State Historic Preservation Officer, the Connecticut State Historic Preservation Officer, Sunrise Wind LLC, and the Advisory Council on Historic Preservation regarding the Sunrise Wind Project executed on March 25, 2024.

The applicant has committed to numerous mitigative measures to resolve adverse effects including but not limited to studies, documentation, and contribution of funds.

7. Fish and Wildlife Values: USACE anticipates that the project would result in minor to moderate impacts to fish and wildlife values. The FEIS analyzed impacts to wildlife, fish, and other marine fauna including the following: Bats (FEIS Section 3.6), birds (FEIS Section 3.8), finfish, invertebrates, and essential fish habitat (FEIS Section 3.10), Marine Mammals (FEIS Section 3.11), and sea turtles (FEIS Section 3.12). This information can be found summarized in Table ES-2 of the FEIS. Overall, the project would result in minor adverse impacts to terrestrial species and moderate adverse impacts for marine species (potentially major to North Atlantic Right Whale (NARW). When considering past, present, and reasonably foreseeable offshore wind projects, USACE anticipates that cumulatively there would still be minor adverse impacts to terrestrial species and moderate adverse impacts to marine species. However, the FEIS estimates that cumulatively there could also be minor to moderate beneficial impacts to marine species via the reef effect created by the turbine foundations as well as cable protection measures. BOEM as lead agency consulted with NMFS and USFWS under the ESA and MSA. USACE will incorporate the BOs issued by NMFS and USFWS as special conditions into the authorized permit and additionally will implement various EFH Conservation Recommendations via special condition into the authorized permit to minimize impacts to EFH listed species.

33 CFR § 320.4(c) also discusses the FWCA and the need for USACE to consider input from USFWS, NMFS, and state fish and wildlife agencies with a view to the conservation of wildlife resources by prevention of their direct and indirect loss and damage due to the proposed project. USFWS did not specifically provide FWCA recommendations for review on this project. However, NMFS provided four (4) FWCA recommendations for consideration.

USACE determined that FWCA recommendations will be adopted and implemented as practicable based on feasibility constraints. These implemented recommendations will be reflected in the USACE permit conditions.

USACE anticipates that the concerns of state fish and wildlife agencies, the USFWS and NMFS in relation to the FWCA will be fully considered and implemented to the degree practicable and appropriate on future offshore wind projects as well.

8. Flood Hazards: The proposed project does not have any components that involve construction, removal, or modification of impoundment structures. As sea level rise is a component of climate change and sea levels are a component of coastal flooding, projects such as this which are aimed at reducing greenhouse gas emissions could help limit flooding. When looking at past, present, and reasonably foreseeable offshore wind projects, there could be a proposal to impact an impoundment, levee, hurricane barrier, etc. but it is anticipated that applicants would try to avoid these structures due to potential permitting complications. Therefore, when considering past, present, and reasonably foreseeable future offshore wind projects, USACE anticipates that cumulatively there would be a minor beneficial impact to flood hazards.

9. Floodplain Values: The proposed project is not located within a floodplain and is not anticipated to have effect on floodplains or their values. Due to the nature and siting of these projects, USACE estimates that this would be the case for reasonably foreseeable offshore wind projects as well.

10. Land Use: USACE anticipates that the project would have minor adverse impacts on land use (FEIS Section 3.18). The project by making landfall at the SPCP and the planned route to the POI has minimized its on-land routing impacts. When considering past, present, and reasonably foreseeable future offshore wind projects, USACE anticipates that there would still be negligible impacts on land use.

11. Navigation: USACE anticipates that the project would have minor to moderate adverse impacts to navigation (FEIS Section 3.19). Cumulatively when considered along with recently permitted and reasonably foreseeable offshore wind projects the project would have moderate adverse impacts to navigation due the presence of hundreds of wind turbines.

The proposed cable route for Sunrise Wind would be located off Fire Island and installed via HDD under the LIIW. The applicant has sited the cable to avoid impacts to the maintenance of the LIIW by siting the cable burial depth to avoid impacts to navigation and to minimize impacts to USACE's ability to dredge and maintain the LIIW navigation channel. The applicant submitted a Section 408 Permission request pursuant to Section 14 of the Rivers and Harbors Act (33 CFR 408) and impacts to the navigation channels were assessed.

Mitigation measures are included to minimize impacts to navigation including those in the Section 408 permission in addition to, but not limited to:

- Complying with burial depth requirements beneath the authorized depth of federal navigation channels.
- Development of Cable Burial Risk Assessment, implementation of cable maintenance plans, and utilizing cable alert systems.
- Siting of all WTGs in a grid with approximately 1.0 nautical mile spacing. This layout will help allow for safer navigation within the lease area. This layout will also provide a uniform spacing among structures to facilitate search and rescue operations.

- Complying with USCG requirements for marking structures, providing notification to mariners of hazards and of construction activities, etc.

See Section 10.8 of this ROD below.

12. Shoreline Erosion and Accretion: USACE anticipates that the project would have no effect on shoreline erosion or accretion as the project would not be anticipated to alter hydrodynamics that would affect these shoreline processes. Looking at recently permitted and reasonably foreseeable offshore wind projects in the vicinity, none of them appear to contain design elements that would be expected to cause shoreline erosion or accretion either. Therefore cumulatively, USACE anticipates no effect on shoreline erosion and accretion.

13. Recreation: USACE anticipates that the project would result in minor adverse impacts to recreation (FEIS Section 3.21). Minor adverse impacts as a result of anchoring, lighting and cable emplacement, temporary noise and traffic are anticipated. Some minor beneficial impacts could result from the construction of the turbines which could provide reef-like habitat, which could benefit recreational fishing. When also considering recently permitted and reasonably foreseeable offshore wind projects, the cumulative impacts to recreation would be minor adverse and minor beneficial.

14. Water Supply and Conservation: USACE anticipates that the project would have no effect on water supply and conservation because it would have no effect on water quantities available for water supplies. When considering recently permitted and reasonably foreseeable offshore wind projects in the vicinity, none of them appear to contain design elements that would impact water quantities either. Therefore, cumulatively USACE anticipates that there would be no effect on water supply and conservation.

15. Water Quality: USACE anticipates that the project would result in short term minor adverse impacts to water quality (FEIS Section 3.5). When considered along with recently permitted and reasonably foreseeable offshore wind projects USACE anticipates that the project would cumulatively result in minor adverse impacts to water quality. NYSPSC issued a Water Quality Certificate for Case 20-T-0617 dated August 23, 2023, indicating that the project meets the state's water quality standards. Mitigation measures are included in the WQC to minimize impacts to Water Quality.

16. Energy Needs: USACE anticipates that the project would result in beneficial impacts to energy needs, specifically renewable energy needs. The project would provide a total of 924 MW of renewable energy to the New York energy grids once it was operational. This project would contribute towards New York's mandate of 9,000 MW of offshore wind energy by 2035, as outlined in New York State Climate Leadership and Community Protection Act (Climate Act), enacted in 2019. This addition of reliable, renewable energy to these state power grid is anticipated to have beneficial effects on energy needs. This project would also contribute to the shared goal of the Departments of the Interior, Energy, and Commerce to deploy 30 GW of offshore wind in the United

States by 2030, while protecting biodiversity and promoting ocean co-use. Based on previously permitted and reasonably foreseeable future offshore wind projects, cumulatively these impacts would be beneficial to energy needs.

17. Safety: USACE anticipates that the project would have a minor adverse impact on safety. As the project is expected to impact navigation it could also impact safety. However, the mitigation measures described above under Navigation should limit adverse impacts to safety. When considering recently permitted and reasonably foreseeable offshore wind projects, USACE anticipates that these projects would have similar navigation concerns and implement similar safety measures. Therefore cumulatively USACE anticipates that the project would have a minor adverse impact to safety.

18. Food and Fiber Production: USACE anticipates that the project would have a minor adverse impact on food and fiber production. USACE anticipates that commercial fishing is the aspect of food and fiber production that would be impacted by the project. Section 3.14 of the FEIS for an in-depth analysis of estimated impacts to commercial fishing. The FEIS estimates that impacts to commercial fishing would vary from short term to long term and from minor to major adverse, with the duration and intensity of impacts varying by project phase and fishery and fishing operations due to differences in target species, gear type, and predominant location of fishing activity. However with the environmental protection measures the applicant has committed to implementing, the FEIS estimates that most vessels would only have to adjust somewhat to account for disruptions due to impacts. As commercial fishing is only one aspect of food and fiber production and does not include aquaculture and farming- neither of which are proposed to be impacted by the project- USACE estimates that the impacts to food and fiber production would be less than the impacts to commercial fishing. When considered along with previously permitted and reasonably foreseeable offshore wind projects, USACE anticipates that the cumulative impacts to food and fiber production would still be minor adverse.

19. Mineral Needs: USACE anticipates that the project would have no effect on mineral needs (FEIS Section 3.20). The project avoids federally and/or state approved sand borrow areas or mineral lease areas. The export cable traverses through some aliquots with sand resources and/or unverified sand resource areas identified by BOEM. As BOEM authorizes offshore mineral lease areas, the wind energy lease area designation determination took into account the presence or potential for offshore sand or mineral extraction. As recently permitted and reasonably foreseeable future wind projects would also occur within lease areas designated by BOEM, USACE anticipates that cumulatively there would be no effect on mineral needs.

20. Consideration of Property Ownership: USACE anticipates that the project would have no effect on property ownership. The applicant has obtained a lease from BOEM to utilize the offshore area where the wind farm would be located for the life of the project (up to 35 years). The applicant has received authorization from the state of New York to install the offshore export cables within state waters. The applicant has obtained

all real estate easements required for the onshore part of the work. As other recently permitted and reasonably foreseeable offshore wind projects would be expected to obtain the same authorizations and easements, USACE anticipates that cumulatively there would be no effect on property ownership.

21. Needs and Welfare of the People: USACE anticipates that the project would be in the interest of the people as the authorization of the project, with the required mitigation, would result in increased energy reliability and environmental benefits in the form of a net reduction in greenhouse gas emissions (see General Environmental Concerns above). The project has received a New York State Department of State for Coastal Zone Management concurrence in addition to the required state approvals including Article VII and WQC. Regarding public input on the federal permitting process, USACE only received two comments on the project, which were addressed above. However, as the lead federal agency, BOEM received numerous comments from the public, agencies, interested groups, and stakeholders. As summarized in Appendix O of the FEIS, BOEM received a total of 180 individual comment submissions in response to the DEIS. This includes comments submitted online via www.regulations.gov, transcripts of comments by individual speakers at BOEM's three virtual public meetings, and written comments submitted by mail. BOEM counted each public hearing transcript as a single submission but pulled out the individual comments and addressed them separately in the EIS. The other comments submitted to BOEM were substantive comments regarding information in the draft EIS and were all addressed and considered in the determination of the preferred alternative in the FEIS. These comments were summarized and addressed by BOEM in Appendix O of the FEIS.

7.2 Public and private need

The relative extent of the public and private need for the proposed structure or work: As described in Section 3.0, the purpose of this project is to develop a commercial-scale offshore wind energy facility in Lease Area OCS-A 0487 (Lease Area) with wind turbine generators, an offshore substation, and electric transmission cables making landfall on Fire Island, Town of Brookhaven, Suffolk County, New York to support the achievement of New York's renewable energy goals.

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, Sunrise Wind's goal is to fulfill its contractual commitments to NYSERDA pursuant to a power purchase agreement executed in 2020, and a new agreement in 2024 resulting from NYSERDA's competitive bidding process.

7.3 Resource use unresolved conflicts

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.

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 Beneficial and/or detrimental effects on the public and private use

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 is described below:

Detrimental effects are expected to be minimal and temporary.

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 and mitigation measures described in the BOEM ROD to offset the loss of aquatic resource functions (see section 11 below).

Beneficial effects are expected to be more than minimal and permanent.

Permanent beneficial effects, such as 924 MW of renewable energy to New York States energy grid are expected once the construction of the SRW project is completed. The construction of the project would lead to reduced emissions from fossil-fuel power generating facilities.

7.5 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. Offshore wind as a form of renewable energy is anticipated to reduce Greenhouse gas emissions following project construction and operation. Section 3.4 of BOEM's FEIS includes the analysis on Air Quality inclusive of anticipated emissions of greenhouse gases and anticipated effects on climate change.

8.0 Mitigation

(33 CFR 320.4(r), 33 CFR Part 332, 40 CFR 230.70-77, and 40 CFR 1508)

8.1 Avoidance and minimization

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 are described in Section 1.3.1 above.

In an email dated April 11, 2024, the applicant submitted revised project plans that included project refinements which included the reduction from 94 to 84 WTGs and a minor overall increase of two-feet to the width of the temporary pier. As discussed in Section 1.3.1, the Corps has adopted the BOEM FEIS in accordance with 40 C.F.R. 1506.3, inclusive of various mitigation measures that were both proposed by the applicant and/or recommended or required following consultation with federal and state resource agencies.

8.2 Compensatory mitigation requirement

Is compensatory mitigation required to offset environmental losses resulting from proposed unavoidable impacts to waters of the United States? No

Provide rationale: Compensatory mitigation is not required because the proposed work within the lease area, the export cable, the export cable landfall, and the onshore route for the export cable do not fall within any mapped wetlands or special aquatic sites.

9.0 Consideration of Cumulative Effects

(40 CFR 1508 & 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 the aggregate effects of past, present, and reasonably foreseeable future actions, and whether that incremental contribution is significant or not.

9.1 Identify/describe the direct and indirect effects which are caused by the proposed activity:

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 of the ESA.

10.1.1 Lead federal agency for Section 7 of the ESA

Has another federal agency been identified as the lead agency for complying with Section 7 of the ESA with the Corps designated as a cooperating agency and has that consultation been completed? Yes

Identify the lead agency, the actions taken to document compliance with Section 7 of the ESA and whether those actions are sufficient to ensure the activity(s) requiring Department of the Army authorization is in compliance with Section 7 of the ESA:

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 has reviewed the documentation provided by the agency and determined it is sufficient to confirm Section 7 ESA compliance for this permit authorization, and additional consultation is not necessary.

The following actions below document this compliance with Section 7 of the ESA.

10.1.2 ESA Consultation with U.S. Fish and Wildlife Service

On December 16, 2022, BOEM initiated formal consultation with the USFWS by submitting a Biological Assessment (BA) pursuant to the ESA for piping plover and rufa red knot. A BA addendum was then submitted to USFWS on March 28, 2023. The BA included a request for concurrence for BOEMs "Not likely to adversely affect" (NLAA) determination for roseate tern, eastern black rail, northern long-eared bat, and seabeach amaranth.

BOEM additionally informally consulted with the USFWS on the following species: rufa red knot for project impacts not arising from wind turbine collisions. Piping plover were also addressed for non-turbine collision effects.

On June 29, 2023, USFWS issued a BO concurring with BOEMs determinations that the proposed project would be not likely to adversely affect roseate tern, eastern black rail, northern long-eared bat, and seabeach amaranth. USFWS also stated the proposed project would not be likely to jeopardize the existence of tricolored bat and monarch butterfly. The USFWS stated in their BO that the proposed project will not jeopardize the continued existence of Atlantic coast piping plover or the rufa red knot. Additionally, USFWS concurred with BOEMs determination that the project would not likely adversely affected the species listed in the informal consultation provided the full

implementation of the conservation measures included in the BA, COP, ROD, and Section III of the BO are implemented.

USACE will incorporate the following special condition within the DA Permit Authorization:

This Department of the Army (DA) permit does not authorize you to take an endangered species. In order to legally take a listed species, you must have separate authorization under the Endangered Species Act (ESA) (e.g., an ESA Section 10 permit, or a Biological Opinion (BO) under ESA Section 7, with "incidental take" provisions with which you must comply). The United States Fish and Wildlife Service (USFWS) BO, entitled “Biological Opinion on the Effects of the Sunrise Wind Farm and Sunrise Wind Export Cable – Development and Operation on Federally Listed Species within the Jurisdiction of the Long Island Field Office, New York”, prepared by the U.S. Fish and Wildlife Service, and dated June 2023, contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with "incidental take" that is also specified in the BO. Your authorization under this DA permit is conditional upon your compliance with all of the mandatory terms and conditions associated with the incidental take statement of the attached BO, which terms and conditions are incorporated by reference in this permit. Failure to comply with the terms and conditions associated with the incidental take statement of the BO, where a take of the listed species occurs, would constitute an unauthorized take, and it would also constitute noncompliance with your DA permit. The USFWS is the appropriate authority to determine compliance with the terms and conditions of its BO, and with the ESA.

10.1.3 ESA Consultation with National Marine Fisheries Service

On August 8, 2022, BOEM initiated formal consultation with NMFS by submitting a BA assessing the impacts of the SRW projects. A series of revised BAs were submitted to NMFS on January 13, 2023, February 27, 2023, April 12, 2023, and April 24, 2024. NMFS issued a BO on September 28, 2023, in which NMFS concluded that the proposed action is likely to adversely affect but is not likely to jeopardize the continued existence of blue, fin, sei, sperm, or North Atlantic right whales or the Northwest Atlantic DPS of loggerhead sea turtles, North Atlantic DPS of green sea turtles, Kemp’s ridley or leatherback sea turtles, shortnose sturgeon, or any of the five DPSs of Atlantic sturgeon. The proposed action is not likely to adversely affect giant manta rays, hawksbill sea turtles, or oceanic whitetip sharks or critical habitat designated for the New York Bight DPS of Atlantic sturgeon. NMFS also determined that the project would have no effect on the Gulf of Maine DPS of Atlantic salmon, or critical habitat designated for the North Atlantic right whale, or the Northwest Atlantic DPS of loggerhead sea turtles.

An Incidental Take Statement (ITS) was included with the NMFS BO which specified Reasonable and Prudent Measures (RPMs) and Terms and Conditions necessary and appropriate to minimize, monitor, and report the take of ESA-listed whales, sea turtles, and Atlantic sturgeon.

USACE will incorporate the following special condition within the DA Permit Authorization:

This DA permit does not authorize you to take an endangered species. In order to legally take a listed species, you must have separate authorization under the ESA (e.g., an ESA Section 10 permit, or a BO under ESA Section 7, with "incidental take" provisions with which you must comply). The National Marine Fisheries Service (NMFS) BO for the Sunrise Wind Offshore Energy Project, entitled “National Marine Fisheries Service Endangered Species Act Section 7 Consultation Biological Opinion”, prepared by the National Marine Fisheries Service, and dated September 28, 2023, contains mandatory terms and conditions, including specified provisions of any incidental take authorization pursuant to the Marine Mammal Protection Act, to implement the reasonable and prudent measures that are associated with "incidental take" that is also specified in the BO. Your authorization under this DA permit is conditional upon your compliance with all of the mandatory terms and conditions associated with the incidental take statement of the attached BO, which terms and conditions are incorporated by reference in this permit. Failure to comply with the terms and conditions associated with the incidental take statement of the BO, where a take of the listed species occurs, would constitute an unauthorized take, and it would also constitute noncompliance with your DA permit. The NMFS is the appropriate authority to determine compliance with the terms and conditions of its BO, and with ESA.

10.2 Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), Essential Fish Habitat (EFH)If N/A because there is no EFH in the vicinity of the permit action, select that option and rest of this subsection may be deleted. If there is EFH in the district’s area of responsibility, delete pick list box and complete remainder of 10.2 as appropriate.

10.2.1 Lead federal agency for EFH provisions of the Magnuson-Stevens Act

Has another federal agency been identified as the lead agency for complying with the EFH provisions of the Magnuson-Stevens Act with the Corps designated as a cooperating agency and has that consultation been completed? Yes

Identify the agency, the actions taken to document compliance with the Magnuson-Stevens Act and whether those actions are sufficient to ensure the activity(s) requiring Department of the Army authorization is in compliance the EFH provisions.

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 Corps has reviewed the documentation provided by the agency and determined it is sufficient to confirm compliance for this permit authorization with the EFH provisions,

and additional consultation is not necessary.

10.2.2 Magnuson-Stevens Act

Did the proposed project require review under the Magnuson-Stevens Act? Yes

10.2.3 EFH species or complexes

Were EFH species or complexes considered? Yes. Atlantic cod, haddock, pollock, offshore hake, red hake, silver hake, white hake, summer flounder, winter flounder, windowpane flounder, witch flounder, yellowtail flounder, American plaice, Atlantic herring, Atlantic wolffish, monkfish, Atlantic butterfish, Atlantic mackerel, black sea bass, bluefish, scup, albacore tuna, bluefin tuna, skipjack tuna, yellowfin tuna, Atlantic sea scallop, Atlantic surf clam, ocean quahog, longfin inshore squid, northern shortfin squid, barndoor skate, little skate, winter skate, basking shark, blue shark, common thresher, dusky shark, porbeagle shark, sand tiger shark, sandbar shark, shortfin mako shark, smoothhound shark complex, spiny dogfish, tiger shark, white shark.

Effect determination and basis for that determination: Adverse Effect

10.2.4 National Marine Fisheries Service consultation

Consultation with the National Marine Fisheries Service was initiated and completed as required (see the attached ORM2 Summary sheet for begin date, end date and closure method of the consultation)

On August 8, 2022, BOEM submitted an EFH Assessment to NMFS for the SRW project. On September 14, 2023, NMFS provided a response to BOEM's EFH Assessment indicated that the proposed project would "result in significant adverse impacts to EFH, federally managed species, their prey, and other resources under our purview". NMFS provided 44 Conservation Recommendations (CRs) in response to the EFH Assessment in addition to four (4) Fish and Wildlife Coordination Act (FWCA) Recommendations.

Since BOEM's jurisdictional authority is limited to the OCS, USACE would be responsible for responding to and enforcing EFH conservation recommendations that were adopted within the territorial seas (state waters). BOEM was responsible for reviewing and responding to NMFS for all CRs on the OCS including those that were applicable to the OCS and state waters. USACE was responsible for responding to those CR's only applicable to state waters. Additionally, BOEM noted that the FWCA does not apply to OCS leases and permits issued under the Secretary of the Interior per the Solicitors Memo dated February 12, 1982. Therefore, USACE was responsible for responding to the FWCA Recommendations. Additionally, four (4) of the CR's were related to the National Pollutant Discharge Elimination System (NPDES) Permit which is issued by the U.S. Environmental Protection Agency (EPA). EPA was responsible for responding to those conditions.

The CR's were provided to the applicant to provide responses to. BOEM, EPA and USACE took into consideration the applicant's responses to the CRs and on October 23, 2023, BOEM provided NMFS with a response letter, including USACE's responses, detailing which CR's would be adopted, partially adopted, or not adopted.

In order to avoid, minimize, and mitigate adverse effects to EFH and EFH managed species USACE will incorporate the following special condition based on the adoption of various CRs within the DA Permit Authorization:

The permittee must prepare and implement a Sequencing Plan that describes how construction activities will be sequenced to avoid or minimize impacts to Atlantic cod spawning. The plan must specifically describe how construction-related bottom disturbing activities (e.g., sea-bed prep, interarray cable installation and burial, scour protection installation, boulder relocation and/or removal, foundation site preparation, WTG or OCS-DC installation including pile driving, and other construction-related bottom disturbing activities) will occur such that construction-related bottom disturbing activities are avoided and/or minimized as listed below:

a. The Sequencing Plan must describe, to BSEE's and BOEM's satisfaction, how the construction schedule for pile driving is designed, to the extent technically or economically feasible and practicable, to avoid and/or minimize any pile driving in the lease area between November 1 and December 31. If pile driving is necessary during this time period, The permittee shall describe in detail the specific measures taken to minimize acoustic exposure ranges for fish and how pile driving is limited to WTG positions in the southernmost and easternmost portions of the lease area, to the extent technically or economically feasible and practicable.
b. The Sequencing Plan must describe, to BSEE's and BOEM's satisfaction, how the schedule for construction-related bottom disturbing activities other than pile driving is designed, to the extent technically or economically feasible and practicable, to avoid and/or minimize any construction-related bottom disturbing activities between November 1 and March 31. If construction-related bottom disturbing activities are necessary during this time period, The permittee shall describe in detail how these activities are limited to the southernmost and easternmost portions of the lease area, to the extent technically or economically feasible and practicable.
c. The Sequencing Plan must provide a detailed construction schedule that includes installation timeframes and locations for all construction related bottom disturbing activities inclusive of seabed preparation and installation activities.
d. The permittee shall submit the Sequencing Plan to this office, BOEM, and BSEE for coordination with NMFS GARFO-HESD for a 60-day review, 120 days prior to site preparation activities for inter-array cables and WTGs. The permittee shall resolve all comments on the Sequencing Plan to BOEM's and BSEE's satisfaction prior to implementation of the plan. If there are less than 120 days between site preparation activities and this COP approval, The permittee shall

submit the plan as soon as practicable and no later than 60 days prior to commencing activities.

e. The permittee shall provide a summary describing the implementation of the Sequencing Plan in the Annual Certification under 30 C.F.R. § 285.633.

Prior to OCS sea-bed prep, inter-array cable installation, foundation site preparation, and other construction-related bottom disturbing activities (e.g., boulder relocation and/or removal, cable lay and burial, scour protection installation), the permittee shall prepare and implement a Cod Spawning Monitoring Plan to monitor for Atlantic cod aggregations in the lease area between November 1 and March 31 of each year during which construction activities are planned.

a. The permittee shall carry out monitoring in a manner consistent with/comparable to existing cod monitoring studies conducted in the lease area (e.g., Atlantic cod passive acoustic and telemetry study, Movement Patterns of Fish in Southern New England AT-19-08) and use both Passive Acoustic Monitoring (PAM) and acoustic telemetry technology.
b. The permittee shall submit the plan to BOEM and BSEE for coordination with NMFS GARFO-HESD for a 60-day review at least 120 days before the commencement of in-water construction on the OCS. The permittee shall resolve all comments on the plan to BOEM's and BSEE's satisfaction prior to implementation of the Plan. If there are less than 120 days between commencement of in-water construction on the OCS and this COP approval, The permittee shall submit the plan as soon as practicable and no later than 60 days prior to commencing activities.
c. The permittee shall submit an annual Cod Spawning Monitoring Report within 90 days of the completion of each survey season to BOEM and BSEE for coordination with NMFS GARFO-HESD. The report must include documentation of any cod detections and contain information on all survey activities that took place during the season, including location of equipment and location, time, and date of detections. The report on survey activities must be comprehensive of all activities, regardless of whether cod were detected. Following the completion of each monitoring campaign, The permittee shall make all data collected from PAM and acoustic telemetry publicly available. Detection data will be shared through the Atlantic Coast Telemetry Network and the Mid-Atlantic Telemetry Observing System (MATOS). Specifically, sensor and biological data should be publicly disseminated by packaging the data according to MATOS data standards.

If, prior to BSEE's review of the applicable Facility Design Report (FDR) or Fabrication and Installation Report (FIR) , the Permittee determines that fewer than 84 WTGs will be constructed for the Sunrise Wind project, The permittee shall prioritize removal from the following positions in order: WTGs 92, 93, 94, 91, 95, 122, and 123, and then any other WTG positions in Priority Area 1. Priority Area 1 includes WTGs 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 120, 121, 122, 123, 124, 150, 151, and OCS-DC. If applicable, The permittee shall describe how it prioritizes the removal of the listed WTG positions in the FDR/FIR.

The permittee shall prepare and implement a Micrositing Plan(s) that describes how wind turbine locations, OCS-DC, inter-array cables and export cable routes will be microsited to avoid or minimize impacts to sensitive benthic habitat, potential and confirmed Munitions and Explosives of Concern (MEC)/Unexploded Ordinances (UXO) ; known and potential shipwrecks, and Ancient Submerged Land Forms (ASLFs) . The plan(s) must specifically describe how inter-array and export cable routes will be microsited to avoid or minimize impacts to sensitive benthic habitats, including boulders greater than or equal to 0.5 m, as technically and/or economically practicable or feasible. The plan(s) must describe MEC/UXO ALARP Certified areas, which should be consistent with MEC/UXO As Low As Reasonably Practical (ALARP) Certification. To the extent practicable, cables should cross sensitive benthic habitat areas perpendicularly at the narrowest points; cables unable to avoid benthic features such as sand waves should be sited along natural benthic contours within troughs/lows, to maximize cable burial while minimizing disturbance to local submarine topography. The permittee shall submit detailed supporting data and analysis as part of the FDR or FIR, including relevant geophysical and geospatial data. The submission of the data may be incorporated by reference or submitted as an attachment to the FDR or FIR. The Micrositing Plan must be consistent with MEC/UXO ALARP Certification, Cable Burial Risk Assessment, and Boulder Identification and Relocation Plan. The Micrositing Plan must include a figure for each microsited WTG or cable segment, including benthic habitat delineations showing sensitive benthic habitat and locations of boulders greater than or equal to 0.5 m. The plan must include a figure encompassing the lease area, depicting large boulder locations, benthic habitat delineations, and the proposed microsited locations for cables and WTGs. Benthic habitat (NOAA complexity categories) and benthic feature/habitat type maps in conjunction with backscatter, bathymetry, and boulder layers should be used to inform the Micrositing Plan.

a. For cables that cannot be microsited to avoid impacts to sensitive benthic habitat or boulders greater than or equal to 0.5 m, the micrositing plan must identify technically and economically practicable or feasible impact minimization measures and use the following prioritized list, including complex habitat sub-types (using NMFS complexity categories), to avoid during micrositing: complex habitats with high density large boulders; complex habitats with medium density large boulders; complex habitats with low density large boulders; complex habitats with scattered large boulders; complex habitats with no large boulders.
b. The Micrositing Plan must be submitted to BOEM and BSEE for coordination with NMFS GARFO-HESD for a 60-day review, 120 days prior to site preparation activities for cables, WTGs and OCS-DC within the scope of the plan. The permittee shall resolve all comments on the Micrositing Plan(s) to BOEM’s and BSEE’s satisfaction prior to implementation of each plan. If there are less than 120 days between site preparation activities and this COP approval, The permittee shall submit the plan as soon as practicable and no later than 60 days prior to commencing activities. The final version of the Micrositing Plan(s) must be provided to BOEM, BSEE, NMFS GARFO-HESD, and USACE.

Where plows, jets, grapnel runs, or other similar methods are used, post-construction surveys capable of detecting bathymetry changes of 1.5 foot or less must be completed to determine the height and width of any created berms. The permittee shall capture bathymetry changes greater than 3 feet during the first and second post-installation surveys along the cable routes. If there are bathymetric changes in berm height greater than 3 feet above grade after the second survey, The permittee shall develop and implement a Berm Remediation Plan to restore created berms to match adjacent natural bathymetric contours (isobaths). The permittee shall submit the Berm Remediation Plan to BOEM and BSEE for coordination with NMFS for a 60-day review within 90 days of completion of the Year 1 MBES bathymetry survey. The permittee shall resolve all comments on the Berm Remediation Plan to BOEM's and BSEE's satisfaction prior to initiating restoration activities. The final version of the Berm Remediation Plan must be provided to BOEM, BSEE, NMFS and USACE.

The permittee shall submit a Boulder Identification and Relocation Plan(s) to BSEE for review and concurrence. The plan(s) must be submitted to BOEM and BSEE for coordination with NMFS for a 60-day review, 120 days prior to boulder relocation and/or removal activities within the scope of the plan. The permittee shall resolve all comments on the Boulder Identification and Relocation Plan(s) to BOEM's and BSEE's satisfaction prior to implementation of each plan. If BOEM or BSEE do not provide comments on a plan within 60 days of its submittal, then the Permittee may presume concurrence with the plan. A copy of the final plan(s) must be provided prior to construction to BOEM, BSEE, USACE and NMFS.

a. The plan must detail how the Permittee will avoid or minimize impacts to sensitive benthic habitats and relocate boulders as close as practicable to the original location, in areas of soft bottom but immediately adjacent to similar habitat. The plan(s) should use benthic habitat (NOAA complexity categories) and benthic feature/habitat type maps in conjunction with backscatter and boulder layers to inform the siting of boulders. The plan(s) must include sufficient scope to mitigate boulders for facility installation and operation risks. The plan(s) must be consistent with and meet the conditions of the Safety Management System (SMS) . The plan(s) must include the following for boulders that are proposed to be relocated:
    - A summary and detailed description of surface boulders greater than 0.5 m in diameter, locations of areas with subsurface boulders and locations along the cable routes and WTG areas where such boulders have been found;
    - A detailed summary of methodologies used in boulder identification, including geological and geophysical survey results;
    - Figures of the locations of boulder relocation and/or removal activities specified by activity type (e.g., pick or plow, removal, or placement) and overlaid on multibeam bathymetry and backscatter data;
    - A description of boulder removal and/or relocation methods for each type of boulder relocation and/or removal activity and technical feasibility constraints, including capacity of crane used in grab systems, vessel specifications and metocean limits on operation, etc.;

- The environmental footprint of disturbance activities by habitat type and measures taken to avoid further adverse impacts to archaeological resources, sensitive benthic habitats and fishing operations;
- A comprehensive list and shapefile of locations of boulders that would be relocated (latitude, longitude), boulder dimensions (m), buffer radius (m), areas of active (within last 5 years) bottom trawl fishing (latitude, longitude), areas where boulders greater than 2 ms in diameter are anticipated to occur (latitude, longitude), and identification of approximate areas to which boulders would be relocated (latitude, longitude);
- The measures taken to minimize the quantity of seafloor obstructions from relocated boulders in areas of active bottom trawl fishing;
- A description of safety distances or zones to limit boulder relocation and/or removal near third-party assets;
- A description of MEC/UXO ALARP Certified areas, which should be consistent with MEC/UXO ALARP Certification;
- A summary of any consultation and outreach conducted with resource agencies and the fishing industry in development of the plan (e.g., notifications to mariners);
- A statement of consistency with the Micrositing Plan.

b. The permittee shall provide USACE, USCG, NOAA, and the local harbormaster with a comprehensive list and shapefile of positions and areas to which boulders would be relocated (latitude, longitude) at least 60 days prior to boulder relocation and/or removal activities.
c. The permittee shall implement methods identified in the approved COP and described in the Boulder Identification and Relocation Plan (described above) for boulder relocation and/or removal activities. The permittee shall consider the spatial extent of boulder relocation and/or removal in the micrositing of WTGs and OCS-DC foundations and inter-array and export cables for this Project and must relocate boulders as close as practicable to areas immediately adjacent to existing similar habitat. The relocation of boulders must be consistent with the Project easement.
    - The permittee shall provide to BSEE and BOEM and make available to the approved Certified Verification Agent (CVA) a Boulder Relocation Report. The report must include a post-relocation summary of the Boulder relocation and/or removal activities and information to certify boulder risks related to the installation and operation of the facility have been properly mitigated. The report must also identify boulders that could not be relocated with documentation of technical feasibility concerns, including information on how, if at all, the final boulder placement differs from the Boulder Relocation Plan and why such changes were necessary. The report must be submitted within 60 days of completion of the boulder relocation and/or removal activities and prior to or with the relevant FIR. The permittee shall also provide BOEM and BSEE a comprehensive list and shapefile of boulder locations to which

boulders were relocated (latitude, longitude), boulder dimensions (m), any safety distances or zones to limit boulder relocation and/or removal near third-party assets (m), and areas of active (within last 5 years) bottom trawl fishing (i.e., as a raster file for use in ArcGIS).

The permittee shall prepare and implement an Anchoring Plan(s) for all areas where anchoring or buoy placement occurs and jack-up barges are used during construction and operations/maintenance within 1,640 feet (500 m) of habitats, resources, and submerged infrastructure that are sensitive, including sensitive benthic habitats;21 boulders greater than or equal to 0.5 m; ancient submerged landform features (ASLFs); known and potential shipwrecks; potentially significant debris fields; potential hazards; third-party infrastructure, and any related facility installation activities (such as cable, WTG, and OCS-DC installation). Avoidance buffers must be consistent with the following: potential unexploded ordnances will be shown with an exclusion zone consistent with risks identified in the MEC/UXO Desktop Study; confirmed UXO will be shown with exclusion zone relative to risks of planned activities; avoidance of cultural resources (shipwrecks and ASLFs) will be consistent with as-built or as-laid position plats. The permittee shall provide to all construction and support vessels the locations where anchoring or buoy placement must be avoided to the extent technically and/or economically practicable or feasible, including sensitive benthic habitats; boulders greater than or equal to 0.5 m; ASLFs; known and potential shipwrecks; potentially significant debris fields; potential hazards; and any related facility installation activities (such as cable, WTG, and OCS-DC installation). Dynamic positioning systems should be used in these areas instead of anchoring, as practicable. If anchoring is necessary at these locations, then all vessels deploying anchors must extend the anchor lines to the extent practicable to minimize the number of times the anchors must be raised and lowered to reduce the amount of habitat disturbance, unless the anchor chain sweep area includes sensitive benthic habitat that may be impacted by the chain sweep. On all vessels deploying anchors, The permittee shall use mid-line anchor buoys to reduce the amount of anchor chain or line that touches the seabed, unless the Permittee demonstrates, and BOEM and BSEE accept, that (1) the use of mid-line anchor buoys to reduce the amount of anchor chain or line that touches the seabed is not technically practical or feasible; or (2) a different alternative is as safe and provides the same or greater environmental protection. If placement of jack-up barge spud cans is necessary in sensitive benthic habitats, locations for the spud cans must be selected to avoid or minimize impacts according to the following prioritized list, including complex habitat sub-types (using NMFS complexity categories): complex habitats with high density large boulders; complex habitats with medium density large boulders; complex habitats with low density large boulders; complex with scattered large boulders; complex habitats with no large boulders; as technically feasible and practicable. Benthic habitat (NOAA complexity categories) and benthic feature/habitat type maps in conjunction with backscatter, bathymetry, and boulder layers should be used to inform the anchoring plan.

a. The permittee shall provide the proposed Anchoring Plan to BOEM and BSEE for coordination with NMFS GARFO-HESD for a 60-day review at least 120 days before anchoring activities or construction begins for export and inter-array

cables. The permittee shall resolve all comments on the Anchoring Plan to BOEM's and BSEE's satisfaction before conducting any OCS seabed-disturbing activities that require anchoring. If there are less than 120 days between anchoring activities and this COP approval, The permittee shall submit the plan as soon as practicable and no later than 60 days prior to commencing activities.

The final version of each Anchoring Plan must be provided to BOEM, BSEE, NMFS GARFO-HESD, and USACE.

The permittee shall prepare and implement a Scour and Cable Protection Plan(s) that includes descriptions and specifications for all scour and cable protection materials. The plan(s) must include depictions of the location and extent of scour and cable protection, the habitat delineations for the areas of cable protection measures, and detailed information on the proposed scour or cable protection materials for each area and habitat type. The Scour and Cable Protection Plan(s) must demonstrate consistency with the Micrositing Plan(s) and Sequencing Plan(s), as appropriate.

a. The permittee shall avoid the use of engineered stone or concrete mattresses in complex habitat, as practicable and feasible. The permittee shall ensure that all materials used for scour and cable protection measures consist of natural or engineered stone that does not inhibit epibenthic growth and provides three-dimensional complexity in height and in interstitial spaces, as practicable and feasible. If concrete mattresses are necessary, bioactive concrete (i.e., with bio-enhancing admixtures) must be used as practicable as the primary scour protection (e.g., concrete mattresses) or veneer to support biotic growth.
b. Cable protection measures must have tapered or sloped edges to reduce hangs for mobile fishing gear. The permittee shall avoid the use of plastics/recycled polyesters/net material (i.e., rock-filled mesh bags, fronded mattresses) for scour protection.
c. The Scour and Cable Protection Plan(s) must be submitted to BOEM and BSEE for coordination with NMFS GARFO-HESD for a 60-day review, at least 120 days prior to placement of scour and cable protection within the area covered by the scope of the Plan(s). The Scour and Cable Protection Plan(s) must be concurred with by BOEM and BSEE prior to BSEE issuing a no-objection to the relevant FDR.
d. The permittee shall resolve all comments on each Plan to BOEM's and BSEE's satisfaction before placement of the scour and cable protection materials. The final version of the Scour and Cable Protection Plan(s) must be provided to BOEM, BSEE, NMFS GARFO-HESD and USACE.

The permittee shall report any occurrence of at least 10 dead non-ESA-listed fish within established shutdown or monitoring zones to BOEM and to BSEE (via email to protectedspecies@bsee.gov) as soon as practicable (taking into account crew and vessel safety), but no later than 24 hours after the sighting. BOEM or BSEE will notify NMFS GARFO-HESD. The permittee shall confirm the relevant point of contact prior to reporting and confirm the reporting was received.

The permittee shall conduct fisheries and benthic monitoring according to the Sunrise Wind Fisheries and Benthic Monitoring Plan to assess fisheries and benthic habitat status in the Project area pre-, during, and post-construction. The permittee shall review all NMFS GARFO comments on the Fisheries and Benthic Monitoring Plan that BOEM provides to the permittee and revise the Plan, as appropriate. The permittee shall resolve all comments on the Plan to BOEM's and BSEE's satisfaction prior to implementation of the revised Plan. A copy of the final Fisheries and Benthic Monitoring Plan shall be provided to this office within 30 days of BOEM & BSEE's approval.

The permittee shall, to the extent it is technically and/or economically practicable or feasible, avoid using Zinc sacrificial anodes on external components of WTG and OCS-DC foundations to reduce the release of metal contaminants in the water column.

The permittee shall utilize vibratory pile driving to the maximum extent practicable for both installation and removal of the temporary pier , as practicable.

The permittee shall utilize a soft start during pile installation of the temporary pier on the Intra-coastal Waterway. If pile driving is occurring during a time of year when ESA-listed species may be present, and the anticipated noise is above the behavioral noise threshold, a "soft start" is required to allow animals an opportunity to leave the project vicinity before sound pressure levels increase. In addition to using a soft start at the beginning of the work day for pile driving, one must also be used at any time following cessation of pile driving for a period of 30 minutes or longer. For impact pile driving: pile driving will commence with an initial set of three strikes by the hammer at 40% energy, followed by a one minute wait period, then two subsequent 3-strike sets at 40% energy, with one-minute waiting periods, before initiating continuous impact driving. For vibratory pile installation: pile driving will be initiated for 15 seconds at reduced energy followed by a one-minute waiting period. This sequence of 15 seconds of reduced energy driving, one-minute waiting period will be repeated two additional times, followed immediately by pile-driving at full rate and energy.

The permittee shall avoid in-water work within Narrow Bay/Long Island Intracoastal Waterway from January 15 to May 31 of any calendar year in estuarine/nearshore waters of 6 meters (m) in depth or less to avoid impacts to winter flounder early life stages (eggs, larvae) with the exception of the installation and/or removal of the temporary pier in Narrow Bay/Long Island Intracoastal Waterway. If work is conducted from January 15 to May 31, a turbidity curtain should be used around the construction area, as practicable.

The permittee shall avoid and minimize impacts to sensitive benthic habitats in all inshore/estuarine habitats where seafloor preparation and cable installation activities will occur through the use of HDD, micrositing, and rerouting, as practicable. The permittee shall conduct post-construction surveys to determine any impacts to sensitive benthic habitats. The permittee shall coordinate with USACE, BOEM, BSEE, and NMFS regarding potential remedial steps to disturbed benthic habitats, as necessary. All

survey results should be provided to NMFS HESD at NMFS.GAR.HESDoffshorewind@noaa.gov.

The permittee shall ensure that all vessels avoid vessel grounding by floating at all stages of the tide or utilizing appropriate spudding, jack-ups or anchoring to avoid vessel grounding. Any spudding, jack-ups or anchoring utilized shall avoid sensitive benthic habitats to the maximum extent possible.

The permittee shall avoid trenching in open nearshore/estuarine waters, as practicable. If open trenching is used, dredged/excavated materials shall not be sidecast or placed in the aquatic environment.

During dredging/excavation of HDD exit pits, the permittee shall dispose of all dredged material at a state approved upland facility if any material is identified to be contaminated. Contaminated sediment shall not be side-casted or stored within any waterway. If the dredged material is contaminated, the permittee shall utilize clean fill to backfill areas where any contaminated sediment was dredged from the HDD exit pit. If the material is not contaminated, the dredged/excavated material may be sidecasted and the side casted material shall be allowed to backfill the HDD exit pit upon completion of the HDD activities.

The permittee shall submit the final copy of the Frackout/Inadvertent Release plan to NMFS HESD at NMFS.GAR.HESDoffshorewind@noaa.gov and to USACE a minimum of 60 days prior to construction.

The permittee shall avoid seabed disturbing activities in Submerged Aquatic Vegetation (SAV). The permittee shall not moor barges in SAV or SAV habitat and shall maintain a minimum 100 foot buffer between the edge of any SAV beds and any equipment staging or anchoring activities. Additionally, the permittee shall ensure that SAV surveys should be provided to vessels/captains to ensure SAV is avoided during construction to the maximum extent practicable.

Within 60 days of completion of each activity in the Intracoastal Waterway (the installation of the temporary pier, the HDD work, and the removal of the temporary pier) the Permittee must submit a post-construction report to USACE and NMFS HESD detailing the following information, as applicable:

a. The dates during which the work occurred.
b. Methods utilized for pile installation (vibratory, impacted, etc.)
c. Vessels (type and quantity) utilized for the work, the method of anchoring, and the length of time they were anchored.
d. For any mooring or staging work in previously mapped SAV that could not be avoided, the date(s) the impacts occurred, the length of time of the impacts, and the specific activities within SAV resources.
e. For any inadvertent releases that occurred during the HDD work, the date(s), the location, the proximity to the SAV beds, and the measures taken to mitigate the situation.

f. If the initial HDD work was unsuccessful, indicate the size and location of the new entry and exit pits, whether the exit pits were located within the shellfish survey area, and whether the 100-foot buffer from SAV resources was maintained.
g. If the second set of pits failed and trenching in isolation is required,, indicate the length, width, and depth of the trench, the distance from the trench and side slopes to the closest SAV resources, and the square footage of any direct impacts to SAV resources from this activity.

USACE and NMFS will have 90 days to review the report and to determine if a post-construction SAV survey will be required due to anchoring, mooring, or staging in mapped SAV or impacts to SAV resulting from an inadvertent return. If so, the Permittee will perform an SAV survey during the next SAV growing season in accordance with the guidelines mentioned above. USACE will then review the SAV survey within 60 days of submission to determine if restoration and/or compensatory mitigation is required. Any required compensatory mitigation will comply with USACE's 2008 compensatory mitigation rule (33 CFR 332).

The permittee shall avoid in-water work within 1000-feet of Mean High Water on the ocean side of the Long Island Beaches including the Fire Island National Seashore between May 15 to July 15 of any calendar year to avoid and minimize impacts to horseshoe crab spawning.

As there are 10 NMFS scientific surveys that overlap the Sunrise Wind project, consistent with NMFS and BOEM survey mitigation strategy, the permittee shall submit to BOEM and USACE, a survey mitigation agreement between NMFS and the Permittee within 120 days of the COP approval. The survey mitigation agreement must describe how the permittee will mitigate the Project impacts on the eight NMFS surveys. The permittee shall conduct activities in accordance with such agreement.

If the permittee and NMFS fail to reach a survey mitigation agreement, then the permittee shall submit a Survey Mitigation Plan to BOEM and NMFS that is consistent with the mitigation activities, actions, and procedures described below, within 180 days of COP approval. BOEM will review the Survey Mitigation Plan in consultation with NMFS Northeast Fisheries Science Center (NEFSC). The permittee shall resolve comments to BOEM's satisfaction and must conduct activities in accordance with the plan.

a. As soon as reasonably practicable, but no later than 30 days after the issuance of the Project's COP approval, the Permittee shall initiate coordination with NMFS NEFSC at nefsc.survey.mitig@noaa.gov to develop the survey mitigation agreement described above. Mitigation activities specified under the agreement must be designed to mitigate the Project impacts on the following NMFS NEFSC surveys: (a) Spring Multi-species Bottom Trawl survey; (b) Autumn Multi-species Bottom Trawl survey; (c) Ecosystem Monitoring survey; (d) Aerial marine mammal and sea turtle survey; (e) Shipboard marine mammal and sea turtle

survey; (f) Atlantic surfclam and ocean quahog survey; (g) Atlantic sea scallop survey; and (h) Seal survey; (i) NARW survey; (j) Sea Turtle Ecology survey. At a minimum, the survey mitigation agreement must describe actions and the means to address impacts on the affected surveys due to the preclusion of sampling platforms and impacts on statistical designs. NMFS has determined that the project area is a discrete stratum for surveys that use a random stratified design. This agreement may also consider other anticipated Project impacts on NMFS surveys, such as changes in habitat and increased operational costs due to loss of sampling efficiencies.

b. The survey mitigation agreement must identify activities that will result in the generation of data equivalent to data generated by NMFS's affected surveys for the duration of the Project. The survey mitigation agreement must describe the implementation procedures by which the Permittee will work with NEFSC to generate, share, and manage the data required by NEFSC for each of the surveys impacted by the Project, as mutually agreed upon between the Permittee and NMFS NEFSC. The survey mitigation agreement must also describe the Permittee's participation in the NMFS NEFSC Northeast Survey Mitigation Program to support activities that address regional-level impacts for the surveys listed above. The agreement must include provisions that provide criteria for changing mitigation activities over time, or timeframes for review and reconsideration of the agreement based on updated information, or both.

The permittee shall provide the locations of relocated boulders, created berms, and scour protection, including cable protection measures (i.e., concrete mattresses) should be provided to NOAA Fisheries, BOEM, BSEE, USCG, and USACE, and the public as soon as possible to help inform all interested parties of potential gear obstructions.

The permittee shall provide Ichthyoplankton and zooplankton samples collected as part of the Biological Monitoring outlined in the NPDES permit should be provided to NOAA Fisheries NEFSC to cross-verify samples for incorporation into the Ecosystem Monitoring Program plankton dataset.

10.3 Section 106 of the NHPA

Refer to Section 2.3 for permit area determination.

10.3.1 Lead federal agency for Section 106 of the NHPA

Has another federal agency been identified as the lead federal agency for complying with Section 106 of the NHPA with the Corps designated as a cooperating agency and has that consultation been completed? Yes

Identify the lead agency, and whether the undertaking they consulted on included the Corps' undertaking(s). Briefly summarize actions taken by the lead federal agency.

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.

The Corps has reviewed the documentation provided by the agency and determined it is sufficient to confirm Section 106 compliance for this permit authorization, and additional consultation is not necessary.

10.3.2 Historic properties

Known historic properties present? Yes

BOEM identified ten (10) National historic landmarks (NHLs), three (3) Traditional Cultural Properties (TCPs), 61 (39 individual resources, 22 historic districts) National Register of Historic Places (NRHP)-listed properties, 57 (32 individual resources, 25 historic districts) NRHP-eligible properties, and 181 (145 individual resource, 36 historic districts) above ground cultural resources without formal designations or determinations of NRHP eligibility that are considered historic properties for the purposes of this section 106 review; in the offshore Project components' portion of the visual APE. One (1) aboveground historic property within the onshore above-ground visual APE and eight (8) submerged historic properties and 43 Ancient Submerged Landforms (ASLF) properties in the marine APE. No historic properties were identified in the terrestrial APE.

APEs are discussed above in Section 2.3

Effect determination and basis for that determination:

BOEM determined there would be no visual adverse effect to six of the ten NHLs in the offshore visual APE, including Montauk Point Lighthouse, Nantucket Historic District, New Bedford Historic District, William Watts Sherman House, Marble House, and Battle of Rhode Island Historic District, because ocean views are not character-defining features of these historic properties or because of the limited visibility of the Project from the historic properties.

BOEM determined that four NHLs (Bellevue Avenue Historic District, The Block Island Southeast Lighthouse National Historic Landmark, Ocean Drive Historic District, and The Breakers [Historic District]), two TCPs (Chappaquiddick Island, and Vineyard Sound and Moshup's Bridge), six (four individual resources, two historic districts) NRHP-listed properties, 20 (12 individual resources, eight historic districts) NRHP eligible properties, and 15 (13 individual resources, two historic districts) aboveground resources that may be considered historic properties would be subject to visual adverse effects from WTGs. No historic properties were identified in the terrestrial APE, and thus none are adversely affected with implementation of the undertaking.

Further details on the affect's determinations including to each specific historic property, district, NHL, TCP, and ASLFs can be found in the executed Section 106 Memorandum

of Agreement (MOA). In order to avoid, minimize, and mitigate adverse effects to the identified historic properties, historic districts, NHL's and ASLF's, the following special condition will be incorporated into any DA authorization.

The permittee shall comply with the enclosed Memorandum of Agreement (MOA), entitled "Memorandum of Agreement among the Bureau of Ocean Energy Management, the Mashpee Wampanoag Tribe, the Mashantucket (Western) Pequot Tribal Nation, and the Wampanoag Tribe of Gay Head (Aquinnah), the Massachusetts State Historic Preservation Officer, the Rhode Island State Historic Preservation Officer, the New York State Historic Preservation Officer, the Connecticut State Historic Preservation Officer, Sunrise Wind LLC, and the Advisory Council on Historic Preservation regarding the Sunrise Wind farm (Lease Number OCS-A 0487) that was fully executed on March 25, 2024.

10.4 Tribal Trust Responsibilities

10.4.1 Tribal government-to-government consultation

Was government-to-government consultation conducted with federally-recognized tribe(s)? Yes

Provide a description of any consultation(s) conducted including results and how concerns were addressed.

BOEM is the lead federal agency for government-to-government consultation with Federally recognized Tribe(s). On October 15, 2021, BOEM held a government-to-government meeting on the Sunrise Wind Project with the Mashantucket Pequot Tribal Nation, the Mashpee Wampanoag Tribe, the Delaware Nation, the Shinnecock Nation, and the Wampanoag Tribe of Gay Head (Aquinnah). Additional meetings with tribes occurred throughout the Section 106 process. More information regarding Tribal Consultation is included in Appendix J of the BOEM FEIS.

USACE has determined that BOEM's consultation with federally-recognized Tribes is sufficient and additional consultation by USACE is not necessary.

10.4.2 Other Tribal consultation

Other Tribal consultation including any discussion of Tribal Treaty rights.

In order to avoid, minimize, and mitigate adverse effects to the identified historic properties, historic districts, NHL's and ASLF's, including tribal treaty rights and concerns of the federally-recognized tribes the following special condition will be incorporated into any DA authorization in addition to the above mentioned compliance with the executed Section 106 MOA.

No later than 90 days after COP approval, the permittee shall make a request to both the Bureau of Safety and Environmental Enforcement (BSEE) Tribal Liaison Officer and the Eastern Seaboard Tribal Liaison at tribalengagement@bsee.gov to coordinate with federally recognized Tribal Nations with geographic, cultural, or ancestral ties to the project area (hereinafter "interested Tribal Nation"), including, but not limited to: Delaware Nation, Delaware Tribe of Indians, Mashantucket Pequot Indian Tribe (Western), Mashpee Wampanoag Tribe, Mohegan Tribe of Indians of Connecticut, Narragansett Indian Tribe, Shinnecock Indian Nation, and Wampanoag Tribe of Gay Head (Aquinnah). The purpose of this coordination is to (1) solicit Tribal Nation interest in participating as an environmental liaison during construction and/or maintenance activities, so the environmental liaison can safely monitor, and participate in postmortem examinations of mortality events, as a result of these activities; and (2) provide open access to the following: reports generated as a result of the Fisheries Research and Monitoring Plan; reports of North Atlantic Right Whale (NARW) sightings; injured or dead protected species reporting (sea turtles, NARW, sturgeon); NARW Passive Acoustic Monitoring (PAM) monitoring; Protected Species Observer (PSO) reports (e.g., pile driving reports); pile driving schedules and schedule changes; and any interim and final sound field verification (SFV) reports, and its associated data. If an interested Tribal Nation expresses interest in participating as an environmental liaison, the permittee shall provide the interested Tribal Nation information regarding training(s), certification(s), and safety measures, required for participation. Environmental liaisons must be invited to monitor/participate from a safe platform, such as a vessel. The permittee shall provide to the interested Tribal Nation, in a manner suitable to the Tribal Nation, access to all ESA reports, Post Review Discovery Plans, and other documents listed in this paragraph no later than 30 days after the information becomes available. The permittee may redact or withhold documents listed in this paragraph when it is information that the permittee would not generally make publicly available and considers that the disclosure may result contrary to the permittee's commercial interests. The permittee shall submit a justification for the request to redact/withhold in writing to the BSEE Tribal Liaison Officer and the Eastern Seaboard Tribal Liaison at tribalengagement@bsee.gov. Only upon approval of such request may the document be redacted/withheld.

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

10.5.1 Section 401 WQC requirement

Is an individual Section 401 WQC required, and if so, has the certification been issued or waived?

An individual WQC is required and has been granted. The applicant received a WQC from the NYSPSC for Case 20-T-0617 issued on August 24, 2023.

10.5.2 401(a)(2) Process

If the certifying authority granted an individual WQC, did the United States Environmental Protection Agency make a determination that the discharge 'may affect'

water quality in a neighboring jurisdiction? No

Provide an explanation of the determination of the effect on neighboring jurisdiction.

On August 24, 2023, USACE provided the WQC to the EPA. In an email dated September 20, 2023, 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 CZMA consistency concurrence

Three (3) CZMA consistency concurrence has been issued for this permit.

The New York State Department of State (NYSDOS) issued a CZM Concurrence with Consistency Certification – Proposal Modified to be Consistent, F-2022-0909, on August 24, 2023 and revised on August 31, 2023.

Rhode Island Coastal Resources Management Council’s issued Coastal Zone Management Concurrence with Consistency Certification (CRMC File No. 2021-09-036) dated September 7, 2023

The Commonwealth of Massachusetts Office of Coastal Zone Management’s issued Coastal Zone Management Concurrence with Consistency Certification dated October 6, 2023

The following condition would be included to ensure compliance with the CZM Concurrence:

Pursuant to 15 CFR 930 Subparts A through I, the permittee 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-2022-0909 dated August 31, 2023.

Pursuant to 15 CFR 930 Subparts A through I, the permittee shall be responsible for, and shall comply with, all of the conditions and stipulations contained within the Commonwealth of Massachusetts Office of Coastal Zone Management’s issued Coastal Zone Management Concurrence with Consistency Certification dated October 6, 2023.

Pursuant to 15 CFR 930 Subparts A through I, the permittee shall be responsible for, and shall comply with, all of the conditions and stipulations contained within the State of Rhode Island Coastal Resources Management Council’s issued Coastal Zone

Management Concurrence with Consistency Certification (CRMC File No. 2021-09-036) dated September 7, 2023.

10.7 Wild and Scenic Rivers Act

10.7.1 National Wild and Scenic River System

Is the project 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? No

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

10.8.1 Permission requirements under Section 14 of the Rivers and Harbors Act (33 USC 408)

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?

Yes.

The proposed activity also requires authorization pursuant to Section 408 for impacts to the Fire Island Inlet to Montauk Point (FIMP) project as well as the LIIW Federal Navigation Channel. On _____, the Corps granted Section 408 Permission.

See Section 408 Memorandum for Record (MFR) enclosed. The following special condition shall be included to ensure compliance with the Section 408 permission:

The permittee shall abide by all Section 408 permission conditions included in the enclosed Section 408 Permission decision document.

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

10.9.1 Wetland Impacts

Does the project propose to impact wetlands? No

10.9.2 Wetland impact public interest review

Based on the public interest review herein, the beneficial effects of the project outweigh the detrimental impacts of the project.

10.10 Other (as needed)

10.10.1 Marine Mammal Protection Act (MMPA)

The applicant has individually applied to the NMFS for an Incidental Take Authorization (ITA) pursuant to the MMPA. The proposed ITA was posted in the Federal Register on February 8, 2023. The Final ITA Regulations are anticipated to be published on May 22, 2024 with a final ITA decision rendered on June 21, 2024 (per the FAST-41 Permitting Dashboard). USACE is not responsible for enforcement of activities under the MMPA.

10.10.2 Outer Continental Shelf (OCS) Air Permit

The applicant has individually applied to the EPA for an OCS Air Permit. Final decision/permit approval is anticipated in May 2024. USACE is not responsible for enforcement of activities under the OCS Air Permit.

10.11 Compliance Statement

The Corps has determined that it has fulfilled its responsibilities under the following laws, regulations, policies, and guidance:

Table 13 – Compliance with Federal Laws and Responsibilities		
Laws, Regulations, Policies, and Guidance	**Yes**	**N/A**
Section 7(a)(2) of the ESA	X	
EFH provisions of the Magnuson-Stevens Act	X	
Section 106 of the NHPA	X	
Tribal Trust	X	
Section 401 of the Clean Water Act	X	
CZMA	X	
Wild and Scenic Rivers Act		X
Section 408 - 33 USC 408	X	
Corps Wetland Policy (33 CFR 320.4(b))		X
Other: N/A		X

11.0 Special Conditions

11.1 Special condition(s) requirement(s)

Are special conditions required to ensure minimal effects, ensure the authorized activity is not contrary to the public interest 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 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.

Rationale: This condition is included to protect the interests of the United States.

B. The permittee shall ensure that all plans, reports, or other documents required to be submitted to this office in relation to this permit must have "Sunrise Wind – NAN-2022-00776" on the title page. All submittals shall be submitted to CENAN-R-PERMIT-APP@USACE.ARMY.MIL and Christopher.W.Minck@usace.army.mil.

Rationale: This condition is included to ensure required plans, reports, and other documents are submitted appropriately to the district.

C. The permittee shall complete and return the enclosed Compliance Certification Forms to this office within 30 days of completion of construction of the authorized work.

Rationale: This condition is included to ensure the district is notified of completion of the project construction.

D. The permittee shall submit an annual report to this office detailing the work that occurred to date and status of compliance with all of the Conditions of this DA Permit. Reports for each year are due by February 15th of the following year.

Rationale: This condition is included to ensure the district is aware of ongoing construction activities to ensure compliance with various permit conditions and reporting requirements.

E. The permittee shall contact this office a minimum of three (3) years in advance of proposed decommissioning to determine permitting requirements. Decommissioning is required at the end of the life of the project, and is not authorized by this Department of the Army (DA) permit.

Rationale: This condition is included to ensure the district is notified well in advance of proposed decommissioning of the project to determine future permitting requirements, since decommissioning is not included in this permit authorization.

F. The permittee shall notify the National Ocean Service (NOS) Office of Coast Survey when you begin cable laying work and work on the OCS and when the work authorized by this permit is completed. When construction of the offshore export cables and other offshore subprojects is complete, the permittee shall notify the NOS's Nautical Data Branch by email at ocs.ndb@noaa.gov, and provide as-built drawings with explicit geographic control, horizontal datum (WGS 84 or NAD83), survey unit, survey date and any other relevant information. Digital data is preferred (e.g., CAD, GIS, PDF, Excel spreadsheets for route position lists of cables, etc.). The notification of completion shall

be done within 90 days of completion of the activities. The permittee shall additionally send this office a copy of this documentation as we may note the location on future survey drawings.

Rationale: This condition is included to ensure appropriate charting and marking of the cable routes.

G. The Permittee must submit BOEM's Construction and Operations Plan (COP) approval to USACE within 30 days of receipt. As USACE also has jurisdiction on the OCS and BOEM was the lead for the National Environmental Policy Act (NEPA) and several agency consultations, numerous DA permit conditions are analogous to BOEM's anticipated conditions of COP approval. USACE will review BOEM's final conditions of COP approval to determine if a permit modification will be required to align these DA permit conditions with the analogous conditions in the COP approval.

Rationale: This condition is included to ensure compliance and consistency with the terms and conditions of BOEM's approval of the project including BMP's and various mitigation measures.

H. The permittee shall abide by all Section 408 permission conditions included in the enclosed Section 408 Permission decision document.

Rationale: This condition is included to ensure compliance with the Section 408 permission conditions to avoid impacts to USACE Civil Works projects.

I. Pursuant to 15 CFR 930 Subparts A through I, the permittee 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-2021-0798 dated August 24, 2023.

Rationale: This condition is included to ensure compliance with the NYSDOS CZM Concurrence and any stipulations included.

J. Pursuant to 15 CFR 930 Subparts A through I, the permittee shall be responsible for, and shall comply with, all of the conditions and stipulations contained within the Commonwealth of Massachusetts Office of Coastal Zone Management's issued Coastal Zone Management Concurrence with Consistency Certification dated October 6, 2023.

Rationale: This condition is included to ensure compliance with the Massachusetts CZM Concurrence and any stipulations included.

K. Pursuant to 15 CFR 930 Subparts A through I, the permittee shall be responsible for, and shall comply with, all of the conditions and stipulations contained within the State of Rhode Island Coastal Resources Management Council's issued Coastal Zone Management Concurrence with Consistency Certification (CRMC File No. 2021-09-036) dated September 7, 2023.

Rationale: This condition is included to ensure compliance with the Rhode Island CZM Concurrence and any stipulations included.

L. This Department of the Army (DA) permit does not authorize you to take an endangered species. In order to legally take a listed species, you must have separate authorization under the Endangered Species Act (ESA) (e.g., an ESA Section 10 permit, or a Biological Opinion (BO) under ESA Section 7, with "incidental take" provisions with which you must comply). The United States Fish and Wildlife Service (USFWS) BO, entitled “Biological Opinion on the Effects of the Sunrise Wind Farm and Sunrise Wind Export Cable – Development and Operation on Federally Listed Species within the Jurisdiction of the Long Island Field Office, New York”, prepared by the U.S. Fish and Wildlife Service, and dated June 2023, contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with "incidental take" that is also specified in the BO. Your authorization under this DA permit is conditional upon your compliance with all of the mandatory terms and conditions associated with the incidental take statement of the attached BO, which terms and conditions are incorporated by reference in this permit. Failure to comply with the terms and conditions associated with the incidental take statement of the BO, where a take of the listed species occurs, would constitute an unauthorized take, and it would also constitute noncompliance with your DA permit. The USFWS is the appropriate authority to determine compliance with the terms and conditions of its BO, and with the ESA.

Rationale: This condition is included to ensure impacts to ESA-listed species are minimized.

M. This DA permit does not authorize you to take an endangered species. In order to legally take a listed species, you must have separate authorization under the ESA (e.g., an ESA Section 10 permit, or a BO under ESA Section 7, with "incidental take" provisions with which you must comply). The National Marine Fisheries Service (NMFS) BO for the Sunrise Wind Offshore Energy Project, entitled “National Marine Fisheries Service Endangered Species Act Section 7 Consultation Biological Opinion”, prepared by the National Marine Fisheries Service, and dated September 28, 2023, contains mandatory terms and conditions, including specified provisions of any incidental take authorization pursuant to the Marine Mammal Protection Act, to implement the reasonable and prudent measures that are associated with "incidental take" that is also specified in the BO. Your authorization under this DA permit is conditional upon your compliance with all of the mandatory terms and conditions associated with the incidental take statement of the attached BO, which terms and conditions are incorporated by reference in this permit. Failure to comply with the terms and conditions associated with the incidental take statement of the BO, where a take of the listed species occurs, would constitute an unauthorized take, and it would also constitute noncompliance with your DA permit. The NMFS is the appropriate authority to determine compliance with the terms and conditions of its BO, and with ESA.

Rationale: This condition is included to ensure impacts to ESA-listed species are

minimized.

N. The permittee shall comply with the enclosed Memorandum of Agreement (MOA), entitled “Memorandum of Agreement among the Bureau of Ocean Energy Management, the Mashpee Wampanoag Tribe, the Mashantucket (Western) Pequot Tribal Nation, and the Wampanoag Tribe of Gay Head (Aquinnah), the Massachusetts State Historic Preservation Officer, the Rhode Island State Historic Preservation Officer, the New York State Historic Preservation Officer, the Connecticut State Historic Preservation Officer, Sunrise Wind LLC, and the Advisory Council on Historic Preservation regarding the Sunrise Wind farm (Lease Number OCS-A 0487) that was fully executed on March 25, 2024.

Rationale: This condition is included to ensure compliance with Section 106 of the NHPA.

O. No later than 90 days after COP approval, the permittee shall make a request to both the Bureau of Safety and Environmental Enforcement (BSEE) Tribal Liaison Officer and the Eastern Seaboard Tribal Liaison at tribalengagement@bsee.gov to coordinate with federally recognized Tribal Nations with geographic, cultural, or ancestral ties to the project area (hereinafter “interested Tribal Nation”), including, but not limited to: Delaware Nation, Delaware Tribe of Indians, Mashantucket Pequot Indian Tribe (Western), Mashpee Wampanoag Tribe, Mohegan Tribe of Indians of Connecticut, Narragansett Indian Tribe, Shinnecock Indian Nation, and Wampanoag Tribe of Gay Head (Aquinnah). The purpose of this coordination is to (1) solicit Tribal Nation interest in participating as an environmental liaison during construction and/or maintenance activities, so the environmental liaison can safely monitor, and participate in postmortem examinations of mortality events, as a result of these activities; and (2) provide open access to the following: reports generated as a result of the Fisheries Research and Monitoring Plan; reports of North Atlantic Right Whale (NARW) sightings; injured or dead protected species reporting (sea turtles, NARW , sturgeon); NARW Passive Acoustic Monitoring (PAM) monitoring; Protected Species Observer (PSO) reports (e.g., pile driving reports); pile driving schedules and schedule changes; and any interim and final sound field verification (SFV) reports, and its associated data. If an interested Tribal Nation expresses interest in participating as an environmental liaison, the permittee shall provide the interested Tribal Nation information regarding training(s), certification(s), and safety measures, required for participation. Environmental liaisons must be invited to monitor/participate from a safe platform, such as a vessel. The permittee shall provide to the interested Tribal Nation, in a manner suitable to the Tribal Nation, access to all ESA reports, Post Review Discovery Plans, and other documents listed in this paragraph no later than 30 days after the information becomes available. The permittee may redact or withhold documents listed in this paragraph when it is information that the permittee would not generally make publicly available and considers that the disclosure may result contrary to the permittee's commercial interests. The permittee shall submit a justification for the request to redact/withhold in writing to the BSEE Tribal Liaison Officer and the Eastern Seaboard Tribal Liaison at tribalengagement@bsee.gov. Only upon approval of such request may the document

be redacted/withheld.

Rationale: This condition is included to ensure compliance with Section 106 of the NHPA and satisfy tribal trust compliance.

P. The permittee must prepare and implement a Sequencing Plan that describes how construction activities will be sequenced to avoid or minimize impacts to Atlantic cod spawning. The plan must specifically describe how construction-related bottom disturbing activities (e.g., sea-bed prep, interarray cable installation and burial, scour protection installation, boulder relocation and/or removal, foundation site preparation, WTG or OCS-DC installation including pile driving, and other construction-related bottom disturbing activities) will occur such that construction-related bottom disturbing activities are avoided and/or minimized as listed below:

a. The Sequencing Plan must describe, to BSEE's and BOEM's satisfaction, how the construction schedule for pile driving is designed, to the extent technically or economically feasible and practicable, to avoid and/or minimize any pile driving in the lease area between November 1 and December 31. If pile driving is necessary during this time period, The permittee shall describe in detail the specific measures taken to minimize acoustic exposure ranges for fish and how pile driving is limited to WTG positions in the southernmost and easternmost portions of the lease area, to the extent technically or economically feasible and practicable.
b. The Sequencing Plan must describe, to BSEE's and BOEM's satisfaction, how the schedule for construction-related bottom disturbing activities other than pile driving is designed, to the extent technically or economically feasible and practicable, to avoid and/or minimize any construction-related bottom disturbing activities between November 1 and March 31. If construction-related bottom disturbing activities are necessary during this time period, The permittee shall describe in detail how these activities are limited to the southernmost and easternmost portions of the lease area, to the extent technically or economically feasible and practicable.
c. The Sequencing Plan must provide a detailed construction schedule that includes installation timeframes and locations for all construction related bottom disturbing activities inclusive of seabed preparation and installation activities.
d. The permittee shall submit the Sequencing Plan to this office, BOEM, and BSEE for coordination with NMFS GARFO-HESD for a 60-day review, 120 days prior to site preparation activities for inter-array cables and WTGs. The permittee shall resolve all comments on the Sequencing Plan to BOEM's and BSEE's satisfaction prior to implementation of the plan. If there are less than 120 days between site preparation activities and this COP approval, The permittee shall submit the plan as soon as practicable and no later than 60 days prior to commencing activities.
e. The permittee shall provide a summary describing the implementation of the

Sequencing Plan in the Annual Certification under 30 C.F.R. § 285.633.

Rationale: This condition is included to minimize impacts to EFH and EFH-listed species.

Q. Prior to OCS sea-bed prep, inter-array cable installation, foundation site preparation, and other construction-related bottom disturbing activities (e.g., boulder relocation and/or removal, cable lay and burial, scour protection installation), the permittee shall prepare and implement a Cod Spawning Monitoring Plan to monitor for Atlantic cod aggregations in the lease area between November 1 and March 31 of each year during which construction activities are planned.

a. The permittee shall carry out monitoring in a manner consistent with/comparable to existing cod monitoring studies conducted in the lease area (e.g., Atlantic cod passive acoustic and telemetry study, Movement Patterns of Fish in Southern New England AT-19-08) and use both Passive Acoustic Monitoring (PAM) and acoustic telemetry technology.
b. The permittee shall submit the plan to BOEM and BSEE for coordination with NMFS GARFO-HESD for a 60-day review at least 120 days before the commencement of in-water construction on the OCS. The permittee shall resolve all comments on the plan to BOEM's and BSEE's satisfaction prior to implementation of the Plan. If there are less than 120 days between commencement of in-water construction on the OCS and this COP approval, The permittee shall submit the plan as soon as practicable and no later than 60 days prior to commencing activities.
c. The permittee shall submit an annual Cod Spawning Monitoring Report within 90 days of the completion of each survey season to BOEM and BSEE for coordination with NMFS GARFO-HESD. The report must include documentation of any cod detections and contain information on all survey activities that took place during the season, including location of equipment and location, time, and date of detections. The report on survey activities must be comprehensive of all activities, regardless of whether cod were detected. Following the completion of each monitoring campaign, The permittee shall make all data collected from PAM and acoustic telemetry publicly available. Detection data will be shared through the Atlantic Coast Telemetry Network and the Mid-Atlantic Telemetry Observing System (MATOS). Specifically, sensor and biological data should be publicly disseminated by packaging the data according to MATOS data standards.

Rationale: This condition is included to minimize impacts to EFH and EFH-listed species.

R. If, prior to BSEE's review of the applicable Facility Design Report (FDR) or Fabrication and Installation Report (FIR) , the Permittee determines that fewer than 84 WTGs will be constructed for the Sunrise Wind project, The permittee shall prioritize removal from the following positions in order: WTGs 92, 93, 94, 91, 95, 122, and 123, and then any other WTG positions in Priority Area 1. Priority Area 1 includes WTGs 87,

88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 120, 121, 122, 123, 124, 150, 151, and OCS-DC. If applicable, The permittee shall describe how it prioritizes the removal of the listed WTG positions in the FDR/FIR.

Rationale: This condition is included to minimize impacts to EFH and EFH-listed species.

S. The permittee shall prepare and implement a Micrositing Plan(s) that describes how wind turbine locations, OCS-DC, inter-array cables and export cable routes will be microsited to avoid or minimize impacts to sensitive benthic habitat, potential and confirmed Munitions and Explosives of Concern (MEC)/Unexploded Ordinances (UXO) ; known and potential shipwrecks, and Ancient Submerged Land Forms (ASLFs) . The plan(s) must specifically describe how inter-array and export cable routes will be microsited to avoid or minimize impacts to sensitive benthic habitats, including boulders greater than or equal to 0.5 m, as technically and/or economically practicable or feasible. The plan(s) must describe MEC/UXO ALARP Certified areas, which should be consistent with MEC/UXO As Low As Reasonably Practical (ALARP) Certification. To the extent practicable, cables should cross sensitive benthic habitat areas perpendicularly at the narrowest points; cables unable to avoid benthic features such as sand waves should be sited along natural benthic contours within troughs/lows, to maximize cable burial while minimizing disturbance to local submarine topography. The permittee shall submit detailed supporting data and analysis as part of the FDR or FIR, including relevant geophysical and geospatial data. The submission of the data may be incorporated by reference or submitted as an attachment to the FDR or FIR. The Micrositing Plan must be consistent with MEC/UXO ALARP Certification, Cable Burial Risk Assessment, and Boulder Identification and Relocation Plan. The Micrositing Plan must include a figure for each microsited WTG or cable segment, including benthic habitat delineations showing sensitive benthic habitat and locations of boulders greater than or equal to 0.5 m. The plan must include a figure encompassing the lease area, depicting large boulder locations, benthic habitat delineations, and the proposed microsited locations for cables and WTGs. Benthic habitat (NOAA complexity categories) and benthic feature/habitat type maps in conjunction with backscatter, bathymetry, and boulder layers should be used to inform the Micrositing Plan.

a. For cables that cannot be microsited to avoid impacts to sensitive benthic habitat or boulders greater than or equal to 0.5 m, the micrositing plan must identify technically and economically practicable or feasible impact minimization measures and use the following prioritized list, including complex habitat sub-types (using NMFS complexity categories), to avoid during micrositing: complex habitats with high density large boulders; complex habitats with medium density large boulders; complex habitats with low density large boulders; complex habitats with scattered large boulders; complex habitats with no large boulders.
b. The Micrositing Plan must be submitted to BOEM and BSEE for coordination with NMFS GARFO-HESD for a 60-day review, 120 days prior to site preparation activities for cables, WTGs and OCS-DC within the scope of the plan. The permittee shall resolve all comments on the Micrositing Plan(s) to BOEM’s and BSEE’s satisfaction prior to implementation of each plan. If there are less than

120 days between site preparation activities and this COP approval, The permittee shall submit the plan as soon as practicable and no later than 60 days prior to commencing activities. The final version of the Micrositing Plan(s) must be provided to BOEM, BSEE, NMFS GARFO-HESD, and USACE.

Rationale: This condition is included to minimize impacts to EFH and EFH-listed species.

T. Where plows, jets, grapnel runs, or other similar methods are used, post-construction surveys capable of detecting bathymetry changes of 1.5 foot or less must be completed to determine the height and width of any created berms. The permittee shall capture bathymetry changes greater than 3 feet during the first and second post-installation surveys along the cable routes. If there are bathymetric changes in berm height greater than 3 feet above grade after the second survey, The permittee shall develop and implement a Berm Remediation Plan to restore created berms to match adjacent natural bathymetric contours (isobaths). The permittee shall submit the Berm Remediation Plan to BOEM and BSEE for coordination with NMFS for a 60-day review within 90 days of completion of the Year 1 MBES bathymetry survey. The permittee shall resolve all comments on the Berm Remediation Plan to BOEM's and BSEE's satisfaction prior to initiating restoration activities. The final version of the Berm Remediation Plan must be provided to BOEM, BSEE, NMFS and USACE.

Rationale: This condition is included to minimize impacts to EFH and EFH-listed species.

U. The permittee shall submit a Boulder Identification and Relocation Plan(s) to BSEE for review and concurrence. The plan(s) must be submitted to BOEM and BSEE for coordination with NMFS for a 60-day review, 120 days prior to boulder relocation and/or removal activities within the scope of the plan. The permittee shall resolve all comments on the Boulder Identification and Relocation Plan(s) to BOEM's and BSEE's satisfaction prior to implementation of each plan. If BOEM or BSEE do not provide comments on a plan within 60 days of its submittal, then the Permittee may presume concurrence with the plan. A copy of the final plan(s) must be provided prior to construction to BOEM, BSEE, USACE and NMFS.

a. The plan must detail how the Permittee will avoid or minimize impacts to sensitive benthic habitats and relocate boulders as close as practicable to the original location, in areas of soft bottom but immediately adjacent to similar habitat. The plan(s) should use benthic habitat (NOAA complexity categories) and benthic feature/habitat type maps in conjunction with backscatter and boulder layers to inform the siting of boulders. The plan(s) must include sufficient scope to mitigate boulders for facility installation and operation risks. The plan(s) must be consistent with and meet the conditions of the Safety Management System (SMS) . The plan(s) must include the following for boulders that are proposed to be relocated:

- A summary and detailed description of surface boulders greater than 0.5 m in diameter, locations of areas with subsurface boulders and locations along the cable routes and WTG areas where such boulders have been found;
- A detailed summary of methodologies used in boulder identification, including geological and geophysical survey results;
- Figures of the locations of boulder relocation and/or removal activities specified by activity type (e.g., pick or plow, removal, or placement) and overlaid on multibeam bathymetry and backscatter data;
- A description of boulder removal and/or relocation and/or relocation methods for each type of boulder relocation and/or removal activity and technical feasibility constraints, including capacity of crane used in grab systems, vessel specifications and metocean limits on operation, etc.;
- The environmental footprint of disturbance activities by habitat type and measures taken to avoid further adverse impacts to archaeological resources, sensitive benthic habitats and fishing operations;
- A comprehensive list and shapefile of locations of boulders that would be relocated (latitude, longitude), boulder dimensions (m), buffer radius (m), areas of active (within last 5 years) bottom trawl fishing (latitude, longitude), areas where boulders greater than 2 ms in diameter are anticipated to occur (latitude, longitude), and identification of approximate areas to which boulders would be relocated (latitude, longitude);
- The measures taken to minimize the quantity of seafloor obstructions from relocated boulders in areas of active bottom trawl fishing;
- A description of safety distances or zones to limit boulder relocation and/or removal near third-party assets;
- A description of MEC/UXO ALARP Certified areas, which should be consistent with MEC/UXO ALARP Certification;
- A summary of any consultation and outreach conducted with resource agencies and the fishing industry in development of the plan (e.g., notifications to mariners);
- A statement of consistency with the Micrositing Plan.
- The permittee shall provide USACE, USCG, NOAA, and the local harbormaster with a comprehensive list and shapefile of positions and areas to which boulders would be relocated (latitude, longitude) at least 60 days prior to boulder relocation and/or removal activities.

b. The permittee shall implement methods identified in the approved COP and described in the Boulder Identification and Relocation Plan (described above) for boulder relocation and/or removal activities. The permittee shall consider the spatial extent of boulder relocation and/or removal in the micrositing of WTGs and OCS-DC foundations and inter-array and export cables for this Project and must relocate boulders as close as practicable to areas immediately adjacent to existing similar habitat. The relocation of boulders must be consistent with the

Project easement.

c. The permittee shall provide to BSEE and BOEM and make available to the approved Certified Verification Agent (CVA) a Boulder Relocation Report. The report must include a post-relocation summary of the Boulder relocation and/or removal activities and information to certify boulder risks related to the installation and operation of the facility have been properly mitigated. The report must also identify boulders that could not be relocated with documentation of technical feasibility concerns, including information on how, if at all, the final boulder placement differs from the Boulder Relocation Plan and why such changes were necessary. The report must be submitted within 60 days of completion of the boulder relocation and/or removal activities and prior to or with the relevant FIR. The permittee shall also provide BOEM and BSEE a comprehensive list and shapefile of boulder locations to which boulders were relocated (latitude, longitude), boulder dimensions (m), any safety distances or zones to limit boulder relocation and/or removal near third-party assets (m), and areas of active (within last 5 years) bottom trawl fishing (i.e., as a raster file for use in ArcGIS).

Rationale: This condition is included to minimize impacts to EFH and EFH-listed species.

V. The permittee shall prepare and implement an Anchoring Plan(s) for all areas where anchoring or buoy placement occurs and jack-up barges are used during construction and operations/maintenance within 1,640 feet (500 m) of habitats, resources, and submerged infrastructure that are sensitive, including sensitive benthic habitats;21 boulders greater than or equal to 0.5 m; ancient submerged landform features (ASLFs); known and potential shipwrecks; potentially significant debris fields; potential hazards; third-party infrastructure, and any related facility installation activities (such as cable, WTG, and OCS-DC installation). Avoidance buffers must be consistent with the following: potential unexploded ordnances will be shown with an exclusion zone consistent with risks identified in the MEC/UXO Desktop Study; confirmed UXO will be shown with exclusion zone relative to risks of planned activities; avoidance of cultural resources (shipwrecks and ASLFs) will be consistent with as-built or as-laid position plats. The permittee shall provide to all construction and support vessels the locations where anchoring or buoy placement must be avoided to the extent technically and/or economically practicable or feasible, including sensitive benthic habitats; boulders greater than or equal to 0.5 m; ASLFs; known and potential shipwrecks; potentially significant debris fields; potential hazards; and any related facility installation activities (such as cable, WTG, and OCS-DC installation). Dynamic positioning systems should be used in these areas instead of anchoring, as practicable. If anchoring is necessary at these locations, then all vessels deploying anchors must extend the anchor lines to the extent practicable to minimize the number of times the anchors must be raised and lowered to reduce the amount of habitat disturbance, unless the anchor chain sweep area includes sensitive benthic habitat that may be impacted by the chain sweep. On all vessels deploying anchors, The permittee shall use mid-line anchor buoys to reduce the amount of anchor chain or line that touches the seabed, unless the Permittee

demonstrates, and BOEM and BSEE accept, that (1) the use of mid-line anchor buoys to reduce the amount of anchor chain or line that touches the seabed is not technically practical or feasible; or (2) a different alternative is as safe and provides the same or greater environmental protection. If placement of jack-up barge spud cans is necessary in sensitive benthic habitats, locations for the spud cans must be selected to avoid or minimize impacts according to the following prioritized list, including complex habitat sub-types (using NMFS complexity categories): complex habitats with high density large boulders; complex habitats with medium density large boulders; complex habitats with low density large boulders; complex with scattered large boulders; complex habitats with no large boulders; as technically feasible and practicable. Benthic habitat (NOAA complexity categories) and benthic feature/habitat type maps in conjunction with backscatter, bathymetry, and boulder layers should be used to inform the anchoring plan.

a. The permittee shall provide the proposed Anchoring Plan to BOEM and BSEE for coordination with NMFS GARFO-HESD for a 60-day review at least 120 days before anchoring activities or construction begins for export and inter-array cables. The permittee shall resolve all comments on the Anchoring Plan to BOEM's and BSEE's satisfaction before conducting any OCS seabed-disturbing activities that require anchoring. If there are less than 120 days between anchoring activities and this COP approval, The permittee shall submit the plan as soon as practicable and no later than 60 days prior to commencing activities.

The final version of each Anchoring Plan must be provided to BOEM, BSEE, NMFS GARFO-HESD, and USACE.

Rationale: This condition is included to minimize impacts to EFH and EFH-listed species.

W. The permittee shall prepare and implement a Scour and Cable Protection Plan(s) that includes descriptions and specifications for all scour and cable protection materials. The plan(s) must include depictions of the location and extent of scour and cable protection, the habitat delineations for the areas of cable protection measures, and detailed information on the proposed scour or cable protection materials for each area and habitat type. The Scour and Cable Protection Plan(s) must demonstrate consistency with the Micrositing Plan(s) and Sequencing Plan(s), as appropriate.

a. The permittee shall avoid the use of engineered stone or concrete mattresses in complex habitat, as practicable and feasible. The permittee shall ensure that all materials used for scour and cable protection measures consist of natural or engineered stone that does not inhibit epibenthic growth and provides three-dimensional complexity in height and in interstitial spaces, as practicable and feasible. If concrete mattresses are necessary, bioactive concrete (i.e., with bio-enhancing admixtures) must be used as practicable as the primary scour protection (e.g., concrete mattresses) or veneer to support biotic growth.
b. Cable protection measures must have tapered or sloped edges to reduce hangs for mobile fishing gear. The permittee shall avoid the use of plastics/recycled

polyesters/net material (i.e., rock-filled mesh bags, fronded mattresses) for scour protection.

c. The Scour and Cable Protection Plan(s) must be submitted to BOEM and BSEE for coordination with NMFS GARFO-HESD for a 60-day review, at least 120 days prior to placement of scour and cable protection within the area covered by the scope of the Plan(s). The Scour and Cable Protection Plan(s) must be concurred with by BOEM and BSEE prior to BSEE issuing a no-objection to the relevant FDR.
d. The permittee shall resolve all comments on each Plan to BOEM's and BSEE's satisfaction before placement of the scour and cable protection materials. The final version of the Scour and Cable Protection Plan(s) must be provided to BOEM, BSEE, NMFS GARFO-HESD and USACE.

Rationale: This condition is included to minimize impacts to EFH and EFH-listed species.

X. The permittee shall report any occurrence of at least 10 dead non-ESA-listed fish within established shutdown or monitoring zones to BOEM and to BSEE (via email to protectedspecies@bsee.gov) as soon as practicable (taking into account crew and vessel safety), but no later than 24 hours after the sighting. BOEM or BSEE will notify NMFS GARFO-HESD. The permittee shall confirm the relevant point of contact prior to reporting and confirm the reporting was received.

Rationale: This condition is included to minimize impacts to EFH and EFH-listed species.

Y. The permittee shall conduct fisheries and benthic monitoring according to the Sunrise Wind Fisheries and Benthic Monitoring Plan to assess fisheries and benthic habitat status in the Project area pre-, during, and post-construction. The permittee shall review all NMFS GARFO comments on the Fisheries and Benthic Monitoring Plan that BOEM provides to the permittee and revise the Plan, as appropriate. The permittee shall resolve all comments on the Plan to BOEM's and BSEE's satisfaction prior to implementation of the revised Plan. A copy of the final Fisheries and Benthic Monitoring Plan shall be provided to this office within 30 days of BOEM & BSEE's approval.

Rationale: This condition is included to minimize impacts to EFH and EFH-listed species.

Z. The permittee shall, to the extent it is technically and/or economically practicable or feasible, The permittee shall avoid using Zinc sacrificial anodes on external components of WTG and OCS-DC foundations to reduce the release of metal contaminants in the water column.

Rationale: This condition is included to minimize impacts to EFH and EFH-listed species.

AA. The permittee shall utilize vibratory pile driving to the maximum extent practicable for both installation and removal of the temporary pier , as practicable.

Rationale: This condition is included to minimize impacts to EFH and EFH-listed species.

BB. The permittee shall utilize a soft start during pile installation of the temporary pier on the Intra-coastal Waterway. If pile driving is occurring during a time of year when ESA-listed species may be present, and the anticipated noise is above the behavioral noise threshold, a “soft start” is required to allow animals an opportunity to leave the project vicinity before sound pressure levels increase. In addition to using a soft start at the beginning of the work day for pile driving, one must also be used at any time following cessation of pile driving for a period of 30 minutes or longer. For impact pile driving: pile driving will commence with an initial set of three strikes by the hammer at 40% energy, followed by a one minute wait period, then two subsequent 3-strike sets at 40% energy, with one-minute waiting periods, before initiating continuous impact driving. For vibratory pile installation: pile driving will be initiated for 15 seconds at reduced energy followed by a one-minute waiting period. This sequence of 15 seconds of reduced energy driving, one-minute waiting period will be repeated two additional times, followed immediately by pile-driving at full rate and energy.

Rationale: This condition is included to minimize impacts to EFH and EFH-listed species.

CC. The permittee shall avoid in-water work within Narrow Bay/Long Island Intracoastal Waterway from January 15 to May 31 of any calendar year in estuarine/nearshore waters of 6 meters (m) in depth or less to avoid impacts to winter flounder early life stages (eggs, larvae) with the exception of the installation and/or removal of the temporary pier along in Narrow Bay/Long Island Intracoastal Waterway. If work is conducted from January 15 to May 31, a turbidity curtain shall be used around the construction area, as practicable.

Rationale: This condition is included to minimize impacts to EFH and EFH-listed species.

DD. The permittee shall avoid and minimize impacts to sensitive benthic habitats in all inshore/estuarine habitats where seafloor preparation and cable installation activities will occur through the use of HDD, micrositing, and rerouting, as practicable. The permittee shall conduct post-construction surveys to determine any impacts to sensitive benthic habitats. The permittee shall coordinate with USACE, BOEM, BSEE, and NMFS regarding potential remedial steps to disturbed benthic habitats, as necessary. All survey results shall be provided to NMFS HESD at NMFS.GAR.HESDoffshorewind@noaa.gov.

Rationale: This condition is included to minimize impacts to EFH and EFH-listed species.

EE. The permittee shall ensure that all vessels avoid vessel grounding by floating at all stages of the tide or utilizing appropriate spudding, jack-ups or anchoring to avoid vessel grounding. Any spudding, jack-ups or anchoring utilized shall avoid sensitive benthic habitats to the maximum extent possible.

Rationale: This condition is included to minimize impacts to EFH and EFH-listed species.

FF. The permittee shall avoid trenching in open nearshore/estuarine waters, as practicable. If open trenching is used, dredged/excavated materials shall not be sidecast or placed in the aquatic environment.

Rationale: This condition is included to minimize impacts to EFH and EFH-listed species.

GG. During dredging/excavation of HDD exit pits, the permittee shall dispose of all dredged material at a state approved upland facility if any material is identified to be contaminated. Contaminated sediment shall not be side-casted or stored within any waterway. If the dredged material is contaminated, the permittee shall utilize clean fill to backfill areas where any contaminated sediment was dredged from the HDD exit pit. If the material is not contaminated, the dredged/excavated material may be sidecasted and the side casted material shall be allowed to backfill the HDD exit pit upon completion of the HDD activities.

Rationale: This condition is included to minimize impacts to EFH and EFH-listed species.

HH. The permittee shall submit the final copy of the Frackout/Inadvertent Release plan to NMFS HESD at NMFS.GAR.HESDoffshorewind@noaa.gov and to USACE a minimum of 60 days prior to construction.

Rationale: This condition is included to minimize impacts to EFH and EFH-listed species.

II. The permittee shall avoid seabed disturbing activities in Submerged Aquatic Vegetation (SAV). The permittee shall not moor barges in SAV or SAV habitat and shall maintain a minimum 100 foot buffer between the edge of any SAV beds and any equipment staging or anchoring activities. Additionally, the permittee shall ensure that SAV surveys be provided to vessels/captains to ensure SAV is avoided during construction to the maximum extent practicable.

Within 60 days of completion of each activity in the Intracoastal Waterway (the installation of the temporary pier, the HDD work, and the removal of the temporary pier) the Permittee must submit a post-construction report to USACE and NMFS HESD detailing the following information, as applicable:

a. The dates during which the work occurred.
b. Methods utilized for pile installation (vibratory, impacted, etc.)
c. Vessels (type and quantity) utilized for the work, the method of anchoring, and the length of time they were anchored.
d. For any mooring or staging work in previously mapped SAV that could not be avoided, the date(s) the impacts occurred, the length of time of the impacts, and the specific activities within SAV resources.
e. For any inadvertent releases that occurred during the HDD work, the date(s), the location, the proximity to the SAV beds, and the measures taken to mitigate the situation.
f. If the initial HDD work was unsuccessful, indicate the size and location of the new entry and exit pits, whether the exit pits were located within the shellfish survey area, and whether the 100-foot buffer from SAV resources was maintained.
g. If the second set of pits failed and trenching in isolation is required,, indicate the length, width, and depth of the trench, the distance from the trench and side slopes to the closest SAV resources, and the square footage of any direct impacts to SAV resources from this activity.

USACE and NMFS will have 90 days to review the report and to determine if a post-construction SAV survey will be required due to anchoring, mooring, or staging in mapped SAV or impacts to SAV resulting from an inadvertent return. If so, the Permittee will perform an SAV survey during the next SAV growing season in accordance with the guidelines mentioned above. USACE will then review the SAV survey within 60 days of submission to determine if restoration and/or compensatory mitigation is required. Any required compensatory mitigation will comply with USACE's 2008 compensatory mitigation rule (33 CFR 332).

Rationale: This condition is included to minimize impacts to EFH and EFH-listed species.

JJ. The permittee shall avoid in-water work within 1000-feet of Mean High Water on the ocean side of the Long Island Beaches including the Fire Island National Seashore between May 15 to July 15 of any calendar year to avoid and minimize impacts to horseshoe crab spawning.

Rationale: This condition is included to minimize impacts to EFH and EFH-listed species.

KK. As there are 10 NMFS scientific surveys that overlap the Sunrise Wind project, consistent with NMFS and BOEM survey mitigation strategy, the permittee shall submit to BOEM and USACE, a survey mitigation agreement between NMFS and the Permittee within 120 days of the COP approval. The survey mitigation agreement must describe how the permittee will mitigate the Project impacts on the eight NMFS surveys. The permittee shall conduct activities in accordance with such agreement.

If the permittee and NMFS fail to reach a survey mitigation agreement, then the permittee shall submit a Survey Mitigation Plan to BOEM and NMFS that is consistent with the mitigation activities, actions, and procedures described below, within 180 days of COP approval. BOEM will review the Survey Mitigation Plan in consultation with NMFS Northeast Fisheries Science Center (NEFSC). The permittee shall resolve comments to BOEM's satisfaction and must conduct activities in accordance with the plan.

a. As soon as reasonably practicable, but no later than 30 days after the issuance of the Project's COP approval, the Permittee shall initiate coordination with NMFS NEFSC at nefsc.survey.mitig@noaa.gov to develop the survey mitigation agreement described above. Mitigation activities specified under the agreement must be designed to mitigate the Project impacts on the following NMFS NEFSC surveys: (a) Spring Multi-species Bottom Trawl survey; (b) Autumn Multi-species Bottom Trawl survey; (c) Ecosystem Monitoring survey; (d) Aerial marine mammal and sea turtle survey; (e) Shipboard marine mammal and sea turtle survey; (f) Atlantic surfclam and ocean quahog survey; (g) Atlantic sea scallop survey; and (h) Seal survey; (i) NARW survey; (j) Sea Turtle Ecology survey. At a minimum, the survey mitigation agreement must describe actions and the means to address impacts on the affected surveys due to the preclusion of sampling platforms and impacts on statistical designs. NMFS has determined that the project area is a discrete stratum for surveys that use a random stratified design. This agreement may also consider other anticipated Project impacts on NMFS surveys, such as changes in habitat and increased operational costs due to loss of sampling efficiencies.
b. The survey mitigation agreement must identify activities that will result in the generation of data equivalent to data generated by NMFS's affected surveys for the duration of the Project. The survey mitigation agreement must describe the implementation procedures by which the Permittee will work with NEFSC to generate, share, and manage the data required by NEFSC for each of the surveys impacted by the Project, as mutually agreed upon between the Permittee and NMFS NEFSC. The survey mitigation agreement must also describe the Permittee's participation in the NMFS NEFSC Northeast Survey Mitigation Program to support activities that address regional-level impacts for the surveys listed above. The agreement must include provisions that provide criteria for changing mitigation activities over time, or timeframes for review and reconsideration of the agreement based on updated information, or both.

Rationale: This condition is included to minimize impacts to EFH and EFH-listed species.

LL. The permittee shall provide the locations of relocated boulders, created berms, and scour protection, including cable protection measures (i.e., concrete mattresses) shall be provided to NOAA Fisheries, BOEM, BSEE, USCG, and USACE, and the public as soon as possible to help inform all interested parties of potential gear

obstructions.

Rationale: This condition is included to minimize impacts to EFH and EFH-listed species.

MM. The permittee shall provide Ichthyoplankton and zooplankton samples collected as part of the Biological Monitoring outlined in the NPDES permit to NOAA Fisheries NEFSC to cross-verify samples for incorporation into the Ecosystem Monitoring Program plankton dataset.

Rationale: This condition is included to minimize impacts to EFH and EFH-listed species.

NN. The permittee shall ensure that the minimum burial depth for the export and inter-array cables on the OCS is four feet below the stable seabed and a minimum of six feet below the stable seabed within State Waters. The minimum burial depth shall be measured from the top of the cable.

a. In any area/s on the OCS where the minimum burial depth requirement cannot be met, the permittee shall deploy cable protection measures (i.e. concrete mattressing, rock bags or rock placement). The cable protection measures must comply with the scour and/or cable protection measure plans.

Rationale: This condition is included to ensure proper cable burial depths are achieved and sufficient protection is provided.

OO. The permittee shall conduct an inspection of each inter-array and export cable to determine cable location, burial depths, the state of the cable, and site conditions within 6 months, 1 year, and 2 years of commissioning, and every 3 years thereafter (e.g., years 5, 8, 11, 14, 17, 20, and 23 after commissioning). These surveys must also be conducted within 180 days of a storm event (as defined in the Post-Storm Event Monitoring Plan). The permittee shall provide BSEE, BOEM, and USACE with a cable monitoring report within 90 days following each inspection. Inspections of the inter-array and export cables must include high-resolution geophysical (HRG) methods, involving, for example, multibeam bathymetric survey equipment; and must identify seabed features, natural and man-made hazards, and site conditions along Federal sections of the cable routing.

a. If this office determines that burial conditions have deteriorated or changed significantly and remedial actions are warranted, this office will notify the permittee and the permittee shall implement corrective actions required to ensure compliance with this permit.

Rationale: This condition is included to ensure the location of the cables are monitored to ensure sufficient coverage and cable protection.

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.

Section 3.4 of the BOEM FEIS outlines Air Quality Impacts.

12.2 Presidential Executive Orders (EO)

12.2.1 EO 11988, Floodplain Management

This action is not located in a floodplain.

12.2.2 EO 12898 and EO 14008, Environmental Justice

12.2.2.1 Provide details regarding screening and mapping tools and available information utilized during the review.

The BOEM FEIS Section 3.17 details BOEM's analysis of the project alternatives with regarding to Environmental Justice (EJ). BOEM utilized available state mapping tools, EPA's EJSCREEN to identify communities meeting specified criteria for minority or income status, and NOAA's social indicator mapping to identify EJ populations that also have a high level of fishing engagement or fishing reliance.

12.2.2.2 Have disadvantaged communities been identified within the vicinity of the proposed project?

Yes, refer to FEIS Section 3.17 for more information.

12.2.2.3 What meaningful involvement efforts did the Corps take for potentially affected disadvantaged communities and other interested individuals, communities, and organizations?

BOEM, as the lead federal agency, was responsible for meaningful involvement. The Corps outlined our responsibility and involvement at the public hearings hosted by BOEM.

12.2.2.4 Describe if resource impacts are high and adverse.

BOEM concludes that environmental justice populations would not experience

disproportionately high and adverse effects related to construction, O&M, and decommissioning of onshore infrastructure. Regional port utilization, construction, O&M, and decommissioning of offshore structures could have major impacts on some commercial fishing operations that use the Lease Area, with potential for indirect impacts on employment in related industries that could affect environmental justice populations. Cable emplacement and maintenance and construction noise would also contribute to impacts on commercial fishing. The long-term presence of offshore structures would also have major impacts on scenic and visual resources and viewer experience from some onshore viewpoints that could affect environmental justice populations. The Corps concurs with the findings in the FEIS.

Do the impacts fall disproportionately on disadvantaged communities? No

BOEM anticipates that the combined impacts of the project on EJ populations would be moderate overall, with minor beneficial impacts. The Corps concurs with the findings in the FEIS. See the conclusion for the proposed action in the FEIS Section 3.17.

12.2.2.5 Based upon the discussion and analysis in the preceding sections, the Corps has determined that the portions of the proposed project within our federal control and responsibility would not have a disproportionately high and adverse human health or environmental effect on disadvantaged communities.

12.2.3 EO 13112, Invasive Species, as amended by EO 13751

There are no invasive species issues involved in this proposed project.

12.2.4 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 Findings of No Significant Impact

Having reviewed the information provided by the applicant and all interested parties and an assessment of the environmental impacts, I find that this permit action will not have a significant impact on the quality of the human environment. Therefore, an environmental impact statement will not be required.

12.4 Compliance with the Section 404(b)(1) Guidelines

The proposed discharge complies with the Guidelines.

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. The permit will be issued with appropriate conditions included to ensure minimal effects, ensure the authorized activity is not contrary to the public interest and/or ensure compliance of the activity with any of the authorities identified in Section 10.

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 Sunrise Wind, LLC to construct the SRW project than the “selected action” as described in the BOEM FEIS and ROD and the proposed action as described in the application to USACE and subsequent amendments (as described in Section 1.3). The issuance of this permit is consistent with statutes, regulations, guidance, and policy, and on balance, issuance of a Corps’ permit to construct the SRW 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.

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