

Fisheries Mitigation Plan for Sunrise Wind

Version ~~21.10~~

Prepared Pursuant to
Section 12.05 of the Offshore Wind Renewable Energy
Certificate Purchase and Sale Agreement by and Between the
New York State Energy Development and Research Authority
and Sunrise Wind LLC dated October 23, 2019

Albany, NY

Prepared by
Sunrise Wind LLC



~~October-December August 232001XX, 2021019~~

Record of Revision

Version No. and Revision Date	Description of changes	Revision on pages
[Version No; date]	[Original issue]	[page(s)]
<u>2.0</u>	<u>December November 01XX, 2020</u>	
<u>2.1</u>	<u>August, 2021</u>	

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Links to project information:

Project website: <https://sunrisewindny.com/><https://us.orsted.com/Wind-projects>

Fisheries website: <https://us.orsted.com/Mariners>

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1. Fisheries Mitigation Plan Summary

1.1. Overall philosophy and principles

This section should describe the overall philosophy and principles the Developer will follow to avoid, minimize, restore, and off-set potential fisheries impacts.

- Sunrise Wind is committed to maintaining a strong working relationship with all commercial and recreational fishermen who may be affected by a wind farm or wind farm activities in and around a lease area. Sunrise wind believes that good communication is essential to creating understanding between those who provide food for our tables and those who provide electricity for our homes. While not all conflicts can be resolved through communication alone, open and honest interaction helps to manage conflicts when they arise and identify ways to avoid or mitigate impacts that may occur.
- Communications, coordination, collaboration, and coexistence are the core principles of Sunrise Wind’s fisheries engagement philosophy.

1.2. Overall approach to incorporating data and stakeholder feedback

This section should describe how the Developer will use research, data, and stakeholder feedback to update the FMP and support decision-making throughout the life cycle of the project (pre-construction, surveys, site design, construction, operations, and decommissioning).

- Sunrise Wind has and will continue to build sustainable working relationships with stakeholders throughout the phases of the Project – with a focus on meaningful engagement that produces mutual benefits;
- Sunrise Wind will adopt a collaborative science approach with the fishing industry throughout all phases of the Project and share non-proprietary research and information;
- Sunrise Wind has and will continue to engage and listen to representatives of the many different types of fishing activities that take place in the Project area;
- Sunrise Wind will aim, where possible, to mitigate and reduce potential impacts to fishing activities;
- Sunrise Wind has and will continue to share relevant information about the proposed activities that could affect the fishing industry and coordinate activities with a view to minimizing impacts on fishermen;
- Sunrise Wind has and will continue to seek input from Fisheries Representatives and Liaisons ~~and~~ other industry organizations to continually improve coordination with commercial and recreational fishermen of all gear types;
- Sunrise Wind has and will continue to strive to fairly and quickly resolve conflicts between the Project and individual fishermen; and

1.3. Existing guidance and best practices that will be followed

This section should present a list of existing guidance documents, publications, tools, and/or plans that will be followed to support the FMP. Include links, if available, for all references.

- Sunrise Wind will follow the “Fisheries Communication and Outreach Plan” developed by Ørsted. This plan guides engagement and feedback with the commercial and recreational fishing community.
 - <https://us.orsed.com/wind-projects/mariners> <https://orstedcdn.azureedge.net/-/media/WWW/Docs/Corp/US/Mariners/Fisheries-Plan-Final.ashx?la=en&rev=6af2139ac2d549d683fc2a0f7f2ae532&hash=8804EF50129A9F89DE961546C61F24EB>
 - [A Sunrise Wind-specific Fisheries Outreach and Communication Plan has also been submitted with the SRW COP as Appendix B, which will become publicly available at the publication of the Notice of Intent \(NOI\).](#)
- Sunrise Wind will implement mitigation strategies as discussed in:
 - Bureau of Ocean Energy Management (BOEM) Guidelines for Providing Information on Fisheries Social and Economic Conditions for Renewable Energy Development on the Atlantic Outer Continental Shelf Pursuant to 30 Code of Federal Regulations (CFR) Part 585.
 - <https://www.boem.gov/Social-and-Economic-Conditions-Fishery-Communication-Guidelines/>
 - Development of Mitigation Measures to Address Potential Use Conflicts between Commercial Wind Energy Lessees/Grantees and Commercial Fishermen on the Atlantic Outer Continental Shelf Report on Best Management Practices and Mitigation Measures: A final report for the U.S. Department of the Interior, Bureau of Ocean Energy Management, Office of Renewal Energy Programs, Herndon, VA. OCS Study BOEM
 - <https://www.boem.gov/OCS-Study-BOEM-2014-654/>
- Sunrise Wind will seek input from the New York State Fisheries Technical Working Group (NYSERDA 2019) pursuant to Section 12.04 of the Agreement.
 - <https://nyfisheriestwg.ene.com/>

2. Communications and Collaboration Approach

2.1. Overview and communication plan objectives

This section should provide an overview of the communication plan and objectives and its importance in fisheries migration.

- It is the goal of Sunrise Wind is to establish a “good neighbor” working relationship with commercial and recreational fisheries operating in and near our projects. The Ørsted “Fisheries Outreach and Communication Plan” (linked in Section 1.3) outlines how the Sunrise team seeks to minimize disruption of fishing activities during all phases of development and maximize ease of access and safe navigation for fishing activities during wind farm operations.
- Additionally, Sunrise Wind ~~intends to develop~~has developed a Project-specific ~~appendix to the “Fisheries Communications and Outreach Plan appendix” (linked in Section 1.3),~~ consistent with the approach used by Ørsted in other offshore wind projects, and with location-specific details. This Project-specific ~~plan~~appendix was submitted with the SRW COP and will be publicly available at the NOI publication date.

2.2. Roles, responsibilities, and contact information

This section will provide a list of roles, name, and contact information. The list should provide stakeholders with an understanding of who should be called for a particular issue or question. It will also include links to the project and fisheries website so readers know where to find additional information.

Name/Title	Role/Responsibilities	Contact Information
<u>John O’Keeffe</u> <u>Ed LeBlanc</u> Head of Marine Affairs Manager- Northeast	<u>Lead-Head</u> for marine stakeholder communications and fisheries department; F-TWG attendee	Phone: <u>857-332-4485978-447-2737</u> Email: <u>JOHNO@orsted.com</u> <u>EDWLE@orsted.com</u>
<u>Ross Pearsall</u> Fisheries Relations Manager	<u>Lead for marine stakeholder communications and fisheries department; F-TWG attendee</u>	Phone: <u>857-278-2442</u> Email: <u>ROSPE@orsted.com</u>
Rodney Avila Corporate Fisheries Liaison	Collect data about the structure of fishing communities associated with the Project area.	Phone: 857-332-4479 Email: <u>RODAV@orsted.com</u>
Julia Prince CT/NY Fisheries Liaison	Collect data about the structure of fishing communities associated with the Project area.	Phone: 851-348-3263 Email: <u>JULPR@orsted.com</u>
<u>Chris Sarro</u> MA/RI Fisheries	<u>Collect data about the structure of fishing communities associated with the Project area.</u>	Phone: <u>857-276-1332</u> Email: <u>CHSAR@orsted.com</u>

Julie Evans Paul Farnham (NY)	Fisheries Representative- Collect and disseminate information and serve as a conduit for concerns.	Email: jevansmtk@gmail.com paulfarnham1@gmail.com
Sid Holbrook (CT)	Fisheries Representative- Collect and disseminate information and serve as a conduit for concerns.	Email: sidholbrook@gmail.com
Massachusetts Lobstermen Association (MA)	Fisheries Representative- Collect and disseminate information and serve as a conduit for concerns.	Email: beth.casoni@lobstermen.com
Martha's Vineyard Fishermen Preservation Trust (MA)	Fisheries Representative- Collect and disseminate information and serve as a conduit for concerns.	Email: shelley.edmundson@gmail.com
New Bedford Port Authority (MA)	Fisheries Representative- Collect and disseminate information and serve as a conduit for concerns.	Email: Pamela.Lafreniere@newbedford-ma.gov
Rodman Sykes (RI)	Fisheries Representative- Collect and disseminate information and serve as a conduit for concerns.	Email: crfisheries@gmail.com
Greg Decelles Fisheries Science Coordinator Specialist	Receive, process and disseminate scientific data collected in the Lease Area(s) Member of the ROSA Advisory Council and Interim Fisheries Methods Working Group	Phone: 857-408-4497 Email: GREDE@orsted.com

Project website: <https://sunrisewindny.com>/~~<https://us.orsted.com/Wind-projects>~~

Fisheries website: <https://us.orsted.com/Mariners>

2.3. Identification of fishing industry stakeholders

This section should describe the process by which stakeholders relevant to fisheries and the fishing industry will be identified and classified by stakeholder group.

- Sunrise Wind ~~has and~~ will ~~continue to~~ collect data about the structure of fishing communities associated with the Project area through its extensive network of Fisheries Liaisons (FLs) and Fisheries Representatives (FRs), as described in the “Fisheries Outreach and Engagement Plan” (linked in Section 1.3). This plan includes a detailed outline of the responsibilities and qualifications of the FLs and FRs and recognizes the importance of these roles and credentials for successful outreach due to the complexities of the fishing industry with multiple gear types, port sizes, locations, and many small businesses.
- Regulatory/agency and other stakeholders ~~have been identified~~ ~~will be identified~~ based on assessments to determine permits, approvals, authorizations, or consultations required for the Project at the local, state or federal levels.

- Sunrise Wind has and will continue to also work with the New York State Fisheries Technical Working Group (F-TWG) pursuant to Section 12.04 of the Agreement to identify relevant stakeholders including advocacy groups and research entities.
- Sunrise Wind also recognizes the Responsible Offshore Development Alliance (RODA) and Responsible Offshore Science Alliance (ROSA) as important regional stakeholders working on behalf of the commercial fishing community. Ørsted's Gregory DeCelles and Chris Sarro are actively involved in ROSA, which establishes science priorities collaboratively with agencies and the fishing industry and maximizes the value of the investment spent on fisheries science.

2.4. Participation in stakeholder and technical working groups

2.4.1. Communication with F-TWG

This should describe the communication and collaboration approach with members of the F-TWG and consultations.

- Sunrise Wind's Project representatives attended the F-TWG kick off meeting in November 2018 and numerous subsequent F-TWG meetings in 2019 and 2020.
- Sunrise Wind will continue working with the F-TWG and attend future meetings and workshops pursuant to Section 12.04 of the Agreement.
- Updates to this Plan are ~~anticipated~~ based on engagement with the F-TWG.

2.4.2. Communication with other New York State agencies

This should describe communication with New York State agencies during each phase of the project.

- Sunrise Wind ~~has will~~ consulted and will continue to consult with NYS agencies pursuant to Section 12.03 of the Agreement.
- Pursuant to Section 12.03 of the Agreement, Sunrise Wind ~~anticipates consulting has~~ consulted and will continue to consult with NYS Department of Environmental Conservation, Division of Fish and Wildlife, the Marine Resources Advisory Council, and the New York State NYS Department of State (DOS), and the NYS Department of Public Service (DPS). Such communication ~~is anticipated to~~ has included discussion of potential impacts to fisheries from survey activities and construction of the Project, including communication protocols and survey protocols.

2.4.3. Communication with other stakeholder and working groups

This should describe any relevant participation with other stakeholder groups, such as international fisheries groups that would help inform the FMP.

- Sunrise Wind has coordinated with and/or will ~~coordinate~~ with the National Oceanic & Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries), National Park Service (NPS), Massachusetts Department Marine Fisheries (MADMF), Massachusetts Coastal Zone Management (MACZM), the Massachusetts Fisheries Working Group, Rhode Island Department Marine Fisheries (RIDMF), Rhode Island Coastal Resources Management Council (RICRMC), ~~and~~ the Rhode Island Fisheries and Habitat Advisory Boards, and

Connecticut DEEP, if required, regarding the identification and engagement of fishery stakeholders.

- Sunrise Wind ~~has been committed to~~ collaborating and will continue to collaborate with Responsible Offshore Development Alliance (RODA) and Responsible Offshore Science Alliance (ROSA) as well as local, state and federal agencies in development of regional science and monitoring strategies.

2.5. Communication methods and tools

2.5.1. Methods by phase

This section should describe the communication and outreach methods and tools that will be employed for each stakeholder group during each phase of the project.

Proposed Outreach Methods/Tools	Phase*			
	1	2	3	4
Notices and facilitation (as necessary) of discussions and meetings with local fishermen in Project-associated ports	X	X		
Notification and information about survey activities distributed through digital listservs	X	X		
Notification and information about survey activities directly to fishermen active in the survey area	X	X		
Wide distribution of contact information for Fisheries Representatives/Liaisons	X	X		
Engagement of a network of Fisheries Representatives/Liaisons for information distribution	X	X		
When appropriate, placement of experienced fishing captains on survey vessels to assist in communications and de-confliction during survey activities	X	X		
Use of very high frequency (VHF) <u>radio</u> to communicate vessel intentions at designated intervals during on water activity	X	X		
Local Mariners Briefings posted on website	X	X		
Develop and follow written procedures for gear interactions that may occur in the Project Area	X	X	X	X
Work with fishing gear groups to consider potential conflicts with gear types in the context of seasonal schedules	X	X		
Social mapping through interviews and other information sources	X	X		
A <u>local</u> Marine Coordination Center that will be used as a base of communications for all Project vessel activity to maritime stakeholders which may include technology such as VHF/UHF marine radio and AIS monitoring.		X	X	X
Regular stakeholder meetings to provide information on non-routine maintenance and servicing activities (if necessary), to identify issues or concerns.			X	X
Fisheries Liaison to enable prompt response to stakeholder questions or concerns.	X	X	X	X
The Fisheries Outreach network for distribution of information on operations activities and maintenance vessel deployment as needed.			X	X
An open-door policy for feedback on the Project	X	X	X	X
<i>*Phase: 1: Survey/Design; 2: Construction; 3: Operation; 4: Decommission</i>				

2.5.2. Communication with vessels

This section should describe communication methods/tools with vessels actively fishing in areas in or adjacent to the Project area during site assessment and construction activities and facilitate proper notification to vessels and resource managers.

- The “Fishing and Outreach Plan” (linked in Section 1.3) describes the Project team’s communication objectives, methods and tactics and during site assessment and construction activities.
- Additionally, a fishing captain or other experienced representative from the fishing industry will be onboard survey vessels, when available, to advise the vessel master and crew on fishing activity encountered. Representation depends in part on berth availability on vessels.
- The fisherman or other experienced representative from the fishing industry, chosen for his/her depth of knowledge of the local fishery, assists in avoiding gear interactions, serves as a trustworthy point-of-contact for fishermen on the marine radio, and collects valuable data on vessels and fisheries active in the survey area.

2.5.3. Protection of confidential information

This section should describe how confidential information shared by stakeholders will be protected.

- Sunrise Wind follows a company protocol for protection of confidential information shared by stakeholders.

3. Monitoring and Research Pre-, During, and Post-Construction

3.1. Identification of scope of monitoring activities/studies

This section should provide an overview of the anticipated monitoring activities, including how the specific scope of monitoring activities will be identified and what types of scientific questions will be addressed.

- Sunrise Wind will develop study topics and monitoring methodologies through an iterative process that includes input from fisheries stakeholders, the F-TWG, and regulatory authorities.
- The “Fisheries Outreach and Engagement Plan” (linked in Section 1.3) further describes the Developer’s commitment to collaborative science and monitoring to better understand the impact of offshore wind projects on fish and fish habitats.
- Sunrise Wind is committed to collaborative science with the commercial and recreational fishing industries prior to, during, and following construction. Fisheries monitoring studies are being planned to assess the impacts associated with the Project on economically and ecologically important fisheries resources within the SRWF and along the SRWEC. These studies would be conducted in collaboration with the local fishing industry and would build upon monitoring efforts being conducted by other wind farms in the northeast region. A number of monitoring techniques (e.g., trawl survey, ventless trap survey, dredge survey, optical surveys) can be utilized to evaluate changes to environmental resources in the Selected Project area. As practicable, the survey designs used by the developer will be made compatible with other regional surveys (e.g., NEFSC trawl survey) to facilitate information integration with, and comparison to, information from existing data collection efforts.

3.2. Baseline data and characterization approach

This section should describe how baseline data will be established on the spatial and temporal presence of fish and invertebrates in the proposed area of the Project at multiple life history stages including egg, larval, juvenile, adult, and spawning stages, as well as associated fish and invertebrate habitats.

3.2.1. Existing literature and data of benthic and fisheries resources

Describe existing literature and datasets that are available for baseline characterization.

- Without limitation, the following studies are available to assess the baseline characteristics for fish, invertebrates and their habitats occurring within the Project area, including but not limited to:
 - NYSERDA and/or NYSDEC studies on marine wildlife;

- New York State Department of Environmental Conservation (NYSDEC). 2008. Coastal Fish & Wildlife Habitat Assessment Form – Carmans River. December 15.
 - https://www.dos.ny.gov/opd/programs/consistency/Habitats/Long_Island/Carmans_River.pdf.

NYSERDA and/or NYSDEC studies on marine wildlife;

- NYSERDA. 2017a. New York State Offshore Wind Master Plan: Fish and Fisheries Study. NYSERDA Report 17-25q.
 - <https://www.nyserdera.ny.gov/All-Programs/Programs/Offshore-Wind/About-Offshore-Wind/Master-Plan>
- BOEM studies on marine habitats and species including fish, ~~and~~ lobsters and crabs (<https://www.boem.gov/environment/environmental-studies/renewable-energy-research-completed-studies>);
 - Collie, J.S. and J.W. King. 2016. Spatial and Temporal Distributions of Lobsters and Crabs in the Rhode Island Massachusetts Wind Energy Area. U.S. Dept. of the Interior, Bureau of Ocean Energy Management, Atlantic OCS Region, Sterling, Virginia. OCS Study BOEM 2016-073.
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- NOAA and Northeast Fisheries Science Center studies and stock assessment reports, including:
 - Cargnelli, L.M., S.J. Griesbach, P.L. Berrien, W.W. Morse, and D.L. Johnson. 1999a. Essential fish habitat source document: Haddock, *Melanogrammus aeglefinus*, life history and habitat characteristics. NOAA Tech Memo NMFS-NE-128. 31 p.
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- [Northeast Fisheries Science Center \(NEFSC\). 2018a. 65th Northeast Regional Stock Assessment Workshop \(65th SAW\) Assessment Summary Report. Northeast Fisheries Science Center Reference Document 18-08. 38 p. Accessed June 2020.](#)
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- [Northeast Fisheries Science Center \(NEFSC\). 2018b. 64th Northeast Regional Stock Assessment Workshop\(64th SAW\) Assessment Summary Report. Northeast Fisheries Science Center Reference Document 18-03. 27 p. Accessed June 2020.](#)
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- ~~[Fishery independent surveys completed by the NOAA Northeast Fisheries Science Center including the biannual otter trawl survey, scallop dredge survey, dredge survey for Atlantic surfclams and ocean quahogs, and optical surveys for scallops \(HABCAM\) NOAA studies on trawl surveys, sea scallops, and clams;](#)~~
- ~~[Trawl and dredge surveys completed by state agencies and academic institutions \(e.g., Virginia Institute of Marine Science Northeast Area Monitoring and Assessment Program biannual trawl survey, NYSDEC Ocean Trawl Survey\) Other state and regional studies on ocean trawls surveys;](#)~~
- ~~[Additional studies by, RICRMC, RIDMF, MADMF, and MACZM in the waters and regional studies and other published data for waters of the northeast Atlantic related to of offshore wind development; and](#)~~
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- Studies that Sunrise Wind or its affiliates have conducted in the Lease Areas and surrounding waters of the north Atlantic as outlined in 3.2.2.
- Information hosted on the Northeast Ocean Data Portal~~and~~, the Mid-Atlantic Ocean Data Portal, and the New York State of Opportunity Geographic Information Gateway can be used to characterize the benthic habitats, as well as biotic and abiotic variables that influence the distribution and abundance of fisheries resources within Project area.
- Based on the existing literature and datasets:
 - The relevant Lease Area(s) can be characterized as: Complex ecosystem with multiple commercially valuable species including scallops, longfin squid, surf clam, etc.
 - Finfish within the vicinity of the Project Area can be categorized in two groups based on vertical their habitat use in the water column: demersal and pelagic.
 - Demersal fish likely to occur in Project Area include: American plaice, Atlantic cod, black sea bass, haddock, monkfish, ocean pout, red hake, scup, skates (barndoor, little, thorny, winter), smooth dogfish, spiny dogfish, silver hake, summer flounder, tautog, windowpane flounder, winter flounder, witch flounder and yellowtail flounder.
 - Pelagic fishes likely to occur include: Sharks, tunas (including the Atlantic Bluefin tuna), bluefish, butterfish, cobia, American eel, American shad, Atlantic herring, Atlantic mackerel, blueback herring, king mackerel, menhaden, Spanish mackerel, and striped bass
 - Common commercially harvested species in the relevant Lease Area(s) include: several species of skate and shark, longfin squid, red and silver hake, monkfish, scup, summer flounder, yellowtail flounder, black sea bass, Atlantic herring, Atlantic mackerel, butterfish, bluefish, striped bass, tunas, mahi mahi, swordfish, American lobster, soft shell clam, Atlantic surf clam, blue crabs, horseshoe crabs, blue mussels, bay scallops, sea scallops, conch, eastern oyster, and northern quahog.
 - The relevant Lease Area(s) contain known spawning area for commercially harvested squid
 - Juveniles of several species of flounder have been observed in the relevant Lease Areas.
 - Winter flounder “are suspected” of spawning in the relevant Lease Area(s)
- Since August 2016, Sunrise Wind and its affiliates have been completing geophysical, geotechnical, and benthic surveys, as well as desktop analyses, to identify areas of sensitive benthic habitat in relevant Lease Area(s). As part of the regulatory process, Sunrise Wind will continue to conduct these surveys within the remainder of the Project Area, and along the proposed export cable route to New York.

3.2.2. Data collected of benthic and fisheries resources

This section should describe survey activities undertaken or that will be undertaken by the Developer that will inform the baseline characterization of benthic and fisheries resources.

- Since August 2016, Sunrise Wind and its affiliates have been completing geophysical, geotechnical, and benthic surveys, as well as desktop analyses, to identify areas of sensitive benthic habitat in the Project Area relevant Lease Area(s) in accordance with the relevant BOEM guidelines. As part of the regulatory process, Sunrise Wind will continue to conduct these surveys within the remainder of the Project Area, and along the proposed export cable route to New York.
- Sunrise Wind has and will continue to conduct appropriate site assessment surveys to establish baseline conditions of benthic and fisheries resources within the Project Area.
- Sunrise Wind has and will continue to conduct high resolution geophysical surveys (HRG) and geotechnical surveys in the Project area in accordance with BOEM's Guidelines for Providing Geophysical, Geotechnical, and Geohazard Information Pursuant to 30 CFR Part 585 (BOEM 2020). Sunrise Wind will conduct additional surveys as part of the permitting process to inform the baseline characterization including:
 - benthic habitat surveys to characterize the benthic habitat; and
 - geotechnical and high resolution geophysical (HRG) surveys.
- Sunrise Wind has completed several surveys to characterize the benthic habitat in the Project Area. The survey protocols were reviewed in several rounds and meetings by federal and state agencies, including BOEM, NOAA, NPS, NYSDEC, NYSDOS, NYSERDA, and RI and MA state agencies, and feedback was incorporated into the survey plan. The surveys included:
 - Benthic habitat surveys, which included SPI, PV, and grab samples in NYS waters, to characterize the benthic habitat in the Lease Area and along the export cable in accordance with BOEM's Guidelines for Providing Benthic Habitat Survey Information for Renewable Energy Development on the Atlantic Outer Continental Shelf Pursuant to 30 CFR Part 585 (BOEM 2019);
 - A targeted video survey of habitat areas of interest within the Lease Area based on benthic habitat survey results and geophysical survey results; and
 - A submerged aquatic vegetation survey in the intracoastal waterway north of Fire Island.
- Sunrise Wind has and will complete benthic habitat mapping which will integrate the results of the benthic surveys and final geophysical data in accordance with NOAA's Recommendations for Mapping Fish Habitat (NOAA's National Marine Fisheries Greater Atlantic Regional Fisheries Office Habitat Conservation and Ecosystem Services Division 2020);
- Sunrise has and will utilize the benthic survey information collected from the Project area and from South Fork Wind Project, Revolution Wind Project, Bay State Wind Project, and Block Island Wind Farm- for additional information on the regional benthic environment of

the Northwest Atlantic Outer Continental Shelf off Southern New England. These surveys include:

- Bay State Wind LLC. 2019. Construction and Operations Plan, Bay State Offshore Wind Farm. Submitted to Bureau of Ocean Energy Management. Submitted by Bay State Wind LLC. Submitted March 2019, Revised July 2019.
- Deepwater Wind South Fork, LLC. 2019. Construction and Operations Plan, 30 CFR Part 585. Submitted to Bureau of Ocean Energy Management. Submitted by Deepwater Wind South Fork, LLC. Submitted June 2018, Revised September 2018, Revision 2 Submitted May 2019.
- DWW Rev I, LLC. 2020. Construction and Operations Plan, Revolution Wind Farm. Prepared by VHB, Providence, RI. Submitted to the Bureau of Ocean Energy Management, Sterling, VA. March 2020.
- CoastalVision and Germano & Associates. 2010. Sediment Profile & Plan View Imaging Report: Evaluation of Sediment and Benthos Characteristics along Potential Cable Routes and Turbine Locations for the Proposed Block Island Wind Farm. Report prepared for Deepwater Wind, Providence, RI.
- Sunrise Wind LLC. 2020. Construction and Operations Plan, Sunrise Wind Farm Project. Submitted to Bureau of Ocean Energy Management. Submitted by Sunrise Wind LLC. Submitted September 2020.
- Sunrise Wind has completed a Project-specific Essential Fish Habitat Assessment that describes the species and life stages with designated EFH that may occur within the Project area and assesses the potential impacts from construction and operation and maintenance of the Project on EFH.
- The developer will incorporate additional data from MADMF and other agencies that have proposed conducting regional studies on the impacts of offshore wind development along the northern Atlantic OCS.
- Sunrise Wind will coordinate with federal and state agencies and other stakeholders (e.g., universities) to further develop a baseline characterization of the fisheries resources in the Project Area. To the extent practicable, these surveys will be carried out in cooperation with the local commercial fishing industry, and will can use data-multiple data collection techniques (e.g., otter trawls, ventless traps, underwater video, etc.) to better characterize the commercially and recreationally important fish and invertebrate species in the Project area. The research techniques to be implemented are still being considered, based on input received from agencies, guidance that is being developed through ROSA (of which SRW is an active participant), monitoring being conducted at other Ørsted-affiliated lease sites, and monitoring being carried out by other offshore wind developers. The sampling methodology will be described, and to the extent practicable, efforts will be made to use sampling methods that are consistent with existing state and federal surveys to enhance the compatibility of the data that is collected.

3.2.3. Existing literature and data of the fishing industry

This section should describe the existing literature and data that are available for baseline characterization of the commercial and recreational fishing industry.

- Without limitation, the following studies are available to develop a baseline characterization of the commercial and recreational fishing industry in the area:
 - Public AIS, ~~VMS and landings data~~, WindPlot data from fishermen, NMFS VTR and VMS data, state VTR data, and by consulting with various fishing stakeholders to determine where and how they fish and how they transit to and from their fishing grounds.

3.2.4. Data collected by the Developer or the fishing industry

This section should describe data collected, or will be collected, to support baseline characterization.

- Sunrise Wind has and will rely on information from interviews with fishermen that frequent the Project Area which have been conducted, as well as future interviews.
- Sunrise Wind has and will log data and information collected during other outreach activities and feedback from the fishing industry.
- Sunrise Wind believes that the more data that can be collected and interpreted will help both industries coexist together.
- Additionally, the Sunrise Wind will rely on the other forms of data collection described in section 3.2.

3.3. Monitor for potential impacts during each phase

This section should describe how potential impacts will be monitored on these types of life history stages during each phase of physical work for the Project (site assessment, construction, operation, and decommissioning) to inform mitigation planning for later phases of the Project as well as for future Projects.

- Sunrise Wind plans to conduct site-specific studies during each project phase, the scope and methodologies for which will be determined in collaboration with state and federal agencies, input from regional fisheries science entities such as ROSA, and fisheries stakeholders.
- At least two years of prePre-construction monitoring in the lease area will be performed to strengthen the existing baseline of information on the abundance, distribution, demographics, and community structure of fish and invertebrate resources. within the Project Area. This fishery monitoring research will be performed in accordance with guidelines set forth by BOEM, and the relevant state agencies. As part of the fisheries monitoring studies, baseline data will be collected for at least two years, and across all four seasons to better characterize the species assemblage present within the Project lease area. Sampling will can occur using a range of gear types (e.g., ventless strap, otter trawl, underwater video) and will be designed to sample for commercially, recreationally, and ecologically important fish and invertebrate species within the Project lease area. The research techniques to be implemented are still being considered, based on input received from agencies, guidance that is being developed through ROSA (of which SRW is an active participant), monitoring being conducted at other Ørsted lease sites, and monitoring being

carried out by other offshore wind developers. The sampling methodology will be described in detail, and to the extent practicable, efforts will be made to use sampling methods that are consistent with existing state and federal surveys to enhance the compatibility of the data that is collected.

- Sunrise Wind will work with local stakeholders, including fishermen, to identify assessment monitoring priorities using outreach, surveys and questionnaires to assist in building consensus.
- Sunrise Wind also intends to use other agencies and stakeholder groups (e.g., E-TWG and F-TWG) to identify research needs and opportunities.

3.4. Assess and quantify changes to fishery resources

This section should describe how changes to fisheries resources will be quantified using statistically sound methods

- Sunrise Wind plans to conduct site-specific monitoring studies and the scope will be determined in consultation with commercial and recreational fishermen, regulatory authorities, and the F-TWG. The objectives, hypotheses, and proposed methodology associated with each monitoring study will be clearly defined. The sampling design (e.g., Before After Control Impact (BACI) or Before After Gradient (BAG) etc....) will be informed by the hypotheses to be addressed, and the sample size will be informed by the objectives, research question(s) and species of interest. The sampling methodology will be described in detail, and to the extent practicable, efforts will be made to use sampling methods that are consistent with existing state and federal surveys to enhance the compatibility of the data that is collected. Fisheries monitoring strategies will be informed by the BOEM guidelines, and also the emerging guidance from the ROSA “Interim Fisheries Working Group”, of which Sunrise Wind is an active participant.

3.5. Assess potential changes to commercial and recreational fishing activities

3.5.1. Current and historical usage

This section should describe how the proposed Project area is used by commercial and recreational fisheries in the region, including current and historic usage as well as associated transit routes.

- Sunrise Wind has and will continue conduct research to assess current use of Project Area using the methods outlined below;
 - Sunrise Wind ~~will~~ has and will continue to proactively set up and engage in discussions and participate in workshops with fishermen and local organizations to inform the mapping understanding of commercial and recreational fisheries in the region and typical transit routes taken by fishermen.
 - Sunrise Wind ~~is committed to reviewing~~ has reviewed public AIS, federal and state VMS and landings data, viewing WindPlot data from fishermen, and consulting with various fishing stakeholders to analyze where and how they fish and how they

transit to and from their fishing grounds, and ~~intends to incorporate~~ has considered such information into project design, layout and navigational risk assessments.

- Sunrise Wind has evaluated and identified commercial fisheries in the Project Area, details of which can be found in Section 4.7.4 Commercial and Recreational Fisheries and Appendix V Commercial and Recreational Fisheries Data Report of the Sunrise Wind COP. These will become publicly available at the publication of the NOI.
- Sunrise Wind has and will continue to participate in transit studies, such as the MARIPARS, and will continue ~~and~~ discussions regarding current and historic commercial and recreational fisheries usage of the area as part of the F-TWG.

3.5.2. Changes in usage

This section should describe how changes in commercial and recreational fishing patterns will be calculated postconstruction using statistically sound methods.

- Sunrise Wind is committed to monitoring navigation data and information and continuing to consult with fishery stakeholders to analyze the extent and impact of deviations to transiting routes and fishing patterns resulting from the Project Area.
- Sunrise Wind will engage with fishermen to gain a greater understanding of how commercial and recreational fisheries are used in waters in and around the Project Area.

3.6. Addressing data gaps

This section should describe how data gaps will be addressed.

- Sunrise Wind ~~has worked with and~~ will continue to work with stakeholders, including regulatory agencies and local groups, in the design phase of the Project to identify data gaps to be addressed through surveys or permitting applications.
- The fisheries monitoring studies ~~conducted by~~ that Sunrise Wind plans to conduct will sample in all four seasons of the year. This will help fill regional data gaps, as much of the fishery independent monitoring conducted within the lease site occurs in the spring and in the fall.

3.7. Data availability

This section should describe how fisheries data will be made available in accordance with Section 2.2.5 of the RFP.

- Sunrise Wind will make environmental data available in accordance with Section 12.07 of the Agreement which reflects Section 2.2.5 of the RFP.
- Sunrise Wind is setting up a data portal. This site will provide information on available non-proprietary data that is either publicly available or available upon request. This portal is intended to integrate with existing platforms (including Northeastern Regional Association of Coastal Ocean Observing System [NERACOOS], Southeast Coastal Ocean Observing

Regional Association [SERACOOS], Mid-Atlantic Coastal Ocean Observing System [MARACOOS], Northeast Regional Ocean Council [NROC], and Mid-Atlantic Ocean Data Portal [MARCO]) and will serve as :

- A central guide to available Sunrise Wind fisheries and environmental data
 - A link to portals/website where data is visualized live
 - A link to available and archived data sets or a link to request access to available data
- Sunrise Wind will use meta-data standards, where they are established, set by NOAA and NCEI for met/ocean data and biological data (<https://www.ncei.noaa.gov/resources/metadata>).
- Sunrise Wind will engage with U.S. Integrated Ocean Observing System (IOOS), NERACOOS, NROC and trust agencies to address any meta-data gaps and ensure future consistency of environmental data collection.
- Sunrise Wind will coordinate with NERACOOS to make available any non -proprietary data from met-ocean instruments (e.g. FLIDAR) in near real-time once deployed for use by mariners as well as the National Weather Service for forecast modelling as applicable.
- Sunrise Wind participated in a joint Regional Ocean Observing Systems (NERACOOS/MARACOOS) and Ocean Data Portals (NROC/MARCO) Coordination of data platforms webinar on October 2, 2020.

4. Supporting Other Research

4.1. Support of collaborative research

This section should describe how opportunities for developing or investing in collaborative research with the fishing industry to collect ecological and/or fishing data will be identified and undertaken. The description must account for the need to coordinate with members of the F-TWG during data gathering and assessment.

- Sunrise Wind is committed to supporting third party research associated with development of the Project and intends to take a collaborative approach to science. Sunrise Wind has committed to providing funds to support third party research as outlined in Section 4.4.
- Sunrise Wind supports the Responsible Offshore Science Alliance (ROSA), which establishes regional science priorities collaboratively with state and federal agencies, offshore wind developers, academic scientists, representatives of the fishery management councils, and the fishing industry. The work done by ROSA helps to establish regional monitoring guidance and maximizes the value of the investment spent on fisheries science.
- Sunrise Wind has engaged and will continue to engage with the F-TWG, in accordance with Section 12.04 of the Agreement, regarding potential research topics, scopes and methodologies.
 - Sunrise Wind has and will continue to participate in transit studies, such as the MARIPARS, and will continue discussions regarding current and historic commercial and recreational fisheries usage of the area as part of the F-TWG.
 - ~~Sunrise Wind intends to participate in transit studies and discussions as part of the F-TWG.~~
 - Sunrise Wind will use a Science Coordinator to facilitate reasonable requests for data and other forms of participation in science initiatives designed to enhance understanding of impacts from offshore wind.
 - Non-proprietary data collected as part of fisheries monitoring research will be made available to interested stakeholders and scientists in accordance with Section 12.07 of the Agreement upon request. Sunrise Wind is aware that further regional guidance on the sharing and dissemination of fisheries monitoring data is currently being developed through ROSA.

4.2. Handing/processing requests

This section should describe how requests for coordination with third-party supported scientists will be processed - including providing reasonably-requested Project data and access to the Project area for independent scientists examining environmental and fishery sensitivities and/or the impacts of offshore wind energy development on fish, invertebrates and fisheries for the purpose of publication in peer reviewed journals.

- Sunrise Wind will use a designated Science Coordinator to receive, process and collaborate on reasonable requests for Project data.
- Sunrise Wind will establish a workspace to coordinate and facilitate data sharing.

- This site will provide information on available non-proprietary data that is either publicly available or available upon request. This portal is intended to integrate with existing platforms (including Northeastern Regional Association of Coastal Ocean Observing System [NERACOOS], Southeast Coastal Ocean Observing Regional Association [SERACOOS], Mid-Atlantic Coastal Ocean Observing System [MARACOOS], Northeast Regional Ocean Council [NROC], and Mid-Atlantic Ocean Data Portal [MARCO]) platforms and is intended to integrate with those platforms but will instead serve as :
 - A central guide to available lease environmental data
 - A link to portals/website where data is visualized live
 - A link to available and archived data sets or a link to request access to available data
- Sunrise Wind intends to coordinate with other vessels, including research vessels, for independent scientists to examine any environmental sensitivities as a result of the project. For example, Sunrise Wind and its affiliates have coordinated extensively with researchers from the University of Massachusetts Dartmouth, Massachusetts Divisions of Marine Fisheries, the Northeast Fisheries Science Center and the Woods Hole Oceanographic Institution who are using passive acoustic telemetry and an Autonomous Underwater Vehicle in the Sunrise Wind lease area and the surrounding lease areas to understand the seasonal distribution and spawning behavior of Atlantic cod in Southern New England. Likewise, we have coordinated with researchers from the New England Aquarium and Inspire Environmental who are conducting acoustic telemetry studies for Highly Migratory Species in the Sunrise Wind lease area and the surrounding lease areas. This communication and coordination has helped reduce conflicts between Sunrise Wind's and its affiliates' site investigations activities and the researchers' telemetry equipment, allowing the researchers to continue to gather the data that is needed to meet their research objectives.
- To the extent practicable, fisheries monitoring research will be conducted in collaboration with local fishing vessels.

4.3. Proposed restrictions

This section should describe any restrictions on data provision or access that may be required to protect trade secrets or maintain site security.

- Sunrise Wind will use a Science Coordinator who will consider any restrictions on data provision or access that Sunrise Wind believes may be required to protect trade secrets or maintain site security as part of that process.

4.4. Financial commitment for third party research

This section should provide a level of financial commitment, if elected, that will be appropriated to leverage third-party environmental research funding related to fish, invertebrates and fisheries, including federal or State-supported research. Or, if elected, provide the level of commitment to a

general fund for supporting third-party research into relevant fish and invertebrate communities and associated commercial and recreational fisheries and the effects of offshore wind energy development.

- Sunrise Wind has made commitments to third-party environmental research funding. The details of some of these commitments are outlined below, while others are being finalized and will be announced at a future date.
- Sunrise Wind and its affiliates have provided funding for 10 Vemco VR16-4H tags to the University of Massachusetts Dartmouth to support telemetry research at Cox Ledge.

4.5. Proposed or existing commitments/collaborations

This section should describe proposed or existing commitments and collaborations with third-party researchers in support of monitoring activities and assessing impacts.

- Sunrise Wind is developing site-specific studies which would examine fisheries and benthic resource topics, such as larval distributions, benthic habitat quality, distribution of nonindigenous/invasive species, and distribution, demographics, and abundance of selected commercially and recreationally important fisheries species within the region of influence of the Project. The studies will be developed around clear research questions and testable hypotheses. The analytical methods and the data analysis will be clearly stated in the monitoring plan.
- To the extent practicable, the developer will aim to employ techniques that integrate with ongoing data collection efforts and will consider having spatial and temporal overlap with existing surveys when possible.
- Sunrise Wind will coordinate with research vessels, including fishing vessels used for research, for independent scientists to examine fishery sensitivities and other environmental topics. For example, Sunrise Wind and its affiliates we have coordinated extensively with researchers from the University of Massachusetts Dartmouth, Massachusetts Divisions of Marine Fisheries, the Northeast Fisheries Science Center and the Woods Hole Oceanographic Institution who are using passive acoustic telemetry and an Autonomous Underwater Vehicle in the Sunrise Wind lease area and the surrounding lease areas to understand the seasonal distribution and spawning behavior of Atlantic cod in Southern New England. Likewise, we have coordinated with researchers from the New England Aquarium and Inspire Environmental who are conducting acoustic telemetry studies for Highly Migratory Species in the Sunrise Wind lease area and the surrounding lease areas. This communication and coordination has helped reduce conflicts between Sunrise Wind's and its affiliates' Orsted-site investigations activities and the researchers telemetry equipment, allowing the researchers to continue to gather the data that is needed to meet their research objectives.
- Sunrise Wind will use commercial and recreational fishing vessels for the research it conducts whenever feasible, available, and appropriate.
- Sunrise Wind is developing additional commitments and collaborations with third-party researchers which will be announced when details of the collaborations are finalized.

5. Proposed Mitigation of Impacts to Benthic/Fishery Resources

5.1. Potential impacts/risks and mitigation measures by project stage

The table below should list the potential impacts and risks to benthic/fishery resources and proposed mitigation measures. To this end, a description of how the potential adverse impacts of infrastructure design elements (e.g., turbine spacing and layout, turbine foundation type, cable burial and protection methods, and cable crossing designs) on fishing in the proposed Project area will be considered in mitigating impacts should be included. The mitigation measures should also demonstrate that the Project area and proposed site design allows for reasonable flexibility in the site layout (e.g. orientation of turbine lines, distance between turbines, and navigation areas) to accommodate changes that may be needed in the future. The section should also describe the planned operational protocol to avoid, minimize, and mitigate impacts to fish, invertebrates and fisheries during Project construction and operation phases, such as vessel transit routes, designation and monitoring of safety zones, gear monitoring and retrieval, and communication with fishing vessels and resource managers.

Potential Impacts	Proposed Mitigation Measures ¹	Phase*			
		1	2	3	4
Micro-siting conflicts with habitats and fishery resources	<ul style="list-style-type: none"> • Conducting geophysical and geotechnical surveys, benthic surveys, and desktop analyses to inform site design and layout • Seeking input from regulators, the fishing industry, and maritime industry to locate foundations and cable routes in the least impactful manner that is practicable. • <u>Project infrastructure will be sited to avoid and minimize impacts to sensitive habitats (e.g., complex, hard bottom habitats) to the extent practicable.</u> • <u>Design elements for consideration include an indicative layout scenario with WTGs and offshore platforms sited in a uniform east-west/north-south grid by 1.15-mi (1 by 1-nm; 1.85 by 1.85-km) spacing that aligns with other proposed adjacent offshore wind projects in the RI-MA WEA and MA WEA. This layout has been confirmed</u> 	X			

¹ All proposed mitigation measures are subject to applicable regulatory processes and applicable permit requirements. This list of proposed mitigation measures is a good faith statement of currently anticipated mitigation measures. Actual mitigation measures will be pursuant to applicable permits and may vary from this list.

Potential Impacts	Proposed Mitigation Measures ¹	Phase*			
		1	2	3	4
	<p><u>through expert analysis and the USCG (USCG 2020) to allow for safe navigation without the need for additional designated transit lanes. This layout will also provide a uniform, wide spacing among structures to facilitate search and rescue operations and is consistent with study recommendations in the USCG Massachusetts and Rhode Island Port Access Route Study (USCG 2020).</u></p>				
Temporary, alteration of the seabed and localized increases in noise and turbidity	<ul style="list-style-type: none"> • Mobile fish and invertebrates are expected to temporarily leave the area in response to construction or decommissioning activity. <u>Soft-start/ramp up procedures utilized for pile driving for marine mammals and sea turtles are expected to benefit fish and invertebrates and allow them to temporarily leave the area of activity.</u> Because identical <u>or similar</u> habitat is widely available in the immediate area <u>as identified in Project surveys and existing studies</u>, the temporary displacement is not considered significant. • Committed to noise attenuation technologies to reduce sound from pile driving of foundations, pursuant to regulatory concurrence. • Time of year restrictions <u>(TOYR)</u> on construction will reduce impacts on some biological resources. Time of year restrictions will be pursuant to regulatory concurrence. <u>If the TOYR cannot be met, then Sunrise Wind will work with the relevant agencies to develop appropriate avoidance and minimization plans.</u> 		X		X
Changes to water quality from accidental spills and/or releases,	<ul style="list-style-type: none"> • <u>Require all construction and O&M vessels to comply with applicable International Convention for the</u> 		X	X	X

Potential Impacts	Proposed Mitigation Measures ¹	Phase*			
		1	2	3	4
and erosion and run-off during onshore construction	<p><u>Prevention of Pollution from Ships (IMO MARPOL), federal (USCG and EPA), and state regulations and standards for the management, treatment, discharge, and disposal of onboard solid and liquid wastes and the prevention and control of spills and discharges.</u></p> <ul style="list-style-type: none"> • <u>Implementation of a Stormwater Pollution Prevention Plan (SWPPP), including erosion and sedimentation control best management practices (BMPs) and revegetation measures (if required), to minimize potential water quality impacts from construction and O&M of the onshore portions of the Project.</u> • <u>Accidental spill or release of oils or other hazardous material will be managed onshore through implementation of a Spill Prevention, Control, and Countermeasure (SPCC) Plan during construction and operation.</u> • <u>Accidental spill or release of oils or other hazardous materials will be managed offshore through an Emergency Response Plan/ an Oil Spill Response Plan (OSRP) during construction and operation.</u> • Implementation of a Stormwater Pollution Prevention Plan (SWPPP) • Implementation of a Spill Prevention, Control, and Countermeasure (SPCC) Plan • Implementation of an Oil Spill Response Plan (OSRP) • Implementation of an Erosion and Sediment Control Plan 				
Long-term changes to seabed, and habitat	<ul style="list-style-type: none"> • Populations of benthic organisms would not be significantly diminished by the small area of sea floor that will be disturbed by the Project construction. • Use of horizontal direction drill at the landfall to minimize impacts to 		X	X	

Potential Impacts	Proposed Mitigation Measures ¹	Phase*			
		1	2	3	4
	sensitive shoreline vegetation and shellfish resources.				
Colonization of encrusting invertebrates on wind turbine generators (WTG), which will quickly lead to the development of biogenic habitat and associated communities centered on the structures	<ul style="list-style-type: none"> The shift toward a structure-based community is considered <u>may be considered</u> desirable <u>by some user groups</u> because it supports higher trophic level fish that are of commercial and recreational value (e.g., Reubens et al., 2013). 		X	X	X
Mobile fish and invertebrates expected to leave area and return within several months of construction	<ul style="list-style-type: none"> Because identical <u>or similar</u> habitat is widely available in the immediate area, the temporary displacement is not considered significant. 		X		
Distribution of mobile species, including lobsters, groundfish, and pelagic predators	<ul style="list-style-type: none"> Within several months of completion of construction, the abundance and distribution of <u>mobile</u> benthic invertebrates is expected to return to pre-construction conditions (e.g., Roach, M. 2019) Methods under evaluation to limit impacts include: <ul style="list-style-type: none"> Micrositing WTG and export cable locations to avoid sensitive habitats where feasible; Burying cables wherever feasible using the most appropriate tools and methods; Conducting pre- and post-construction <u>fisheries monitoring surveys and assessments</u>; Slow start (ramp up) of pile driving equipment; Emplacement of scour protection; and Reduction of marine debris. 		X	X	X
EMF Impacts	<ul style="list-style-type: none"> <u>SRW will use proper c</u>Cable shielding to <u>minimize-reduce</u> EMF. Target burial depths for the export cables and inter-array cables will minimize EMF impacts (e.g. Snyder, D.B. et. Al 2019) 		X	X	

**Phase: 1: Survey/Design; 2: Construction; 3: Operation; 4: Decommission*

5.2. Coordination with F-TWG and other stakeholders

This section should describe how the Developer will engage with stakeholder groups such as the F-TWG and other regional fishermen and shipping and navigation to determine Project layouts that address stakeholder concerns. Specifically, describe the key types of information and design decisions where feedback will be solicited from stakeholders.

Sunrise Wind has and will continue to coordinate with the F-TWG (in accordance with Section 12.04 of the Agreement) and stakeholders to address concerns and mitigate impacts to benthic/fisheries resources as follows:

- Engage with stakeholder groups and F-TWG, regional fishermen and other maritime stakeholders such as maritime experts, consultants and marine safety committees to refine Project layouts.
- Undertake Navigational Safety Risk Assessment (NSRA) with the USCG and other agencies.
- Work with fisherman and other stakeholders through the dedicated Marine Affairs Department to address key concerns such as navigation, vessel access and safety.
- Obtain input and feedback on project design through membership and presentation in maritime committees, organizations and associations along the US East Coast, including the Propeller Club which has a chapter in New York.

6. Proposed Mitigation of Impacts to the Recreational and Commercial Fishing Industry

6.1. Potential impacts/risks and mitigation measures by project stage

The table below should list the potential impacts and risks to recreational and commercial fishing and proposed mitigation measures. To this end, this section should describe how the potential adverse impacts of infrastructure design elements (e.g., turbine spacing and layout, turbine foundation type, cable burial and protection methods, and cable crossing designs) on fishing in the proposed Project area will be considered in mitigating impacts. The mitigation measures should also demonstrate that the Project area and proposed site design allows for reasonable flexibility in the site layout (e.g. orientation of turbine lines, distance between turbines, and navigation areas) to accommodate changes that may be needed in the future. The section should also describe the planned operational protocol to avoid, minimize, and mitigate impacts to fish, invertebrates and fisheries during Project construction and operation phases, such as vessel transit routes, designation and monitoring of safety zones, gear monitoring and retrieval, and communication with fishing vessels and resource managers.

Potential Impacts	Proposed Mitigation Measures ²	Phase*			
		1	2	3	4
Fishing gear loss	<ul style="list-style-type: none"> • <u>Sunrise wind and its affiliates have developed a Gear Loss and Prevention Procedure in consultation with regulatory authorities and fisheries stakeholders. The Gear Loss Prevention and Claim Procedure may be updated as appropriate with input from regulatory authorities and fisheries stakeholders.</u> • Training and communication following Gear Loss Prevention and Claim Procedure • <u>Use of scout vessels to spot gear</u> • <u>Use of on-board Fisheries Representatives, when practicable, to spot gear</u> • Will bury export cables to appropriate depth to minimize risk. If depth cannot be reached, will add protective materials over cable (e.g. <u>mattressing, rock placement, and rock/grout bags</u>) 	X	X	X	X

² All proposed mitigation measures are subject to applicable regulatory processes and applicable permit requirements. This list of proposed mitigation measures is a good faith statement of currently anticipated mitigation measures. Actual mitigation measures will be pursuant to applicable permits and may vary from this list.

Potential Impacts	Proposed Mitigation Measures ²	Phase*			
		1	2	3	4
Fishing vessel accidents/impacts during construction	<ul style="list-style-type: none"> Engage in notification campaigns to alert fishermen of the schedule of construction activities Communicate with vessels, including fishing vessels near construction areas using “multiple forms of media” 		X		
Transit routes for fisherman	<ul style="list-style-type: none"> <u>Design elements for consideration include an indicative layout scenario with WTGs and offshore platforms sited in a uniform east-west/north-south grid by 1.15-mi (1 by 1-nm; 1.85 by 1.85-km) spacing that aligns with other proposed adjacent offshore wind projects in the RI-MA WEA and MA WEA. This layout has been confirmed through expert analysis and the USCG (USCG 2020) to allow for safe navigation without the need for additional designated transit lanes. This layout will also provide a uniform, wide spacing among structures to facilitate search and rescue operations and is consistent with study recommendations in the USCG Massachusetts and Rhode Island Port Access Route Study (USCG 2020).</u> <u>Navigation lights, markings, sound signals, and other ATON, including AIS on select WTGs, will be installed and maintained as prescribed within the PATON permit issued by the USCG for each WTG and offshore platform. -spacing between turbines and developing a layout with east-west rows of turbines, which will allow easier transit</u> 	X	X	X	
EMF Impacts	<ul style="list-style-type: none"> Cables will be buried to an appropriate depth range, and where achieving target burial depths is prevented due to constraints, for example hard bottom, practical low impact solutions such as appropriate cable mattresses will be utilized Will use cable shielding to minimize <u>reduce</u> EMF 	✗	X		

Potential Impacts	Proposed Mitigation Measures ²	Phase*			
		1	2	3	4
Impacts to sensitive areas	<ul style="list-style-type: none"> Work with stakeholders to collect data and avoid siting the project in sensitive areas to the extent reasonably practicable 	X	X		
General impacts	<ul style="list-style-type: none"> Utilize <u>local</u> Marine Coordination Center to consider and take into account stakeholder concerns 		X	X	

*Phase: 1: Survey/Design; 2: Construction; 3: Operation; 4: Decommission

6.1.1. General approach to avoiding and mitigating fishing gear loss

This section should describe how potential loss of fishing gear due to snags on turbine structures, associated cables or cable mattresses, or related structures installed or deployed as a result of offshore wind energy development, will be minimized.

- Sunrise Wind published a “Gear Loss Prevention and Claim Procedure”, which it will follow. <https://orstedcdn.azureedge.net/-/media/www/docs/corp/us/mariners/gear-loss-claim-1220.ashx?la=en&rev=d1a83b4a98b24a7aa441faf858a2bcb3&hash=F750409DAFEE5DCA16ACD0A520921C5Ahttps://orstedcdn.azureedge.net/-/media/WWW/Docs/Corp/US/Mariners/Fishing-Gear-Conflict-Prevention-and-Claim-Procedure-FINAL.ashx?la=en&rev=176e942db6bd421c92f54923683004c5&hash=2CFFBF24BBABC8CF80893829A1D19501>
 - Sunrise Wind will engage with communication and training to seek to minimize impacts.
 - Sunrise Wind’s communication activities to prevent potential fishing gear loss has included and will continue to include:
 - Dockside: Fisheries Liaisons work will with port Fisheries Representatives to identify mariners who fish in areas where on-water work is planned and to communicate with those fishermen directly.
 - Website: Information for Mariners page will include project specific information and details for on water activities including vessel names and how to contact them: <https://us.orsted.com/Mariners>
 - ~~Jump drives will be loaded with locations of existing facilities.~~
 - VHF updates will be provided daily.
 - Transit routes: Project vessels will attempt to follow general transit routes to and from port, as safe navigation practices permit.
 - The locations of the SRW export cable, offshore structures, and associated cable protections will be provided to NOAA’s Office of Coast Survey after installation is completed so that they may be marked on nautical charts.
 - Jump drives will be loaded with the locations of existing facilities and distributed to local fishermen.

- Sunrise Wind has and will continue to undertake the following training activities:
 - Personnel working offshore will be trained on the procedures and on how to identify/avoid fishing gear.
 - Contractors will be given a briefing on the importance of the local fishing communities and instructed to communicate early and often with fishing vessels while always following USCG Rules of the Road.
- Sunrise Wind has and will continue to gather feedback on lessons learned, which will be incorporated into training and communications.
- Sunrise Wind will bury export cables to appropriate depth to minimize risk. If the “appropriate depth” cannot be reached, Sunrise Wind will add protective materials over cable.

6.1.2. Processing claims for lost fishing gear

This section should describe how the Developer will approach claims of lost gear in the event of a snag that provides for a fair and timely review of the claim and appropriate compensation of impacted parties.

- The Fisheries Liaisons and Fisheries Representatives will be key members of the gear claim review process.
- A qualified, independent third-party will be engaged for any claims appeals.
- The Fishing Gear Conflict Prevention and Claim Procedure can be found on the Ørsted Mariners page and on the following link: <https://orstedcdn.azureedge.net/-/media/www/docs/corp/us/mariners/gear-loss-claim-1220.ashx?la=en&rev=d1a83b4a98b24a7aa441faf858a2bcb3&hash=F750409DAFEE5DC A16ACD0A520921C5Ahttps://orstedcdn.azureedge.net/-/media/WWW/Docs/Corp/US/Mariners/Gear-Plan-Redesign-Sept-2019.ashx?la=en&rev=3de711f948dc47a8bc41a1cc4e58a418&hash=BA81853C5418891FB65BC512879D7DB6>

6.2. Strategies to develop alternate protocols

This section should describe the process for determining when mitigation strategies are insufficient and under what conditions they might elect to rehabilitate or restore fisheries in an alternative location or when the provision of compensation of some form may be appropriate.

- Sunrise Wind has and will continue to engage with BOEM, NOAA Fisheries, and other fisheries stakeholders to identify and implement appropriate and practicable measures to avoid, minimize, and/or mitigate impacts throughout all phases of the Project as required by applicable permits.
- Following identification of potential impacts, Sunrise Wind has and will continue to work with regulators to establish processes for evaluating the effectiveness of selected mitigation strategies. Additionally, it will coordinate with federal and state agencies to identify

additional mitigation strategies or potential modifications to selected mitigation measures that may be implemented in the event the base mitigation strategies are determined to be insufficient by relevant regulatory agencies.

6.3. Coordination with F-TWG and other stakeholders

This section should describe how the Developer will engage with stakeholder groups such as the F-TWG and other regional fishermen and shipping and navigation to determine Project layouts that address stakeholder concerns. Specifically, describe the key types of information and design decisions where feedback will be solicited from stakeholders.

Sunrise Wind has and will continue to coordinate with the F-TWG (in accordance with Section 12.04 of the Agreement) and stakeholders to address concerns and mitigate impacts to the fishing industry as follows:

- Engage with stakeholder groups and F-TWG, regional fishermen and other maritime stakeholders such as maritime experts, consultants and marine safety committees to refine Project layouts that aim to minimize impacts on existing fishing practices and facilitate ongoing access to traditional fishing grounds.
- Undertake Navigational Safety Risk Assessment (NSRA) with the USCG and other agencies.
- Work with fishermen and other stakeholders through the dedicated Marine Affairs Department to address key concerns such as navigation, vessel access, and safety.
- Obtain input and feedback on project design through membership and presentation in maritime committees, organizations and associations along the US East Coast, including the Propeller Club which has a chapter in New York.
- Sunrise Wind will develop study topics and methodologies through an iterative process including input from various stakeholders and agencies from multiple states, including New York, Rhode Island, and Massachusetts. The developer will examine fisheries and benthic resource topics such as larval distributions, benthic habitat quality, distribution of nonindigenous/invasive species, distribution and abundance of selected commercial fisheries species, and impacts to resources from climate change within the region of influence of the Project. Fisheries monitoring will be performed in accordance with Guidelines for Providing Information on Fisheries for Renewable Energy Development on the Atlantic Outer Continental Shelf Pursuant to 30 CFR Part 585 (BOEM 2019). As the timeline allows, the monitoring will commence at least two years prior to offshore construction. Monitoring will continue during construction, and at least two years of post-construction monitoring will be carried out, in accordance with applicable permitting requirements. The research question(s), hypotheses, sampling design, and statistical analyses will be clearly described for each survey. The sampling designs for the monitoring surveys (e.g., Before-After-Control-Impact, or Before-After-Gradient) will be based on published methodologies that have been used to investigate the impacts associated with offshore wind development. Monitoring guidance being developed through the ROSA 'Interim Fisheries Methods Working Group' (of which SRW Science Coordinator Gregory DeCelles is an active member) will also be considered in the design and implementation of fisheries monitoring studies.

7. Project Decommissioning

7.1. Potential impacts based on available information and experience

This section should describe potential impacts to benthic/fisheries and the fishing industry from decommissioning the project, based on available information and relevant experience (if any).

- In March 2017, Orsted became the first developer to decommission an offshore wind project, the Vindeby Offshore Wind Farm near Lolland, Denmark (Vindeby Project).
- Sunrise Wind waste handling processes during decommissioning will focus on re-use or recycling and use disposal as the last option.
- Sunrise Wind anticipates that impacts to marine mammals, sea turtles, birds, bats and fisheries would be similar to the construction phase.

7.2. Approach for developing plan and coordination with stakeholders

This section should describe how a decommissioning plan will be developed to identify and mitigate potential impacts, including coordination with fisheries stakeholders, and any elements of its contemplated decommissioning plan that can be identified at this stage.

- Sunrise Wind will decommission the project in accordance with a detailed Project-specific decommissioning plan that will be developed in compliance with applicable laws, regulations, and generally-accepted industry practices that exist at the end of the Project's operational life.
 - Sunrise Wind will develop the decommissioning plan in coordination with stakeholders including regulatory agencies, fisheries and marine stakeholders, and local communities.
 - Assuming additional offshore wind projects have been decommissioned by the time Sunrise Wind will be decommissioned, these projects and their lessons learned may be used as a model for Sunrise Wind decommissioning.
- The developer Sunrise Wind understands that all facilities will need to be removed to a depth of 15 feet (4.6 meters) below the mudline, unless otherwise authorized by BOEM (30 CFR § 585.910(a)).

8. (Optional) Fisheries Compensation Plan

8.1. Consideration of compensation plan

If a fisheries compensation plan is being considered to offset impacts, this section should describe how it will determine instances where all reasonable attempts to avoid and minimize Project impacts, or restoration to predevelopment conditions are not feasible and some type of fisheries compensation plan is warranted.

- Sunrise Wind will make a decision on whether it is necessary to implement a fisheries compensation plan to offset impacts (and if so, the relevant details) at a later date, and in connection with the permitting process. Any plan, if implemented, will be based on science and evidence.

8.2. Approach to developing compensation plan

8.2.1. Coordination with stakeholders

This section should describe how a fisheries compensation plan was, or will be developed; how the Developer will coordinate with the F-TWG and other entities in the design or review of the fisheries compensation plan.

- Sunrise's first priority is to ensure co-existence with the fishing industry in a positive and pro-active open dialogue.
- In the event a compensation plan is determined to be warranted, Sunrise will consider a fund approach, versus individual compensation approach, which has been recommended by the fishing industry. The decision to create a fund, as well as the development of an allocation framework for such a fund would be informed by engagement with the F-TWG and the fishing industry.

8.2.2. Third-party administration

This section should describe how the compensation plan will be administered by a nongovernmental third-party to provide reasonable and fair compensation for impacts that cannot be sufficiently addressed through other means.

- Sunrise Wind will make a determination of whether to create a fund, following the open dialogues with interested parties outlined throughout this document and will identify a third-party fund manager if an overall decision to implement a fund has been made.

Sunrise Wind will ensure that the third party has the appropriate qualifications and capacity to make fair and reasonable decisions for impacts that the offshore wind farm may have.

9. Additional Considerations

9.1. Additional mitigation strategies and FMP refinement

This section should describe any additional mitigation strategies not otherwise described herein that would improve the Plan and reduce impacts on the fishing community. In addition, describe how the FMP will be updated and refined based on additional information and stakeholder feedback.

- Sunrise Wind will update and refine the FMP, pursuant to Section 12.05 of the Agreement, in response to additional information on the Project area that is collected through additional survey work and outreach, as well as further development of the permit applications and Project design.

9.2. Process for updating the FMP

This section should describe how feedback from the fishing industry stakeholders, F-TWG, and other agencies and working groups will be incorporated and updated in the FMP.

- Sunrise Wind anticipates that stakeholder feedback will play an integral role in shaping study scopes and protocols to support fisheries mitigation measures that may be needed in response to assessment findings.
- Updates to the FMP are anticipated, pursuant to Section 12.05 of the Agreement, ~~on an annual basis and~~ on an ad-hoc basis in connection with milestone events, such as preparation for permitting filings or finalization of study plans.
- Updates to the FMP are intended to reflect the results of iterative exchanges with members of the F-TWG, E-TWG and relevant stakeholders, and to be made in a manner consistent with Section 12.05 of the Agreement.