VINEYARD OFFSHORE

SUBMISSION FOR PURCHASE OF OFFSHORE WIND RENEWABLE ENERGY CERTIFICATES

ORECRFP24-1

PUBLIC

SEPTEMBER 9, 2024

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Section 8.1 Fisheries Mitigation Plan

Response to New York State Energy Research and Development Authority Request for Proposals ORECRFP24-1

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Abbreviations

Abbreviation	Meaning
BACI	Before-After-Control-Impact [framework]
BAG	Before-After-Gradient [framework]
BOEM	Bureau of Ocean Energy Management
CCE	Cornell Cooperative Extension
CFR	Code of Federal Regulations
COP	Construction and Operations Plan
DAC	Disadvantaged Community
E-TWG	NYSERDA's Environmental Technical Working Group
ESP	electrical service platform
F-TWG	NYSERDA's Fisheries Technical Working Group
FCP	Fisheries Communication Plan
FL	Fisheries Liaison
FM	Senior Manager, Fisheries
FR	Fisheries Representative
G&G	geophysical and geotechnical
the "Lease Area"	Lease Area OCS-A 0544
MA WEA	Massachusetts Wind Energy Area
MRASS	Mariner Radio Activated Sound Signal
NM	nautical mile(s)
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NTM	Notice to Mariners
NYSDEC	New York State Department of Environmental Conservation
NYSERDA	New York State Energy Research and Development Authority
NYSOPRHP	New York State Office of Parks, Recreation, and Historic Preservation
OCS	Outer Continental Shelf
OECC	offshore export cable corridor
OFL	Onboard Fisheries Liaison
OWMU	Offshore Wind Mariner Update
PATON	Private Aid to Navigation
PDE	Project Design Envelope
the "Project"	Excelsior Wind
QA	quality assurance

Abbreviation	Meaning
QC	quality control
RI/MA WEA	Rhode Island/Massachusetts Wind Energy Area
ROSA	Responsible Offshore Science Alliance
RWSC	Regional Wildlife Science Collaborative for Offshore Wind
US	United States
VTR	vessel trip report
WTG	wind turbine generator

8.1 FISHERIES MITIGATION PLAN

8.1.1 Fisheries Mitigation Plan Summary

The Vineyard Offshore team has over a decade of experience working with commercial and recreational fishermen, vessel owners, fishing advocacy organizations, shore support services, and fisheries research institutions. We have a demonstrated ability to forge productive working relationships with fishermen and are committed to developing, constructing, operating, and decommissioning well-sited offshore wind projects with minimal fisheries impacts. To do so, we employ project siting and design measures that are aimed at avoiding potential impacts from the outset. Where impacts are unavoidable, we work collaboratively with agencies, fishermen, and other stakeholders to identify appropriate and practicable solutions to minimize and mitigate potential impacts.

Vineyard Offshore strongly believes that the offshore wind and fishing industries can successfully work alongside each other in the marine environment, and we will continue working to build bridges between the two sectors. We will also continue to fund research, share data, participate in regional science initiatives, and expand our prior efforts to employ fishermen and/or fishing vessels to support offshore site assessment, construction, and data-gathering activities. Given our prior, ongoing, and planned efforts, we are confident in our ability to identify, communicate with, and address the concerns of fishermen and fisheries stakeholders in an appropriate and timely manner.

8.1.2 Communications and Collaboration

8.1.2.1 Fisheries Team

Vineyard Offshore has a dedicated team focused on identifying, engaging, and collaborating with fishermen and other fisheries stakeholders relevant to Excelsior Wind (the "Project") (see Figure 8.1-1). Our fisheries communication efforts are led by Senior Manager, Fisheries (FM) Crista Bank, a fisheries biologist with deep knowledge of fishing practices as well as an extensive network of personal relationships with fishermen and fishery organizations in the region. Crista oversees Vineyard Offshore's efforts to build and maintain relations with the fishing industry and surrounding communities. This includes directing outreach, developing fisheries research programs, and identifying potential workforce opportunities for fishing industry involvement.

Figure 8.1-1 Vineyard Offshore's Fisheries Team

Crista's fisheries communications efforts are supported by Emmalai (Emmie) Page who serves as the Fisheries Liaison (FL) for Lease Area OCS-A 0544 (the "Lease Area"). Emmie is a fisheries biologist from Vancouver, Canada. In this role, she spent time working for the Department of Fisheries and Oceans as a Species at Risk Biologist. She also worked onboard bottom trawl vessels as an observer and contributed to the Sea Around Us research group at the University of British Columbia as a stock assessment analyst. Emmie holds a bachelor's degree in Oceanography from the University of British Columbia and a master's degree in Fisheries Resource Management from Memorial University of Newfoundland.

Vineyard Offshore's fisheries team is supported by a growing network of Fisheries Representatives (FRs) who are actively involved throughout all stages of the Project. FRs are fishing industry stakeholders who represent a particular fishing community, organization, gear type, port, region, state, or sector(s). FRs are responsible for communicating fisheries concerns and issues and providing input to our fisheries team. FRs are compensated for their time and expenses; however, they do not work on behalf of Vineyard Offshore. Their duty is to the fishing community, organization, gear type, port, region, state, or sector(s) they represent.

Notably, as Vineyard Wind, we were the first United States (US) offshore wind developer to engage an FR. Today, Vineyard Offshore engages with 11 FRs who represent a variety of gear types and homeports in Connecticut, Massachusetts, New York, New Jersey, and Rhode Island (see Figure 8.1-2). Our FM and FLs have bi-weekly meetings with our FRs and proactively seek their input when updating our Fisheries Communication Plans (FCPs) and designing fisheries programs, protocols, outreach materials, and compensatory mitigation programs.

Figure 8.1-2 Vineyard Offshore's Fisheries Representatives

During site assessment and construction activities on the water, our fisheries team is supported by local fishing vessels we employ as scout and safety vessels, as well as local fishermen who go onboard our contracted vessels as Onboard Fisheries Liaisons (OFLs). OFLs are experienced fishermen contracted by Vineyard Offshore to assist geophysical and geotechnical (G&G) survey vessel captains with on-the-water communication and to document fishing gear in the area to help avoid interactions. Our primary OFL for the Lease Area is a recreational fisherman from New York.

The OFL works in tandem with scout vessels during G&G surveys. The scout vessels work ahead of G&G survey vessel and report fixed fisheries gear locations to the OFL to avoid any gear interaction. The scout vessel also identifies fishermen actively working in the area so the FL can provide them with detailed survey vessel information for the remainder of the survey activity. The communication network developed during G&G surveys is continued during installation activities and has reduced conflict and negative interactions on the water. [redacted]

Vineyard Offshore also employs a Marine Liaison Officer who is responsible for safe marine operations and ensuring that Vineyard Offshore is a good neighbor while on the water. As such, there is frequent interaction, information exchange, and coordination between the fisheries team and the Marine Liaison Officer.

8.1.2.2 Stakeholder Identification

Our fisheries team is in near-daily communication with fishermen and other fisheries stakeholders across the region. The fisheries team is constantly working to connect with new fishermen and understand ongoing fishing activity in and around the Lease Area. This includes working with our New York and New Jersey FRs to network with local fishermen and set up meetings in different ports. [redacted]

Vineyard Offshore is also in regular contact with the relevant federal agencies (e.g., Bureau of Ocean Energy Management [BOEM], US Coast Guard, and National Marine Fisheries Service [NMFS]) and state agencies on environmental and fisheries-related matters. We are also a member of, actively participate in, and/or attend meetings for the following technical working groups, advisory boards, councils, and commissions:

- Regional Wildlife Science Collaborative for Offshore Wind (RWSC)
- Responsible Offshore Science Alliance (ROSA) (our Chief Development Officer serves on the board of directors and our FM is a member of the Advisory Council)
- New York State Energy Research and Development Authority's (NYSERDA's) Environmental Technical Working Group (E-TWG)
- NYSERDA's Environmental Justice Technical Working Group
- NYSERDA's Fisheries Technical Working Group (F-TWG)
- International Council on Exploration of the Sea (FM is member of Working Group on Offshore Wind Development and Fisheries)[1]
- Massachusetts Fisheries Working Group on Offshore Wind Energy
- Massachusetts Habitat Working Group on Offshore Wind Energy
- Massachusetts Ocean Advisory Committee
- Mid-Atlantic Fishery Management Council
- New England Fishery Management Council

These groups allow us to identify stakeholders, better understand fisheries and fishermen's concerns, build relationships, and collaborate on research, education, and work opportunities. In particular, we will coordinate with these groups, as appropriate, to ensure opportunities for New York fishermen to work on the Project are communicated in advance and to identify additional opportunities to develop or invest in collaborative research with the fishing industry.

[1] In summer 2023, our FM visited the United Kingdom to participate in the International Council for the Exploration of the Sea's Working Group on Offshore Wind Development and Fisheries.

We will continue to expand our fisheries outreach efforts in New York and New Jersey after ORECRFP24-1 contract award and execution to identify additional fishermen and other fisheries stakeholders that may be affected by the Project. We will accomplish this through a variety of means but will focus on in-person meetings and events, along with direct communication with local fishermen, as outlined in the previously described efforts.

8.1.2.3 Stakeholder Communication

Our fisheries engagement prioritizes information sharing, soliciting feedback on the design and execution of our Project and programs, supporting an efficient and timely permitting process, and promoting safety on the water. These engagement efforts are guided by our FCPs, which facilitate effective and regular communication with fishermen and fisheries stakeholders throughout the life of our Project. The FCP for the Lease Area is provided as Attachment 8.1-1. This FCP aligns with the Vineyard Wind 1 FCP, which we first drafted in 2011 to improve communication with fishermen and, subsequently, has been refined with over 10 years of input from fishermen, FRs, and fisheries stakeholders. The FCP is updated periodically in response to stakeholder feedback and to incorporate lessons learned, ensuring that communication protocols and tools remain relevant and effective.

Vineyard Offshore maintains project and lease area-specific webpages[2] with information specifically for fishermen, including the FCP for each lease area, final reports from completed fisheries science surveys, presentations from fisheries working group meetings, charts showing lease area and cable corridor information, Offshore Wind Mariner Updates (OWMUs), and periodic information requests, including information requests from fishing vessel owners who are interested in working on our projects. [redacted]

To proactively notify fishermen about our activities offshore, our OWMUs include a description of the planned activity, pictures of the vessel(s) and equipment to be deployed, a chart showing the location of the activity, vessel contact information, OFL contact information (if applicable), and scout vessel picture(s) and contact information (if applicable). OWMUs support deconfliction of the marine space such that local mariners, including fishing vessels, can choose to avoid survey locations and active work sites. OWMUs are also published on our social media channels and sent via email and SMS text alert to those who have opted to receive notifications from Vineyard Offshore. At the request of fishermen, we distribute a weekly email to consolidate and recirculate active OWMUs to help mariners and fishermen keep track of the various notifications they receive. We will also continue to coordinate with the US Coast Guard to issue Notices to Mariners (NTMs) to notify recreational and commercial vessels of our planned offshore activities.

Fisheries communication is conducted through numerous methods including email, SMS text alerts, letter mailings, webinars, phone calls, meetings, and social media channels. When appropriate and weather permitting, our fisheries team holds "port hours" at ports in New Bedford, Massachusetts; Narragansett, Rhode Island; Stonington, Connecticut; and

[2] See: Fisheries and Mariners webpage.

Montauk, New York, to provide information to fishermen who fish in or transit through our project areas. These events are typically held jointly with FLs from other offshore wind developers to provide information to fishing vessel crews who fish in or transit through multiple lease areas and to reduce stakeholder fatigue. We also host information tables and attend regional trade shows and conferences for fishermen and mariners.

Throughout every phase of the Project, Vineyard Offshore will continue to actively engage and communicate with fishermen and fisheries stakeholders, build and maintain trusted relationships, and follow through on identified issues. We will maintain active participation in the F-TWG,[3] which we have been involved in since its inception. In fact, we communicate with the F-TWG regularly, including recurring meetings with NYSERDA's Offshore Wind Marine Fisheries Project Manager, Morgan Brunbauer. We also send our NTMs to Morgan so they can be distributed through relevant channels to reach fishermen in New York.

Lastly, as stated in Section 6.2, we will also continue engaging with New York State agencies, including meeting with Consulting State Agencies. [redacted] We will continue to employ this proactive approach as we advance the Project.

8.1.2.4 Vessel Communication

The FCPs include offshore communication protocols designed to help avoid negative interactions with fishing vessels and fishing gear entanglements and outline the protocols for what to do if an entanglement does occur. These communication protocols have significantly reduced conflict on the water, and, if an entanglement does occur, the fishermen are notified immediately of any interaction and are aware of the problem before returning to retrieve their gear. These protocols will be updated over time to ensure that they remain effective and account for the need to coordinate with members of the F-TWG and consult with New York State agencies.

We have had great success employing OFLs and/or scout vessels. As described in Section 8.1.2.1, OFLs are local fishermen who are familiar with marine operations and fishing practices in the region. We contract with these experienced fishermen on our survey vessels to continue the role of the FL offshore so that there is effective communication onsite and in real time. Among other things, the OFL records observed fisheries activities, ensures survey vessel operations are compliant with the FCP protocols and other fisheries-related policies, and seeks to avoid negative fisheries interactions by looking out for fixed gear and establishing communications (usually by very high-frequency radio) with fishing vessels, when appropriate. In the event of a negative fisheries interaction, the OFL works with the FL and relevant FRs to

[3] Going forward, as required by NYSERDA, we will formally designate at least two team members to serve as Vineyard Offshore's representatives in the E-TWG for at least one-year terms.

resolve the matter safely, fairly, and efficiently. [redacted]

[redacted]

8.1.2.5 Fisheries Collaboration in New York

Vineyard Offshore has partnered with the fishing community on a range of science, workforce, community, and fisheries initiatives on Vineyard Wind 1 and is continuing those efforts for the Project. [redacted]

[redacted]

- [redacted]
- [redacted]

Additional information about current and planned collaborations with the New York fishing community is provided in Section 8.1.4 (marine debris recovery), Section 8.1.5 (scour protection), and Section 8.1.6 (workforce).

8.1.3 Monitoring and Research Pre-, During-, and Post-construction

8.1.3.1 Baseline Data and Pre-construction Monitoring

Vineyard Offshore conducted benthic surveys to establish baseline data on the spatial and temporal presence of benthic species and their habitats in and around the Lease Area.

[4] See: Choose Local F.I.S.H. website.

[redacted] As part of the Vineyard Mid-Atlantic Construction and Operations Plan (COP), we also prepared a comprehensive assessment of the presence finfish (including larval and juvenile species), invertebrates, and their habitats within the Lease Area and OECC (see Section 8.2.7 and Attachment 8.1-2 for a description of available studies).

Although existing data for the Lease Area are sufficient for establishing an environmental baseline for the purposes of the COP, we expect to conduct pre-construction surveys.[5] We included a benthic habitat monitoring plan framework and a preliminary fisheries monitoring plan in the COP. We plan to refine the fisheries monitoring plan in collaboration with researchers from academic institutions that have offshore wind survey experience in the New York Bight and a positive working relationship with the fishing industry. The fisheries monitoring plan will also incorporate input from commercial and recreational fishermen, as well as agencies, including NMFS.

We will continue to design our surveys to be compatible with established survey methods, whenever practicable, so that data generated can be compared with existing data and ongoing regional studies. For example, our fisheries surveys with the University of Massachusetts Dartmouth School for Marine Science & Technology in the Lease Area use survey methods that align with established survey methods to facilitate data integration between our site-specific surveys and existing long-term datasets—what some refer to as a "nested and modular" survey design. Going forward, we will seek to align our survey approach with the outcomes of ongoing efforts by ROSA, RWSC, and agencies to standardize scientific methods, surveys, and monitoring plans.

8.1.3.2 During- and Post-construction Monitoring

Vineyard Offshore will conduct appropriate monitoring during construction and post-construction to assess and quantify potential changes that may be attributable to Project activities. The monitoring measures will be determined in collaboration with agencies and stakeholders through the Project's permitting processes and will be informed by those put in place for other offshore wind projects. Our during- and post-construction surveys will be thoughtfully designed to align with established methods to enhance data compatibility and utility, wherever practicable.

As noted in the preceding subsection, we have developed a benthic habitat monitoring plan framework that includes measures to monitor recovery after construction in areas with sensitive habitats. This benthic habitat monitoring plan framework will be further developed through the permitting process in consultation with regulatory agencies and relevant stakeholders. Such a monitoring plan may be part of regional monitoring efforts. The fisheries monitoring

[redacted]

plan referenced in the preceding section will also include measures to monitor key indicators before and after construction.

When developing these plans, we will consider the *Offshore Wind Project Monitoring Framework and Guidelines* (ROSA 2021)[6] and will rely heavily on our experience and data obtained from developing and implementing monitoring plans for Vineyard Wind 1. For example, scientifically sound, statistically rigorous methods employed for Vineyard Wind 1 include a beyond Before-After-Control-Impact (BACI) framework (recommended by BOEM)[7] and/or a Before-After-Gradient (BAG) framework (suggested by NMFS). The Vineyard Wind 1 project is using a beyond BACI framework to assess trawl and drop camera data and a combination BACI-BAG approach to assess benthic habitat data, where sample stations are placed at regular distances from the impact source (either foundation or scour protection or export cable alignment) along impact monitoring transects.

8.1.3.3 Commercial and Recreational Fishing Impacts

Vineyard Offshore is well-positioned to evaluate the potential impacts on fishermen and fisheries from offshore wind development. Through Vineyard Wind 1, we have gained unparalleled expertise on how to use the best available data to assess commercial and recreational fishing activities and account for different federal and state reporting requirements for the various fisheries and gear types. Throughout the Project's multi-year permitting phase, Vineyard Offshore will continue working with agencies (including Consulting State Agencies), commercial and recreational fishermen, academia, and industry economists to quantify commercial and recreational fishing activities, assess the potential economic exposure of the fishing industry to offshore wind development, and evaluate how best to assess changes in commercial and recreational fishing patterns post-construction.

8.1.3.4 Commercial Fisheries Assessment

As part of the Vineyard Mid-Atlantic COP, we prepared a commercial fisheries assessment using the best available data to ascertain how the Lease Area and OECC are used by commercial fisheries in the region. See Attachment 8.1-3 for the list of references for the studies used to perform this assessment. [redacted]

[redacted]

[6] See: *Offshore Wind Project Monitoring Framework and Guidelines*.

[7] As recommended in the "Guidelines for Providing Information on Fisheries for Renewable Energy Development on the Atlantic Outer Continental Shelf Pursuant to 30 CFR Part 585" (BOEM 2023).

[redacted]

[redacted]

[redacted]

[redacted]

In addition to our strong comprehension of commercial fisheries landings and revenue data, we also understand how to analyze current and historical fishing traffic patterns in the Lease

[redacted]

Area and surrounding waters. Vineyard Offshore has prepared a Navigation Safety Risk Assessment as part of the Vineyard Mid-Atlantic COP. This assessment contains a comprehensive assessment of current and historical fishing vessel traffic patterns in the vicinity of the Lease Area and is being used to inform proposed mitigation measures.

8.1.3.5 Recreational Fisheries Assessment

NOAA Fisheries (2024c) identified key recreational species and/or species groups in New York Bight waters including tunas (e.g., Atlantic bluefin tuna [*Thunnus thynnus*]) and mackerels (e.g., Atlantic mackerel [*Scomber scombrus*]), scup, summer flounder, black sea bass (*Centropristis striata*), tautog (*Tautoga onitis*), and striped bass (*Morone saxatilis*). [redacted]

NOAA Fisheries (2024a) report of socioeconomic impacts of Atlantic offshore wind development describes selected fishery landings and estimates of recreational party and charter vessel revenue for offshore wind lease areas. [redacted]

Vineyard Offshore anticipates continuing conversations with recreational fishermen and supporting research to address data gaps to determine potential changes to recreational fishing patterns. Such efforts may be funded through the initiatives described in Section 8.1.4.

8.1.4 Supporting Other Research

8.1.4.1 Fisheries Data Transparency

Any benthic habitat and fisheries survey or monitoring work that we have conducted or plan to conduct will continue to generate a considerable amount of data that will be made available in the public domain. Much of the data will be publicly available through the federal and state permitting processes, as well as reports or academic publications that result from survey or monitoring work and will be readily accessible to stakeholders.

We will continue working with agencies, stakeholders, and other offshore wind developers to find cost-effective and user-friendly ways to streamline and standardize available data across lease areas, particularly where there are gaps in extant databases. Where practicable, we will disseminate raw environmental data to the most appropriate database(s), such as those recommended in the *Wildlife Data Standardization and Sharing: Environmental Data Transparency for New York State Offshore Wind Energy* (NYSERDA 2021), as soon as feasible following internal quality assurance and quality control (QA/QC). However, as noted in the study, benthos, zooplankton, and fish data are poorly served by extant databases and should be housed and made available by the data originator (e.g., on a project website) until

appropriate databases exist. Accordingly, we will proactively publish our fisheries research on our website.[9]

In accordance with Section 2.2.8 of ORECRFP24-1, Vineyard Offshore will provide a Data Management and Availability Plan to NYSERDA detailing how site and environmental data, including fisheries data, will be made available for use by third parties on an ongoing basis as soon as practicable after collection and QA/QC.

8.1.4.2 Data Sharing and Site Access

As described in Section 8.1.4.1, we intend to make much of our fisheries and environmental data public. We will continue to coordinate with third-party scientists regarding the provision of data and site access, and we will review any requests on a case-by-case basis. For example, we are supporting a five-year project led by the New England Aquarium that includes the deployment of acoustic receivers and a buoy in Lease Area OCS-A 0522 that is transmitting live weather and ocean data to a public website and is equipped with an acoustic receiver to track highly migratory fish species (e.g., marlins, tunas, sharks, and sturgeon). This effort includes a data sharing agreement that allows New England Aquarium to share collected data publicly. We are also supporting the American Saltwater Guides Association and their regional science effort, titled The Albie Project[10] in Lease Area OCS-A 0544 and Lease Area OCS-A 0522. This study focuses on acoustic tagging and data collection of a highly migratory, under-studied species of importance to the recreational fishing community. Data collected in this effort are also publicly available.

In certain instances, Vineyard Offshore may impose restrictions on data provision or the deployment of research equipment (e.g., buoys, environmental sensors) within our Lease Area, OECC, and on our facilities to protect proprietary and/or competitively sensitive information, maintain site security, and ensure safety, among other benefits. All requests will be considered and discussed with the requestor and will not be unreasonably denied. Additional examples of our ongoing and previous efforts to share data and participate in regional data collection programs and studies are provided in Section 8.2.4.

8.1.4.3 Supporting Regional Studies and Funding Independent Research

Vineyard Offshore is firmly committed to supporting regional studies, regional science organizations, and other independent environmental research, particularly through our participation in regional monitoring organizations (see Section 8.1.2). Our Chief Development Officer is on ROSA's Board of Directors, and our FM is a member of the ROSA Advisory Council. We are also an active member of RWSC and have representatives on the RWSC Industry Caucus. As noted in Section 8.1.4.2, we are currently supporting regional studies and funding independent research in our East Coast lease areas to address fisheries data gaps.

[redacted]

[9] See: Fisheries & Mariners webpage.

[10] See: The Albie Project webpage.

[redacted]

[redacted]

[redacted]

8.1.5 Site Design Considerations

The Lease Area is one of six New York Bight lease areas identified by BOEM, following a public process and environmental review, as suitable for wind energy development. During this multi-step, more-than-four-year process, BOEM reduced the areas under consideration for offshore wind energy development by 72% to address environmental and stakeholder concerns based on feedback from agencies, Tribal Nations, and the public (87 Federal Register 2446). The siting of the New York Bight lease areas accounts for several conflicting uses, including commercial and recreational fishing, maritime navigation, US Department of Defense activities, visual impacts, marine protected species, avian species, radar, and existing infrastructure. For example, BOEM excluded areas within 1 nautical mile (NM) (1.9 kilometers) of traffic separation schemes to address navigational concerns and eliminated a large region east of the Lease Area with higher relative fishery value to minimize potential impacts to fisheries (BOEM 2021; 87 Federal Register 2446). Thus, significant steps were taken when siting the Lease Area to avoid and minimize user conflicts and environmental impacts.

Vineyard Offshore has sited and designed the Project to avoid and minimize impacts to fish, invertebrates, and fisheries to the greatest extent practicable. We are also committed to working with federal and state agencies, fishermen, and other fisheries stakeholders to refine the Project's layout and design measures, where technically and economically feasible, as the Project moves through the permitting process.

8.1.5.1 Proposed Site Design

In general, the most optimal WTG layout for wind energy production is a non-grid layout with closer turbine spacing and a higher density of WTGs around the edges of the wind farm; this edge-weighted design maximizes the number of WTGs per area while minimizing wake effects

that impact the efficiency of downwind WTGs. However, as permitting of the first offshore wind projects within the Northeast progressed, agencies and stakeholders expressed the need for more uniform WTG layouts across adjacent projects to accommodate vessel transits, fishing, and other uses of the Outer Continental Shelf (OCS) (e.g., search and rescue). This need is reflected in the stipulations of the BOEM lease agreement for Lease Area OCS-A 0544, which requires Vineyard Offshore to "endeavor to design a surface structure layout that contains two common lines of orientation between OCS-A 0512 and OCS-A 0544."

Although the 1 x 1 NM layout adopted for Vineyard Wind 1 is specific to the needs of ocean users in the Massachusetts Wind Energy Area (MA WEA) and Rhode Island/Massachusetts Wind Energy Area (RI/MA WEA), we have carried forward our experience siting that offshore wind project into the design of the WTG layout for the Lease Area. [redacted]

A number of other Project design elements and installation techniques are designed to minimize potential adverse impacts on fisheries (see Section 8.1.6). [redacted] We will continue these conversations with recreational and commercial fishermen, in consultation with our technical team, as the Project moves through the permitting process.

Throughout the Project's multi-year permitting phase, Vineyard Offshore will continue to consult with relevant agencies, fishermen, and other fisheries stakeholders regarding siting measures and design adjustments that could reduce potential impacts to fisheries. This includes the required consultations with New York State agencies in accordance with Section 2.2.5 of ORECRFP24-1. Vineyard Offshore will also incorporate lessons learned from Vineyard Wind 1 and other offshore wind projects into the final design of the Project. Finally, any advances in offshore installation methods and technologies that reduce the potential for adverse impacts will also be considered, provided that they align with the Project's schedule, commitments, and permitting requirements. As described in the following section, we have the ability to accommodate reasonable changes to the Project's design that may be identified in the future.

8.1.5.2 Site Design Flexibility

The Project is being permitted using a Project Design Envelope (PDE) based on expected commercial and technological advancements over the next several years. The PDE outlines a reasonable range of Project design parameters (e.g., multiple foundation types) and installation techniques (e.g., use of various cable installation tools). The use of the PDE provides Vineyard Offshore with optionality as we proceed through permitting and will allow us to optimize our Project, take advantage of the best available technology, and incorporate stakeholder feedback into the Project's final design. [redacted]

8.1.6 Construction and Operation

Beyond the site design measures described in Section 8.1.5 and cable routing measures described in Section 8.1.7, Vineyard Offshore will implement additional measures to reduce potential impacts on fishing activity occurring in the Lease Area and OECC.[12] [redacted] During the construction phase, temporary marine navigation lighting and marking may need to be installed on the foundation structures as they are being constructed, depending on the timing and sequence of foundation installation.

[redacted]

[11] Vineyard Offshore intends to permit more WTG positions than the Project would ultimately use.

[12] Measures to avoid, minimize, and mitigate impacts to fish, invertebrates, and their habitats are discussed in Section 8.2.7.

[redacted] We will also coordinate with the US Coast Guard and NOAA to ensure that the location of the WTGs, ESP, and as-built cable alignments (including the location of cable protection and cable crossings) are included on the nautical charts.

The Marine Liaison Officer (see Section 8.1.2) is responsible for issuing OWMUs and coordinates with the US Coast Guard to issue NTMs to notify recreational and commercial vessels of our planned offshore activities. [redacted] Our fisheries communication tools are further described in the FCP included as Attachment 8.1-1.

We are committed to working with the US Coast Guard to mitigate safety concerns. We may request that the US Coast Guard establish temporary safety buffer zones around active work sites to improve safety. These temporary safety buffer zones would be adjusted as active work sites change within the Lease Area or along the OECC, allowing fishermen and other stakeholders to use areas not under construction or maintenance. The temporary safety buffer zones are expected to be published in NTMs and all of our standard communication methods (see Section 8.1.2). We may also employ safety vessels to provide guidance to mariners and fishing vessels, explain the ongoing activities, and request that they remain outside the temporary safety buffer zone. These safety vessels would have no enforcement authority; the safety vessels would only provide guidance and document any concerns.

[redacted] We will use this experience to inform our approaches to avoiding gear interactions during the construction and operation of the Project. We will also maintain and expand fisheries engagement and communication

efforts to further strengthen our relationships with local fishermen and facilitate improved approaches to gear interactions.

Vineyard Offshore has developed a fishing gear loss compensation process that allows fishermen to be fairly compensated so they can continue fishing. We use a standard gear loss/damage compensation form that is based on the form previously developed through coordination with FRs, FLs, and other developers for the Vineyard Wind 1 project.[13] This form has been adopted by other developers and provides a standard approach to fishing gear loss and compensation across several lease areas and projects.

Through over a decade of experience working with fishermen and the immense experience that we have gained through Vineyard Wind 1, we have developed a comprehensive suite of avoidance, minimization, and mitigation measures that we believe sufficiently address the Project's potential impacts on fish, invertebrates, their habitats, and fisheries. However, to the extent that additional measures are needed, we expect those to be identified and addressed through the permitting process as well as regional coordination through ROSA and RWSC.

From a best practice perspective, offsetting measures, such as compensatory mitigation for potential fisheries loss and ecological impacts, is the last step and should only be employed to the extent that proposed avoidance, minimization, and mitigation measures are exhausted. Our approach to fisheries compensation is described in Section 8.1.9.

8.1.7 Considerations for Subsea Cables

Siting OECCs is an extremely complex endeavor that must consider and balance a multitude of technical, environmental, commercial, and logistical constraints. [redacted]

We believe that the resulting proposed OECC minimizes potential impacts to fish, invertebrates, their habitats, and fisheries to the greatest extent possible (see Section 8.2.8 for a discussion of potential impacts from the offshore cables). Potential impacts on fishing activity as a result of the presence of construction vessels within the OECC are expected to be relatively short-term and highly localized. This is because, at any given time during cable installation, fishing would only be impaired or precluded (if at all) in the small portion of the OECC under active construction.

[13] See: Gear Loss Claim Application

We will require our cable installation contractor(s) to prioritize the least environmentally impactful cable installation methods(s) and tool(s) that are practicable for each segment of cable and maximize the likelihood of achieving sufficient cable burial (to a depth that allows continued fishing over the cables). Our goal is to minimize the use of cable protection to the greatest extent possible to reduce the risk of interactions with bottom fishing gear. If cable protection is used, fishermen will be informed of where cable protection exists by labeling it on charts and raising awareness through our fisheries outreach network.

8.1.8 Project Decommissioning

The Project's decommissioning will occur approximately 30 years from now. Based on current regulations and our lease agreement for the Lease Area, Vineyard Offshore expects to consult with BOEM prior to that and submit a Decommissioning Application for review and approval. This process will include an opportunity for public comment and consultation with agencies (including relevant New York State agencies), fishermen, and fisheries stakeholders. Upon receipt of the necessary BOEM approvals and any other required permits, Vineyard Offshore would implement the approved Decommissioning Application to remove offshore components.

The facilities will be decommissioned in accordance with the Decommissioning Application, lease agreement stipulations, and 30 Code of Federal Regulations (CFR) Part 585, Subpart I. As currently envisioned, the decommissioning process is the reverse of the installation process. The WTG, ESP, and foundation components will be removed, shipped to shore, and properly disposed of or recycled (see Section 4.5 for information about component reuse and recycling). Depending on input from agencies and relevant stakeholders, the offshore cables, any scour protection, and any cable protection may be removed or left in place if authorized by BOEM. Attachment 8.1-4 outlines the general decommissioning concept and procedures for each Project component based on the technology that exists today. However, we will ultimately use the latest technologies and logistical developments in the offshore wind industry that are available at the time of decommissioning, which may result in other decommissioning methods that are more efficient and further minimize environmental impacts.

8.1.9 Fisheries Compensation Plan

The need for financial compensation to offset impacts to commercial and/or recreational fishermen will be established through the Project's permitting process. The starting point for determining the level of financial compensation is expected to be based on economic exposure estimates. The current process and data sources we used to determine economic exposure are summarized in Section 8.1.3.

The next step in the process is likely to evolve given ongoing discussions at the federal, regional, and state levels regarding appropriate mechanisms to provide compensatory mitigation to potentially impacted fisheries. Vineyard Offshore will continue to participate in these discussions. We are, for example, actively engaged in the design of the regional fisheries compensation fund effort currently led by 11 East Coast states and coordinated by the Special Initiative on Offshore Wind. [redacted]

If financial compensation is required, Vineyard Offshore commits to using a regional compensation fund for the Project. This commitment is conditioned on (1) the availability of a regional compensation fund on a timeline that aligns with the Project's schedule and (2) the regional compensation fund reasonably supporting an equitable, efficient, and transparent process to address potential losses and/or increased costs to fisheries associated directly with offshore wind development that cannot otherwise be addressed through avoidance, minimization, and non-compensatory mitigation strategies.

If a regional compensation fund is not available, Vineyard Offshore will develop a fisheries compensatory mitigation program leveraging our experience from Vineyard Wind 1. We will do so in coordination with relevant fisheries stakeholders, including the F-TWG.

8.1.10 Additional Considerations

We will continue to evolve and adapt our approach to fisheries communication and mitigation to best meet fishing industry needs while maintaining Project viability. Vineyard Offshore is always thinking creatively to address concerns raised by the region's fishermen, lead by example, and work collaboratively with other offshore wind developers to implement measures that support the fishing community. By the time the Project achieves commercial operation, we expect there will be a much greater understanding of how the offshore wind and fishing industries can work together given that several commercial-scale offshore wind projects will have been constructed and will be operational. Experiences, lessons learned, and data gathered from the construction and operation of these projects will further inform Vineyard Offshore's efforts to minimize the Project's potential impacts on fisheries and the fishing community.

In the meantime, we will continue working with fishermen, federal and state regulators, NYSERDA, the F-TWG, ROSA, and other fisheries stakeholders to better understand the potential social and economic impacts from offshore wind on fishing communities; fund independent research and participate in regional science initiatives; develop plans to avoid, minimize, or mitigate any risks identified; and increase trust between the offshore wind and fishing industries through transparent communication.

Fisheries Mitigation Plan

for

Excelsior Wind

Version 1.0

Prepared pursuant to [contract number, date, (TBD)]

with

New York State Energy Research and Development Authority

Albany, NY

Prepared by

Vineyard Offshore

200 Clarendon Street, 18th Floor
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VINEYARD OFFSHORE

September 9, 2024

Record of Revision		
Revision Date	**Description of changes**	**Revision on pages**
[date]	[Original issue]	[page(s)]

Project Information and Contacts		
Name/Title	**Role**	**Contact Information**
Project Development		
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Permitting and Environmental Affairs		
Esther Siskind, Vineyard Mid-Atlantic Federal Permitting Lead	Lead federal permitting activities for Lease Area OCS-A 0544; secondary E-TWG representative	ESiskind@vineyardoffshore.com
Scott Salmon, Senior Permitting Manager (New York)	Direct and oversee state permitting activities in New York	SSalmon@vineyardoffshore.com
Elizabeth Marsjanik, Senior Manager, Environmental Affairs	Primary E-TWG representative	EMarsjanik@vineyardoffshore.com
Community Engagement		
Andrea Bonilla, Senior Manager of External Affairs (New York)	Direct and oversee community engagement and public affairs activities in New York	ABonilla@vineyardoffshore.com
Fisheries and Other Marine Users		
Crista Bank, Senior Manager, Fisheries	Lead fisheries contact; primary F-TWG representative	CBank@vineyardoffshore.com
Emmie Page, Fisheries Liaison	Fisheries Liaison for Lease Area OCS-A 0544; secondary F-TWG representative	EPage@vineyardoffshore.com
Jeannot Smith, Marine Liaison Officer	Lead liaison for non-fisheries mariners	JSmith@vineyardoffshore.com

Links to project information:

Project website: https://www.vineyardoffshore.com/

Fisheries website: https://www.vineyardoffshore.com/fishermen

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Tables

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, mitigate, restore, and offset (e.g., net positive impact) potential fisheries impacts.

The Fisheries Mitigation Plan (FMP) presented herein applies to Excelsior Wind (the "Project"), which includes a 1,350 megawatt Offshore Wind Generation Facility that will be installed in Lease Area OCS-A 0544 (the "Lease Area").

The Vineyard Offshore team has over a decade of experience working with commercial and recreational fishermen, vessel owners, fishing advocacy organizations, shore support services, and fisheries research institutions. We have a demonstrated ability to forge productive working relationships with fishermen and are committed to developing, constructing, operating, and decommissioning well-sited offshore wind projects with minimal fisheries impacts. To do so, we employ project siting and design measures that are aimed at avoiding potential impacts from the outset. Where impacts are unavoidable, we work collaboratively with agencies, fishermen, and other stakeholders to identify appropriate and practicable solutions to minimize and mitigate potential impacts.

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).

Vineyard Offshore will rely on research, data, and stakeholder feedback to update this FMP and to develop, construct, and operate the Project following the mitigation hierarchy. In line with this commitment, Vineyard Offshore will take the following actions:

- Vineyard Offshore will seek consultation and coordinate with relevant stakeholders.
- Vineyard Offshore will review existing research and data and seek input from stakeholders regarding data gaps to inform decisions made throughout the Project's lifecycle.
- Vineyard Offshore will review and seek input from stakeholders on proposed and conducted survey rationales and methodologies as well as design, construction and operation, and decommissioning plans for the Project.
- To the extent that the timeline allows, pre- and post-construction monitoring will be designed in consultation with stakeholders to improve the understanding of impacts of offshore wind energy development and operations on fisheries.
- This FMP will be refined through an iterative and adaptive process that accounts for changing technologies, expanding information about potentially impacted species, and lessons learned from other offshore wind projects in the Mid-Atlantic and Northeast.
- Vineyard Offshore will update this FMP to reflect the Project as it evolves.

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.

- Vineyard Offshore will continue implementing its Fisheries Communication Plan (FCP) for the Lease Area, which outlines our proactive approach to fisheries communication to ensure effective and regular engagement with a wide range of fishermen and fisheries stakeholders (Attachment 8.1-1). The FCP is based on best practice guidance and is updated regularly to incorporate feedback from fishermen and fisheries stakeholders, as well as lessons learned. The FCP is available on our Fisheries & Mariners webpage.
- Vineyard Offshore will continue to follow and implement best practices that are appropriate and relevant to the Project, such as the following:
    - Bureau of Ocean Energy Management's (BOEM's) (2020) *Information Guidelines for a Renewable Energy Construction and Operations Plan (COP)—Version 4.0*
    - BOEM's (2018) "Draft Guidance Regarding the Use of a Project Design Envelope in a Construction and Operations Plan"
    - BOEM's (2019) "Guidelines for Providing Benthic Habitat Survey Information for Renewable Energy Development on the Atlantic Outer Continental Shelf Pursuant to 30 Code of Federal Regulations (CFR) Part 585"
    - BOEM's (2023) "Guidelines for Providing Information on Fisheries for Renewable Energy Development on the Atlantic Outer Continental Shelf Pursuant to 30 CFR Part 585"
    - BOEM's (2020) "Guidelines for Providing Information on Fisheries Social and Economic Conditions for Renewable Energy Development on the Atlantic Outer Continental Shelf Pursuant to 30 CFR Part 585"
    - Other related BOEM guidelines and guidance documents found on their Guidance Portal.
    - Best practice guidance tools that have been or may be developed by the New York State Energy Research and Development Authority's (NYSERDA's) Fisheries Technical Working Group (F-TWG) and Environmental Technical Working Group (E-TWG)
    - Guidelines developed by the Regional Wildlife Science Collaborate for Offshore Wind (RWSC), the Responsible Offshore Science Alliance (ROSA), and other regional monitoring organizations, such as ROSA's (2021) *Offshore Wind Project Monitoring Framework and Guidelines*.
- Vineyard Offshore anticipates consulting additional publications, tools, and plans for the Project, including those listed in Section 3.2.
- Vineyard Offshore will also build on the lessons learned and critical hands-on experience gained from developing, permitting, constructing, and operating the Vineyard Wind 1 project.

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 mitigation.

Vineyard Offshore's communication efforts with stakeholders interested in fisheries issues prioritizes information sharing, soliciting feedback on the design and execution of our Project and programs, supporting an efficient and timely permitting process, and promoting safety on the water.

- Vineyard Offshore will continue to seek methods and processes to allow for a two-way flow of information between key stakeholders and developers, highlighting how we use this feedback to inform our decision making.
- Vineyard Offshore will continue to provide updates to fishing industry stakeholders in an appropriate manner that can be easily accessed and widely distributed, including providing Semi-annual Progress Reports that are posted on BOEM's website.
- Vineyard Offshore will continue to seek collaboration with the fishing industry to use technical applications to enhance communication and coordination for all on-water activities.
- Vineyard Offshore will continue to update its FCP to ensure communication methods remain effective and useful.
- Vineyard Offshore will continue to actively engage and communicate with stakeholders; foster, build, and maintain trusted relationships; work to better understand and address concerns; and clearly communicate the reasons behind the decisions we make.
- Vineyard Offshore's communication plans and objectives will evolve throughout the lifecycle of the Project to ensure effective communication with a range of stakeholders and address stakeholder fatigue wherever possible.

2.2 Project Fisheries Staff, Responsibilities, and Contact Information

This section should provide a list of project fisheries staff, their role(s), and contact information. The list should provide stakeholders with an understanding of who should be contacted for a particular issue or question. It should also include links to the project website so readers know where to find additional information.

Project Information and Contacts		
Name/Title	**Role**	**Contact Information**
Project Development		
Nora DeDontney, Vineyard Mid-Atlantic Development Director	Direct and oversee Project development activities in Lease Area OCS-A 0544	NDeDontney@vineyardoffshore.com
Permitting and Environmental Affairs		
Esther Siskind, Vineyard Mid-Atlantic Federal Permitting Lead	Lead federal permitting activities for Lease Area OCS-A 0544; secondary E-TWG representative	ESiskind@vineyardoffshore.com

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Scott Salmon, Senior Permitting Manager (New York)	Direct and oversee state permitting activities in New York	SSalmon@vineyardoffshore.com
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Emmie Page, Fisheries Liaison	Fisheries Liaison for Lease Area OCS-A 0544; secondary F-TWG representative	EPage@vineyardoffshore.com
Jeannot Smith, Marine Liaison Officer	Lead liaison for non-fisheries mariners	JSmith@vineyardoffshore.com

Project website: https://www.vineyardoffshore.com/

Fisheries website: https://www.vineyardoffshore.com/fishermen

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.

Vineyard Offshore regularly communicates with a wide variety of fishermen and stakeholders relevant to fisheries and the fishing industry. Vineyard Offshore will continue to identify fisheries stakeholders relevant to the Project through the following actions, among others:

- Participate in federal, state, and regional environmental and fisheries technical working groups, advisory boards, councils, and commissions, including the E-TWG, the F-TWG, RWSC, ROSA, and the New York Offshore Wind Alliance.
- Conduct community and stakeholder engagement activities and engage in Project partnerships, particularly in New York.
- Continue and expand fisheries engagement efforts and our network of Fisheries Representatives (FRs), Onboard Fisheries Liaisons (OFLs), and fishing support vessels to facilitate effective communication with commercial and recreational fishermen.
- Continue to consult with the relevant federal and state agencies.
- Continue to implement other stakeholder engagement methods outlined in Vineyard Offshore's Stakeholder Engagement Plan (SEP; Appendix E) and FCP.
- Maintain stakeholder lists, classify stakeholders by stakeholder group where appropriate, and track communications on an internal basis.

2.4 Participation in Stakeholder and Technical Working Groups

2.4.1 Communication with the F-TWG

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

- Vineyard Offshore will continue to actively participate in and dedicate Project-specific technical resources to the F-TWG. Vineyard Offshore notes that our staff has been actively engaged in the F-TWG since its formation. Project updates will be provided at appropriate intervals.
- To the extent practicable, Vineyard Offshore will work with the F-TWG and attend future F-TWG meetings and workshops.
- Vineyard Offshore has identified specific individuals to serve at least one-year terms in the role of primary and secondary core members.
- Vineyard Wind will work with NYSERDA to plan and host Project-specific FMP consultations.

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.

- Vineyard Offshore has already communicated with New York State agencies, including several Consulting State Agencies, during the development of the Project to inform siting and design measures, as well as permitting plans and timelines.
- Vineyard Offshore will communicate with Consulting State Agencies about the Site Assessment Plan and the Vineyard Mid-Atlantic Construction and Operations Plan (COP) and as we prepare New York State permit applications, including meeting with Consulting State Agencies at reasonable times and intervals, to attempt to resolve any identified issues prior to construction.
- Vineyard Offshore will engage with New York State agencies on evolving Project design and potential mitigation and monitoring measures.
- Vineyard Offshore will continue to meet with New York State agencies, including Consulting State Agencies, at reasonable times and intervals, during the construction and operations phases of the Project.
- Vineyard Offshore has developed communication plans, as required by our BOEM lease agreement, that will guide communication and engagement activities with certain stakeholder groups, including New York State agencies.

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.

- Vineyard Offshore will continue to collaborate with other regulatory agencies, academic and research institutions, environmental non-governmental organizations, and other stakeholder groups and will continue to maintain memberships and participate in collaborative efforts. We are a member of, actively participate in, and attend meetings for the following technical working groups, advisory boards, councils, and commissions:
    - RWSC

- ROSA
- NYSERDA's E-TWG
- NYSERDA's Environmental Justice Technical Working Group
- NYSERDA's F-TWG
- International Council on Exploration of the Sea (Senior Manager, Fisheries [FM] is member of Working Group on Offshore Wind Development and Fisheries)
- Massachusetts Fisheries Working Group on Offshore Wind Energy
- Massachusetts Habitat Working Group on Offshore Wind Energy
- Massachusetts Ocean Advisory Council
- Mid-Atlantic Fishery Management Council
- New England Fishery Management Council

- Vineyard Offshore intends to maintain these relationships and develop new partnerships in connection with the Project, particularly in New York.
- Offshore expects that further host community and Disadvantaged Community outreach and communication efforts, such as expanding our local staff and community representatives to conduct outreach, community meetings, and open houses, will lead to the development of partnerships and initiatives that may help inform this FMP.

2.4.4 Communication and Collaboration with Other Developers

This should describe any relevant participation and collaboration with other developers in the offshore space, with a focus on communication and collaboration with adjacent leaseholders. This may include but is not limited to shared research efforts, coordination of survey methods, or standardization of navigational and safety protocols.

- Vineyard Offshore will continue to collaborate with other developers in relation to streamlining communications to reduce stakeholder fatigue, sharing data, and supporting the sustainable development of the offshore wind industry. We will also continue to participate in regional monitoring organizations (e.g., ROSA and RWSC) and agency-led efforts to standardize scientific methods, surveys, and monitoring plans across lease areas. Examples of our participation and collaboration with other developers include the following:
  - We hold port hours in cooperation with other developers to provide information to fishing vessel crews who fish in or transit through multiple lease areas.
  - Vineyard Offshore has developed a fishing gear loss compensation process that allows fishermen to be fairly compensated. We use a standard gear loss/damage compensation form that is based on the form previously developed for the Vineyard Wind 1 projects through coordination with FRs, Fisheries Liaisons (FLs), and other developers. This form has been adopted by other developers and provides a standard approach to fishing gear loss and compensation across several lease areas and projects.
- Vineyard Offshore will seek to maximize the impact of research efforts, such as data collection, methodology, analysis, and dissemination, by collaborating with other developers, particularly those in adjacent lease areas, taking on similar initiatives.

- Vineyard Offshore will coordinate with other New York Bight leaseholders on fisheries outreach whenever practicable and appropriate.
- Vineyard Offshore will leverage BOEM's Programmatic Environmental Impact Statement (PEIS) process as an opportunity for Vineyard Offshore to collaborate with other developers.

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.

Recognizing that stakeholder groups have different needs when it comes to receiving information and participating in the Project development process, Vineyard Offshore employs an array of methods to disseminate information and engage stakeholders. We will continually evaluate and adapt our approach to ensure the effectiveness of our efforts. The following table includes a subset of the communication methods and tools in our stakeholder engagement toolkit. Additional communication methods and tools are described in the SEP (Appendix E) and FCP.

Proposed Outreach Methods/Tools	Phase*			
	1	2	3	4
Vineyard Offshore website	X	X	X	X
Social media, digital advertisements, newsletters, pamphlets and flyers, press releases, and videos	X	X	X	X
Newspaper, radio, podcast, and television interviews	X	X	X	X
Participation in the E-TWG, the F-TWG, and similar federal, state, and regional fisheries technical working groups, advisory boards, councils, and commissions; responding to data and site access requests; collaborative fisheries research	X	X	X	X
Hiring specialized fisheries staff, consultants, and representatives (e.g., FM, FLs, FRs, and OFLs) who will implement the FCP	X	X	X	X
Virtual and in-person meetings and events, port hours, phone calls, emails, text alerts, word of mouth	X	X	X	X
Dedicated outreach materials, FAQs, and charts; outreach to recreational fishing organizations and clubs; partnerships with fishing organizations and individual fishermen	X	X	X	X
Project partnerships, attending/sponsoring/tabling at marine expos and recreational fishing shows, formal and informal coalition building, site visits, focus groups, workshops, informal networking	X	X	X	X
Hiring specialized maritime staff (e.g., Marine Liaison Officer), publishing Offshore Wind Mariner Updates, working with the United States (US) Coast Guard to issue Notices to Mariners, US Coast Guard consultation, engaging in Port Access Route Study processes and comment periods	X	X	X	X
**Phase: 1: Survey/Design; 2: Construction; 3: Operations; 4: Decommissioning*				

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.

- Vineyard Offshore will implement the vessel communication tools and protocols included in the FCP to facilitate communication with vessels actively fishing in or adjacent to the Project during site assessment activities.
- To avoid fisheries conflicts, to the greatest extent practicable, Vineyard Offshore will seek to employ a fishing captain or other experienced fishing industry representative to be onboard vessels during key times/activities where potential conflicts could be greatest.

3 Monitoring and Research Pre-, During, and Post-construction

3.1 Identification of Scope of Monitoring Activities and 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.

- Vineyard Offshore plans to implement appropriate monitoring measures to assess potential changes to the ecological baseline established for the Project in line with applicable permitting requirements (see Section 3.3).
- Monitoring methods and scientific designs will meet the highest scientific standards, and are expected to align with guidance mentioned in the *Offshore Wind Project Monitoring Framework and Guidelines* developed by ROSA and will rely heavily on our experience and data obtained from developing and implementing monitoring plans for Vineyard Wind 1.
- To the greatest extent practicable, fisheries and related research will be performed onboard commercial and recreational fishing vessels. These vessels will meet all appropriate regulatory safety and scientific standards prior to the beginning of any monitoring or research activity.

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 included 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 key existing literature and datasets that are available for baseline characterization.

Numerous data sources characterize the temporal and spatial distribution, abundance, and community composition of fish, invertebrates, and their habitats potentially affected by Project activities. Key data sources include the following:

- Northeast Fisheries Science Center (NEFSC) multispecies bottom trawl surveys
- NEFSC Atlantic surf clam and ocean quahog surveys
- NEFSC Atlantic sea scallop dredge surveys

- Northeast Area Monitoring and Assessment Program trawl surveys
- Vineyard Mid-Atlantic 2022/2023 benthic grab and video survey data
- Northeast Ocean Data Portal and Mid-Atlantic Ocean Data Portal
- NYSERDA's (2021a) *Digital Aerial Baseline Survey of Marine Wildlife in Support of Offshore Wind Energy: Spatial and Temporal Marine Wildlife Distributions in the New York Offshore Planning Area, Summery 2016–Summer 2019, Volume 1: Methods, General Results, Limitations, and Discussion*
- NYSERDA's (2017) *New York State Offshore Wind Master Plan: Fish and Fisheries Study*
- National Oceanic and Atmospheric Administration (NOAA) Fisheries Species Directory: ESA Threatened & Endangered and Deep Sea Coral Data Portal databases
- *Comprehensive Seafloor Substrate Mapping and Model Validation in the New York Bight*
- *Habitat Mapping and Assessment of Northeast Wind Energy Areas*
- New York State Department of Environmental Conservation (NYSDEC) New York Seagrass Map, Map of Artificial Reefs, and Marine Shellfish database
- NOAA Fisheries Socioeconomic Impacts of Atlantic Offshore Wind Development webpage
- BOEM studies and environmental assessments for other offshore wind projects and lease areas, such as the *Commercial and Research Wind Lease and Grant Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf of the New York Bight Final Environmental Assessment* (BOEM 2021b).

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.

- Vineyard Offshore has collected benthic habitat data as part of its geographical and geotechnical (G&G) surveys in the Lease Area between 2022 and 2023.
- BOEM has prepared a Draft PEIS to analyze potential impacts from wind energy development activities in the New York Bight region, which includes the Lease Area, with the aim to help inform the baseline characterization of benthic and fisheries resources.
- Using the wealth of existing data sources for the New York Bight region (see Section 3.2.1), Vineyard Offshore has prepared an initial assessment of the presence of finfish, invertebrates, and their habitats in the Lease Area and the offshore export cable corridor (OECC). This initial assessment has been refined as part of the Vineyard Mid-Atlantic COP through subsequent desktop review, analysis of Project-specific and desktop G&G survey data, integration of BOEM's analysis contained in the PEIS, and consultations with agencies and stakeholders.

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.

- Vineyard Offshore has developed a benthic habitat monitoring plan framework to monitor recovery after construction in areas with sensitive habitats. This benthic habitat monitoring plan framework, submitted as part of the Vineyard Mid-Atlantic COP, will be further developed through the permitting process in consultation with regulatory agencies and relevant stakeholders. Such a monitoring plan may be part of regional monitoring efforts.
- Vineyard Offshore has developed a preliminary fisheries monitoring plan to monitor key indicators before and after construction. The fisheries monitoring plan will be refined in collaboration with regulatory agencies and relevant stakeholders. Such a monitoring plan may also be part of regional monitoring efforts.
- Vineyard Offshore will seek to collaborate with other regulatory agencies and stakeholder groups (e.g., the E-TWG, the F-TWG, and ROSA) to identify research needs and opportunities.
- When developing monitoring plans, Vineyard Offshore would consider ROSA's *Offshore Wind Project Monitoring Framework and Guidelines* and would rely heavily on our experience and data obtained from developing and implementing monitoring plans for Vineyard Wind 1.

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.

- Vineyard Offshore will continue to gain valuable experience assessing changes attributable to Project activities through the monitoring plans that are being implemented for Vineyard Wind 1. For example, scientifically sound, statistically rigorous methods employed for Vineyard Wind 1 include a beyond Before-After-Control-Impact (BACI) framework to assess potential impacts to fish and a combination BACI and Before-After-Gradient (BAG) sampling design based on distance to assess potential impacts to benthic resources.
- Ideally, specific questions and focal taxa will be chosen for the Project, either based on site-specific fisheries risk assessment or in relation to broader regional efforts, to assess variation between sites and understand cumulative impacts for sensitive species.
- Monitoring will, to the extent practicable, use appropriate study designs and methodologies to effectively analyze risk prior to construction and evaluate impacts during construction and operation by testing hypotheses and helping to assure statistical power for meaningful data analysis.
- Outside expertise will, if practicable, be consulted during study design and data analysis processes.
- Vineyard Offshore will continue to collaborate with other regulatory agencies and stakeholder groups to identify research needs and opportunities.

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 how associated transit routes will be determined.

- Vineyard Offshore consulted a range of resources to preliminarily quantify and inventory how the

Lease Area and OECC are used by commercial fisheries in the region, including maps of fishing activity based on vessel monitoring system data and vessel trip reports developed for the Northeast Regional Ocean Council and the Mid-Atlantic Council on the Ocean, and on National Marine Fisheries Service (NMFS) estimates of commercial fisheries revenues. Based on this preliminary analysis, the Lease Area has low total average annual commercial fisheries revenues relative to other New York Bight lease areas. This assessment will be refined as part of the Vineyard Mid-Atlantic COP.

- Vineyard Offshore evaluated potential commercial and recreational fishing impacts resulting from the development of the Lease Area and OECC in the Vineyard Mid-Atlantic COP.
- Vineyard Offshore has prepared a Navigation Safety Risk Assessment as part of the Vineyard Mid-Atlantic COP. This assessment contains a comprehensive assessment of current and historical fishing vessel traffic patterns in the vicinity of the Lease Area and is being used to inform proposed mitigation measures.

3.5.2 Changes in Usage

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

- Vineyard Offshore will continue to collect qualitative information on how the Lease Area and OECC are used by commercial and recreational fishermen in the region through the fisheries outreach described in Section 2.
- Vineyard Offshore will continue working with agencies (including Consulting State Agencies), commercial and recreational fishermen, academia, and industry economists to quantify commercial and recreational fishing activities, assess the potential economic exposure of the fishing industry to offshore wind development, and evaluate how best to assess changes in commercial and recreational fishing patterns post-construction.
- Vineyard Offshore will apply experience gained through Vineyard Wind 1 as well as other projects that will be constructed and operational prior to the Project.

3.6 Addressing Data Gaps

This section should describe how data gaps will be addressed.

- Many recently completed studies and long-term monitoring programs provide information about fish, invertebrates, and benthic habitats (especially sensitive habitats) within the Lease Area, OECC, and surrounding waters.
- To help address data gaps regarding recreational fishing in the Rhode Island/Massachusetts Wind Energy Area (RI/MA WEA), we are supporting a five-year project led by the New England Aquarium that includes the deployment of acoustic receivers and a buoy in Lease Area OCS-A 0522 that is transmitting live weather and ocean data to a public website and is equipped with an acoustic receiver to track highly migratory fish species (e.g., marlins, tunas, sharks, and sturgeon). We would consider supporting similar efforts for the Lease Area.
- Vineyard Offshore is supporting the American Saltwater Guides Association and their regional science effort—The Albie Project—in Lease Area OCS-A 0544. This study focuses on acoustic tagging and data collection of a highly migratory, under-studied species of importance to the recreational fishing

community.

- Vineyard Offshore will continue to work with fishermen, fisheries stakeholders, and agencies to identify data gaps that may be addressed through surveys or permitting applications.

3.7 Data Availability

This section should describe how fisheries data will be made available in accordance with Section 2.2.8 of the RFP.

- Vineyard Offshore has made or intends to make non-proprietary environmental and fisheries data publicly available in a format and manner best suited for efficient distribution.
- Much of the data will be publicly available through the federal and state permitting processes, as well as reports or academic publications that result from survey or monitoring work and will be readily accessible to stakeholders. We proactively publish our fisheries research on our Fisheries & Mariners webpage.
- Where practicable, we will disseminate raw environmental data to the most appropriate database(s), such as those recommended in NYSERDA's (2021b) *Wildlife Data Standardization and Sharing: Environmental Data Transparency for New York State Offshore Wind Energy*, as soon as feasible following internal data quality assurance and quality control (QA/QC).
- Vineyard Offshore will continue working with agencies, stakeholders, and other offshore wind developers to find cost-effective and user-friendly ways to streamline and standardize available data across lease areas.
- Vineyard Offshore will provide a Data Management and Availability Plan to NYSERDA detailing how site and environmental data will be made available for use by third parties on an ongoing basis as soon as practicable after collection and data QA/QC.

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.

- Vineyard Offshore will align research activities for the Project within a regional context by reviewing the ROSA FishFORWRD database to assess if the proposed work is non-duplicative and the ROSA *Offshore Wind Project Monitoring Framework and Guidelines* to promote standardized protocols and integration with other research.
- Vineyard Offshore will provide annual progress updates on regional collaborative research to the ROSA Advisory Council or relevant Topic Area Committees.
- Vineyard Offshore will submit collaborative research Project information to the ROSA FishFORWRD database, review its accuracy, and provide updates every six months.
- Vineyard Offshore will, at collaborative Project kickoff or as soon as information is known, share the

coordinates of any sensors, sampling stations, or other research activities to ROSA for inclusion in the Research Planning Map under development by RWSC.

- Vineyard Offshore will continue to identify opportunities to support collaborative research through the engagement processes described previously and further in the sections that follow.

4.2 Handing and 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 sensitivities and/or the impacts of offshore wind energy development on fish, invertebrates and fisheries for the purpose of publication in peer-reviewed journals or other scientifically vigorous products.

- Vineyard Offshore will coordinate with third-party scientists regarding the provision of data and site access, and we will review any requests on a case-by-case basis. All requests will be considered and discussed with the requestor and will not be unreasonably denied.
- With the exception of temporary safety buffer zones established around work areas, third-party research vessels will be permitted to transit through and within the Lease Area.

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.

- Vineyard Offshore will seek to explain why identified data types are considered commercially sensitive.
- In certain instances, Vineyard Offshore may impose restrictions on data provision or the deployment of research equipment (e.g., buoys, environmental sensors, telemetry receivers, cameras) within the Lease Area, OECC, and on our facilities to protect proprietary and/or competitively sensitive information, maintain site security, and ensure safety, among other benefits.
- Vineyard Offshore notes that some data, though not proprietary, may be time consuming or costly to produce depending on the specific request and the primary format in which the data were collected. Vineyard Offshore will work to advance such requests but also hopes that regional monitoring organizations will make accessing data from all developers easier and more standardized to, at least in part, address this issue.

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. These financial commitments are outside those identified in Section 2.2.7 of the RFP and beyond those identified to fulfill state and federal regulatory permitting requirements.

- Vineyard Offshore plans to carefully consider all funding opportunities that arise through regional monitoring organizations (e.g., RWSC and ROSA). These groups will be raising funds from other entities and, with support from offshore wind developers, will be able to expand the scope and impact of their efforts to better understand the potential environmental effects of offshore wind energy development.

4.5 Proposed or Existing Commitments and Collaborations

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

- Vineyard Offshore is firmly committed to supporting regional studies and other independent environmental research.
- Vineyard Offshore plans to develop new partnerships in connection with the Project, particularly in New York, with an expected focus on supporting independent research and regional studies.

5 Proposed Mitigation of Impacts to Benthic and Fisheries Resources

5.1 Potential Impacts or Risks and Mitigation Measures by Project Stage

The table below should list the potential impacts and risks to benthic/fisheries 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.

Vineyard Offshore has identified preliminary measures to avoid, minimize, and mitigate potential impacts to benthic and fisheries resources from the Project. However, it is premature to finalize monitoring and mitigation measures at this stage of the Project's permitting process, which necessarily entails a thorough assessment of potential impacts and subsequent finalization of appropriate and practicable mitigation measures to address impacts. This multi-year iterative and adaptive process accounts for changing technologies, expanding information about marine species, and lessons learned from other offshore wind projects in the Mid-Atlantic and Northeast.

Potential Impacts	Proposed Mitigation Measures[1]	Phase*			
		1	2	3	4
Micrositing conflicts with habitats and fishery resources	• BOEM sited the Lease Area through a public, multi-year process to avoid and minimize potential impacts to fish, invertebrates, and fisheries from offshore wind development. • Vineyard Offshore will seek input from regulatory authorities, the fishing industry, and the maritime industry to locate foundations and cable routes in the least impactful manner that is practicable. • The wind turbine generators (WTGs) are widely spaced so that their foundations (and associated scour protection), along with cable protection for inter-array cables (if needed), only occupy a minimal portion of the Lease Area, leaving the	X			

Potential Impacts	Proposed Mitigation Measures[1]	Phase*			
		1	2	3	4
	vast majority of the site undisturbed. • To the greatest extent feasible, Vineyard Offshore will site the offshore cables to avoid and minimize impacts to sensitive habitats. • Vineyard Offshore will conduct G&G and environmental surveys to inform the Project's design and layout.				
Temporary alteration of the seabed and localized increases in noise and turbidity	• Vineyard Offshore will use noise attenuation technologies to reduce sound from pile driving of foundations (if such methods are used). • Pile driving noise will be mitigated through a soft start, which allows fish time to move away from the area. • Scour protection may be installed around foundations, where necessary, to minimize scouring and sediment suspension around foundations. • The use of mid-line anchor buoys will be considered, where feasible and safe, as a potential measure to reduce impacts from anchor line sweep.		X		
Long-term changes to seabed habitat	• Vineyard Offshore will, to the extent possible, avoid sensitive benthic habitats. • Vineyard Offshore will seek collaboration with state and federal regulatory authorities and key stakeholders to assess the use of ecological enhancements to provide offsets from potential adverse impacts. • Vineyard Offshore's goal is to minimize the use of cable protection to the greatest extent possible through a careful routing assessment and the selection of the most appropriate cable burial tool(s) to achieve a sufficient burial depth, taking into account site-specific environmental conditions and cable properties. • The addition of foundations, scour protection, and cable protection (if required) may act as an artificial reef and provide habitat previously absent from the area.	X	X	X	X
Electromagnetic field (EMF) impacts	• Vineyard Offshore will use proper shielding to reduce EMF. This can be achieved through sheathing and burial of cables; where sufficient burial depth cannot be achieved, the cables will be covered by cable protection (which would shield EMF). • Vineyard Offshore will conduct EMF modeling and assessments that could be used to identify potential		X	X	

Potential Impacts	Proposed Mitigation Measures[1]	Phase*			
		1	2	3	4
	mitigation requirements as part of the permitting process.				
Cable burial	• Vineyard Offshore will bury export and inter-array cables to an appropriate minimal depth to reduce exposure risk. If depth cannot be reached, Vineyard Offshore will add protective materials over the cable. • Cable burial techniques will be selected to maximize the likelihood of achieving sufficient cable burial, minimize the need for cable protection, and minimize suspended sediments during installation. • Vineyard Offshore will conduct routine surveys or inspections of subsea cables and will conduct a survey or inspection to ensure and correct for cable exposure following a hurricane or other major events causing disturbance to the seabed.		X	X	

**Phase: 1: Survey/Design; 2: Construction; 3: Operations; 4: Decommissioning*
Note:
1. The proposed measures described in this table are preliminary in nature and subject to review and approval from jurisdictional agencies in accordance with regulatory and permitting requirements. Final mitigation measures will be determined pursuant to applicable permitting processes and may vary from the list provided herein.

5.2 Coordination with the 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 that address stakeholder concerns related to benthic and fisheries resources. Specifically, describe the key types of information and design decisions where feedback will be solicited from stakeholders.

- Vineyard Offshore will coordinate with the F-TWG and work with fishermen and other stakeholders to understand concerns and identify potential solutions to mitigate impacts to benthic and fisheries resources.
- Vineyard Offshore will leverage BOEM's PEIS process as an opportunity for Vineyard Offshore to collaborate with other developers.
- Throughout the Project's multi-year permitting phase, Vineyard Offshore will continue to consult with relevant agencies, fishermen, and fisheries stakeholders regarding siting measures and design adjustments that could reduce potential impacts to fisheries.
- Vineyard Offshore's staff have been actively engaged in the F-TWG since its formation. Vineyard Offshore will continue to actively participate in the F-TWG and provide Project updates at appropriate intervals.
- Vineyard Offshore will incorporate lessons learned from Vineyard Wind 1 to facilitate stakeholder

consultations related to benthic and fisheries resources along with design decisions for the Project.

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

6.1 Potential Impacts or Risks and Mitigation Measures by Project Stage

The table below should list the potential impacts and risks to recreational and commercial fisheries and proposed mitigation measures. To this end, this section should describe 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. 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 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.

Vineyard Offshore has identified preliminary measures to avoid, minimize, and mitigate potential impacts to the commercial and recreational fishing industry from the Project. However, it is premature to finalize monitoring and mitigation measures at this stage of the Project's permitting process, which necessarily entails a thorough assessment of potential impacts and subsequent finalization of appropriate and practicable mitigation measures to address impacts. This multi-year iterative and adaptive process accounts for changing technologies, expanding information about marine species, and lessons learned from other offshore wind projects in the Mid-Atlantic and Northeast.

Potential Impacts	Proposed Mitigation Measures[1]	Phase*			
		1	2	3	4
Fishing gear loss	• The FCP includes tools and protocols to facilitate communication with vessels actively fishing or preparing to fish in or near the Lease Area and OECC. • Vineyard Offshore employs OFLs onboard our survey vessels and/or hires local fishing vessels to serve as scout vessels (where appropriate) to improve communication with the fishing industry and help avoid gear interactions during our offshore surveys. • Vineyard Offshore has developed and implemented a fishing gear loss compensation process that allows fishermen to be fairly compensated.	X	X	X	X
Navigational safety concerns	• Vineyard Offshore will develop a Navigational Enhancement Plan in consultation with regulatory authorities, fishermen, and fisheries stakeholders. The plan will aim to enable fishermen to safely continue effective navigation and fishing activities to encourage coexistence with the Project and, once finalized, will be appended to the FMP.		X	X	

Potential Impacts	Proposed Mitigation Measures[1]	Phase*			
		1	2	3	4
	• Vineyard Offshore will seek consultation with appropriate regulators, the F-TWG, and the fishing community to minimize the overall area of temporarily closed areas. Temporary safety buffer zones would be adjusted as active work sites change within the Lease Area or along the OECC, allowing fishermen and other stakeholders to use areas not under construction or maintenance. • Vineyard Offshore will incorporate best practices and lessons learned from Vineyard Wind 1 into construction and operational protocols for the Project. • Each WTG and electrical service platform (ESP) will be maintained as a Private Aid to Navigation (PATON). • Vineyard Offshore will coordinate with the US Coast Guard and NOAA to ensure that the location of the WTGs, ESPs, and as-built cable alignments are included on nautical charts.				
Displacement or loss of access to traditional fishing grounds during survey and construction activities	• Vineyard Offshore will coordinate with fishing stakeholders to determine spatial and temporal use. • Vineyard Offshore will, to the extent practicable, avoid heavily fished areas. • Vineyard Offshore will endeavor to minimize potential disruptions to fishing activities from site assessment and construction activities. Except for temporary safety buffer zones established around work areas, fishing vessels will be permitted to transit through and within the Lease Area and OECC.	X	X	X	X
EMF impacts	• Vineyard Offshore will use proper shielding to reduce EMF. This can be achieved through sheathing and burial of cables; where sufficient burial depth cannot be achieved, the cables will be covered by cable protection (which would shield EMF). • Vineyard Offshore will conduct EMF modeling and/or assessments that could be used to identify potential mitigation requirements as part of the permitting process.	X	X	X	
Cable burial	• Vineyard Offshore will bury export and inter-array cables to an appropriate minimal depth to reduce exposure risk. If depth cannot be reached, Vineyard Offshore will add protective materials over cables. • Cable burial techniques will be selected to maximize the likelihood of achieving sufficient cable burial, minimize the		X	X	

Potential Impacts	Proposed Mitigation Measures[1]	Phase*			
		1	2	3	4
	need for cable protection, and minimize suspended sediments during installation. • Vineyard Offshore will conduct routine surveys or inspections of subsea cables and will conduct a survey or inspection to ensure and correct for cable exposure following a hurricane or other major events causing disturbance to the seabed. • Vineyard Offshore will notify mariners, as soon as practicable, of exposed cables that pose a risk to navigational and fishing activities.				
Impacts to sensitive areas	• Vineyard Offshore will collaborate with state regulatory authorities and key stakeholders to collect data and avoid sensitive areas to a reasonably practicable extent. • The WTGs are widely spaced so that their foundations (and associated scour protection), along with cable protection for inter-array cables (if needed), only occupy a minimal portion of the Lease Area, leaving the vast majority of the site undisturbed. • Vineyard Offshore will continue to conduct G&G and environmental surveys to inform the Project's design and layout.	X	X		X
Turbine scour protection	• Vineyard Offshore will seek collaboration with federal and state regulatory authorities and key stakeholders to assess the use of ecological enhancements to provide offsets from potential adverse impacts.	X	X	X	X

**Phase: 1: Survey/Design; 2: Construction; 3: Operations; 4: Decommissioning*
Note:
1. The proposed measures described in this table are preliminary in nature and subject to review and approval from jurisdictional agencies in accordance with regulatory and permitting requirements. Final mitigation measures will be determined pursuant to applicable permitting processes and may vary from the list provided herein.

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.

- Vineyard Offshore will endeavor to bury export cables to a sufficient depth to minimize exposure risk. If the "appropriate depth" cannot be reached, Vineyard Offshore will add protective materials over the cable that, to the extent practicable, allow for fishing to continue to occur.
- Vineyard Offshore will coordinate with the US Coast Guard and NOAA to ensure that the location of

the wind turbine generators (WTGs), electrical service platforms (ESPs), and as-built cable alignments are included on nautical charts.

- Vineyard Offshore will use our experience from Vineyard Wind 1 to inform our approaches to avoiding gear interactions during the construction and operation of the Project.

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 and appeals of the claim and appropriate compensation of impacted parties.

- Vineyard Offshore has developed and implemented a fishing gear loss compensation process that allows fishermen to be fairly compensated. We use a standard gear loss or damage compensation form that is based on the form previously developed through coordination with FRs, FLs, and other developers for the Vineyard Wind 1 project. This form has been adopted by other developers and provides a standard approach to fishing gear loss and compensation across several lease areas and projects.
- Vineyard Offshore will consider the use of a third-party reviewer to assess claims and appeals when practicable and necessary to facilitate the satisfaction of valid claims.

6.2 Coordination with the 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. Describe how changes to environmental resources will be quantified using statistically sound methods.

- The BOEM lease agreement for Lease Area OCS-A 0544 requires Vineyard Offshore to "endeavor to design a surface structure layout that contains two common lines of orientation between OCS-A 0512 and OCS-A 0544." Recognizing this requirement, as part of the Project's permitting process, Vineyard Offshore will engage with the F-TWG, regional fishermen, and other maritime stakeholders, such as maritime experts, consultants, and marine safety committees, to discuss Project layouts that aim to minimize impacts on existing fishing practices and facilitate ongoing access to traditional fishing grounds.
- Upon request, Vineyard Offshore will provide a detailed, step-by-step breakdown of the process used to create the Project's layout.
- Vineyard Offshore will continue to work with fishermen and other stakeholders to help address key concerns such as navigation, vessel access, and safety.
- Vineyard Offshore has prepared a Navigation Safety Risk Assessment as part of the Vineyard Mid-Atlantic COP. This assessment contains a comprehensive assessment of current and historical fishing vessel traffic patterns in the vicinity of the Lease Area and is being used to inform proposed mitigation measures.

7 Considerations for Subsea Cables

7.1 Mitigation Strategies for Subsea Cables

This section should describe any additional fish and fisheries mitigation strategies for proposed subsea cable routes that support the offshore wind project.

- Vineyard Offshore has and will continue to design the OECC in consultation with agencies and relevant stakeholders to avoid or minimize the length of cable through sensitive habitats (e.g., mapped hard and complex bottom, artificial reefs, submerged aquatic vegetation), as well as areas of high commercial and recreational fishing density, to the extent feasible.
- To further minimize impacts, Vineyard Offshore will microsite individual offshore export cable alignments within the OECC to avoid sensitive habitats (where feasible) using the geophysical survey data that we collect, but avoidance of all sensitive habitats is not always possible.
- Vineyard Offshore will require our cable installation contractors to prioritize the least environmentally impactful cable installation methods(s) and tool(s) that are practicable for each segment of cable.
- Vineyard Offshore's goal is to minimize the use of cable protection to the greatest extent possible. If cable protection is used, fishermen will be informed of where cable protection has been installed by labeling it on charts and raising awareness through fisheries outreach.
- Vineyard Offshore will endeavor to consolidate the Project's cables with existing infrastructure, where possible.
- The proposed landfall site was selected to minimize offshore cable length (and correspondingly, minimize impacts) and avoid and minimize potential impacts to sensitive habitats.

8 Project Decommissioning

8.1 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).

- Vineyard Offshore's waste handling processes during decommissioning will focus on re-use or recycling, with disposal as the last option.
- Vineyard Offshore will collaborate with regulatory authorities, fishermen, and key fisheries stakeholder groups to better understand the effects and potential impacts associated with decommissioning.

8.2 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.

- Vineyard Offshore will decommission the Project in accordance with all necessary laws and

regulations and generate a detailed Project-specific Decommissioning Plan.

- Vineyard Offshore will seek input on the detailed Project-specific Decommissioning Application from regulatory agencies, fisheries and marine stakeholders, and local communities.
- Vineyard Offshore will use lessons learned from the construction and operation activities as well as other offshore wind projects and apply them (when appropriate) to the Decommissioning Plan.

9 Fisheries Compensation Plan

9.1 Consideration of Compensation Plan

This section should describe how the developer 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.

- At a minimum, Vineyard Offshore intends to follow any and all guidance being developed as part of BOEM's (2022) Draft Fisheries Mitigation Guidance provided that to the extent aspects of such guidance are memorialized in the Proposer's selected Project COP approval.
- The need for financial compensation to offset impacts to commercial and/or recreational fishermen will be established through the Project's permitting process.

9.2 Approach to Developing Compensation Plan

9.2.1 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.

- Vineyard Offshore will work as needed to evolve the guidance being developed as part of BOEM's (2022) Draft Fisheries Mitigation Guidance provided that to the extent aspects of such guidance are memorialized in the Proposer's selected Project COP approval.
- Vineyard Offshore has and will continue to engage and communicate feedback, as appropriate, in the design and development phase of the regional fisheries compensation fund effort currently led by 11 East Coast states (https://offshorewindpower.org/fisheries-mitigation-project).
- If financial compensation is required, Vineyard Offshore commits to using a regional compensation fund for the Project, provided that one is available on a timeline that aligns with the Project's schedule that the regional compensation fund reasonably supports an equitable, efficient, and transparent process to address potential losses and/or increased costs to fisheries associated directly with offshore wind development that cannot otherwise be addressed through avoidance, minimization, and non-compensatory mitigation strategies.
- If a regional compensation fund is not available, Vineyard Offshore will develop a fisheries compensatory mitigation program leveraging our experience from Vineyard Wind 1. We will do so in coordination with relevant fisheries stakeholders, including the F-TWG.

9.2.2 Third-party Administration

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

- Vineyard Offshore will seek input from federal, state, and fishing industry stakeholders to assess the most appropriate entity for the administration and disbursement of fisheries mitigation funds; this will include evaluating the potential to use the identified administrator from the effort led by the 11 East Coast states to design and develop a regional fisheries compensation fund.

10 Additional Considerations

10.1 Additional Mitigation Strategies and Fisheries Mitigation Plan 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.

- Vineyard Offshore is committed to ensuring that we employ measures that afford the highest levels of environmental protection while maintaining health and safety and Project viability. Throughout the Project's multi-year permitting process, we will continue to assess potential risks to species, as well as commercial and recreational fishermen, and identify measures to avoid, minimize, or mitigate potential impacts in line with applicable permitting requirements, as well as regional monitoring efforts. Stakeholder input, as well as lessons learned from Vineyard Wind 1 and other offshore wind projects, will inform this effort.
- Vineyard Offshore will support collaborative research on potential mitigation strategies in coordination with other developers, agencies, and stakeholders.
- Vineyard Offshore will implement a Navigational Enhancement Plan that is designed with engagement from the F-TWG, fisheries organizations, and regulatory authorities.

10.2 Process for Updating the Fisheries Mitigation Plan

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

- Vineyard Offshore will update the FMP to reflect the results of iterative exchanges with members of the F-TWG, the E-TWG, and other relevant stakeholders.
- Vineyard Offshore will continue engaging with the F-TWG, fishermen, and fisheries organizations and use feedback from these discussions to evolve the FMP in the same way we use feedback to evolve our FCP.
- Vineyard Offshore will update the FMP in a timely manner that reflects changes made based on key regulatory Project deliverable dates.
- Vineyard Offshore expects that additional guidance and information will become available throughout the Project's permitting process and will continue to consider its relevance to the FMP.

Section 8.1 Attachments

Response to New York State Energy Research and Development Authority Request for Proposals ORECRFP24-1

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Attachment 8.1-1: Fisheries Communication Plan

Fisheries Communication Plan: Lease Area 544

Prepared by:

Vineyard Mid-Atlantic LLC

(a Vineyard Offshore LLC affiliated company)

2023-12-14

Document Control

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Table of Contents

List of Figures

1. Introduction

Vineyard Offshore is an offshore wind development company established by the same team that developed Vineyard Wind 1 (Lease Area OCS-0501), the nation's first commercial-scale offshore wind project. Vineyard Offshore leads the development of two lease areas along the United States East Coast – Lease Area OCS-A 0544 (also known as Vineyard Mid-Atlantic) and Lease Area OCS-A 0522 (also known as Vineyard Northeast).

Section 3.1.2.2. of the Commercial Lease of Submerged Lands for Renewable Energy Development on the Outer Continental Shelf (the "Lease Agreement") for Lease Area OCS-A 0544 requires Vineyard Mid-Atlantic to develop a publicly available Fisheries Communication Plan (FCP). This document serves as the FCP for Vineyard Mid-Atlantic in satisfaction of the above-cited Lease Agreement provision and is being implemented by Vineyard Offshore as the developer.

The FCP is a living document based on best practice guidance and input from fishermen and fisheries stakeholders. It outlines our proactive approach to fisheries communication to ensure effective and regular engagement with a wide range of fishermen and fisheries stakeholders. This FCP aligns with the Vineyard Wind 1 FCP, which was first drafted in 2011 to improve communication with fishermen potentially affected by the development of that offshore wind project. Since then, our communications plan and approach have evolved and grown with over 10 years of input from fisheries stakeholders. This document will be updated periodically, in response to stakeholder feedback and to incorporate lessons learned, to ensure communication protocols and tools remain relevant and effective.

Vineyard Offshore strongly believes that the offshore wind and fishing industries can successfully work alongside each other in the marine environment, and we will continue the approach we started with Vineyard Wind 1 to build bridges between the two sectors. We will also continue to fund research, share data, participate in regional science initiatives, and expand our prior efforts to hire fishermen and/or fishing vessels to support offshore site assessment and data-gathering activities.

Visit https://www.vineyardoffshore.com/fisheries-544 to sign up for updates, to view Offshore Wind Mariner Updates (OWMUs), and to fill out an online Vessel Request for Information (RFI) form with vessel specifications and crew certifications if vessel owners are interested in working on Vineyard Mid-Atlantic. Charts showing the Lease Area, frequently asked questions (FAQs), and our fisheries science reports can also be found on the website.

2. Communication Goals and Objectives

The objectives of the FCP are as follows:

- engage in proactive two – way communication with fisheries stakeholders;
- build and maintain relations with the fishing industry and surrounding communities;
- develop fisheries research programs;
- identify potential workforce opportunities for fishing industry involvement; and

- respond to stakeholder feedback and incorporate lessons learned, to ensure communication protocols and tools remain relevant and effective.

3. Background and Lease Description

Lease Area OCS-A 0544 (the "Lease Area"), within the New York Bight, is a 43,056-acre site located approximately 21 nautical miles south of Fire Island, New York in water depths of 21 – 26 fathoms (127 – 155 feet) on the Outer Continental Shelf (OCS; Figure 1). The Lease Area abuts Empire Wind's Lease Area OCS-A 0512 along its western edge.

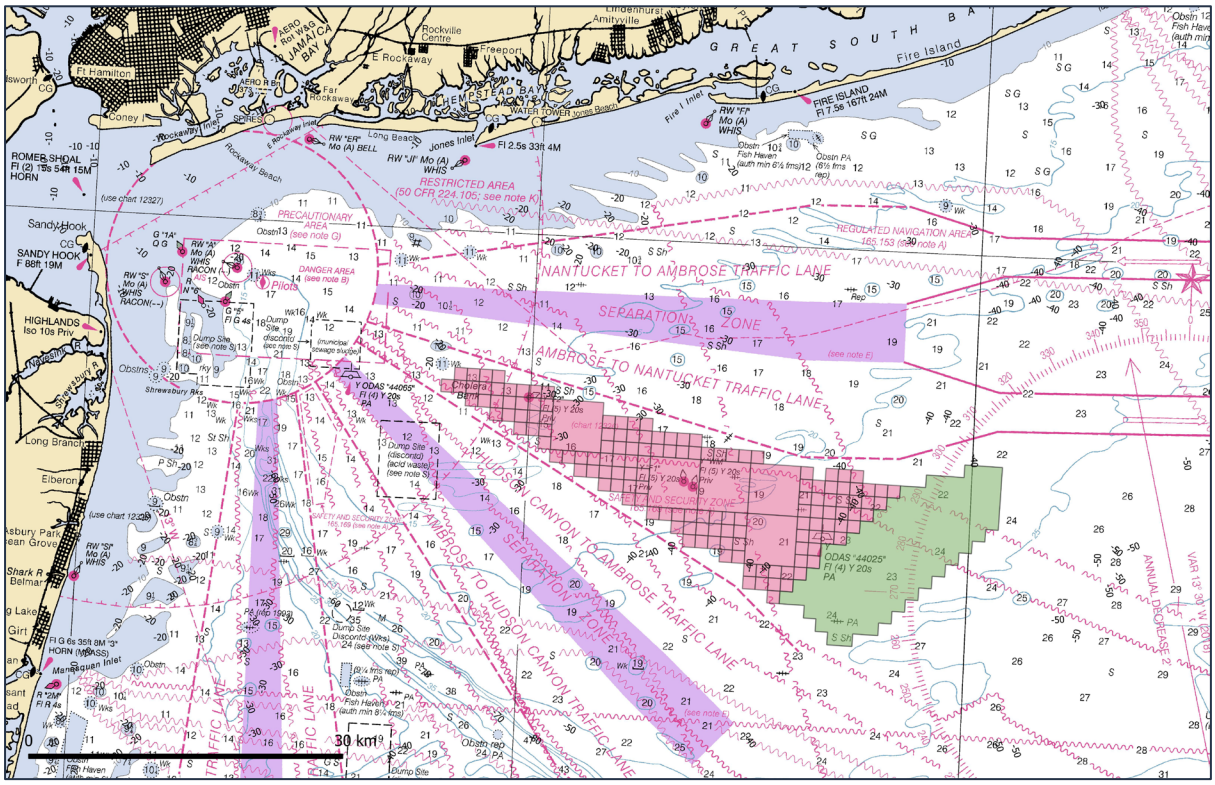

Figure 1: Location of Lease Area OCS-A 0544 (shaded green) in the New York Bight Wind Energy Area. Empire Wind Lease Area OCS-A 0512 (pink shading) is adjacent to the west. Nautical chart 12300 in the background (soundings in fathoms).

4. Potentially Affected Fisheries

An analysis published by National Oceanic and Atmospheric Administration (NOAA) Fisheries in 2023 indicates that the commercial fisheries most likely to be most affected[1] by offshore site assessment, construction, and operational activities for Vineyard Mid-Atlantic are: (1) Sea Scallop; (2) Mackerel, Squid, and Butterfish; (3) Summer Flounder, Scup, Black Sea Bass; (4) Monkfish; and (5) Atlantic Herring.[2] Other Fishery Management Plans (FMPs) and fisheries may also be affected. Highly migratory species (sharks, tunas, billfish) transit through the Lease Area and recreational fishing vessels, including both large party charters and smaller for-hire vessels, are known to fish in the area and along potential offshore export cables. Vineyard Offshore is conducting fisheries outreach and engagement with different fisheries to verify and refine NOAA Fisheries' assessment of potentially impacted commercial and recreational fisheries in the Lease Area as well as along any potential offshore export cable corridors.

5. Fisheries Team

The Fisheries Team for Vineyard Mid-Atlantic consists of the following members, whose roles are described below:

- Fisheries Manager (FM)
- Fisheries Liaison (FL)
- Marine Liaison Officer (MLO)
- Fisheries Representatives (FRs)
- Onboard Fisheries Liaisons (OFLs) and
- Scout Vessels

Our fisheries communication efforts are led by our FM Crista Bank, a fisheries biologist with deep knowledge of fishing practices as well as an extensive network of personal relationships with fishermen and fishery organizations in the region (see Figure 2). Crista oversees Vineyard Offshore's efforts to build and maintain relations with the commercial and recreational fishing industries and surrounding communities. This includes directing outreach, developing fisheries research programs, and identifying potential workforce opportunities for fishing industry involvement. She has spent the last five years laying the groundwork for these strategies as an FL on the Vineyard Wind 1 project.

Crista's fisheries communication efforts are supported by Travis Lowery who serves as an FL for Vineyard Offshore. He is primarily responsible for developing and delivering our New England fisheries program. This program includes a range of components, such as

[1] NOAA Fisheries defines "most impacted" as the FMPs deriving the most revenue from an area over the 14-year analysis period of 2008 to 2021, indicating the highest potential for impact to the industry from a reduction in fishing area.

[2] https://www.greateratlantic.fisheries.noaa.gov/ro/fso/reports/WIND/WIND_AREA_REPORTS/OCS_A_0544.html.

outreach, communication strategy engagement, project planning, workforce development, and fisheries science. Travis is a fisheries biologist who spent six years working for the Marine Fisheries Field Research Group at UMass Dartmouth's School for Marine Science and Technology. He spent over 300 days at sea as chief scientist working on cooperative research projects. He most recently led the ventless trap and larval surveys in the Vineyard Wind 1 lease area.

Crista and her team are working closely with Jim Donofrio, a New Jersey-based recreational fisherman with an extensive network of fishing industry contacts in the New York Bight, and Jake Wiscott a commercial scallop/dragger fisherman home based in Cape May. Vineyard Offshore is currently recruiting an FL for Vineyard Mid-Atlantic. Travis is also engaging with New England-based fishermen and others in the region who fish in the New York Bight. If you are interested in the FL position or have suggestions on potential candidates, please contact our FM.

Vineyard Offshore also employs an MLO who is responsible for safe marine operations and ensuring that Vineyard Offshore is a good neighbor while on the water. As such, there is frequent interaction, information exchange, and coordination between the fisheries team and the MLO.

Our fisheries team is readily available by phone, email, and text for ongoing communication (see Figure 2 and our website for contact information). Fishermen can also sign up for general updates and news, OWMUs, and information requests by filling out a contact form on our website.

Information about the role FLs, FRs, OFLs, and scout vessels play on our projects is provided below.

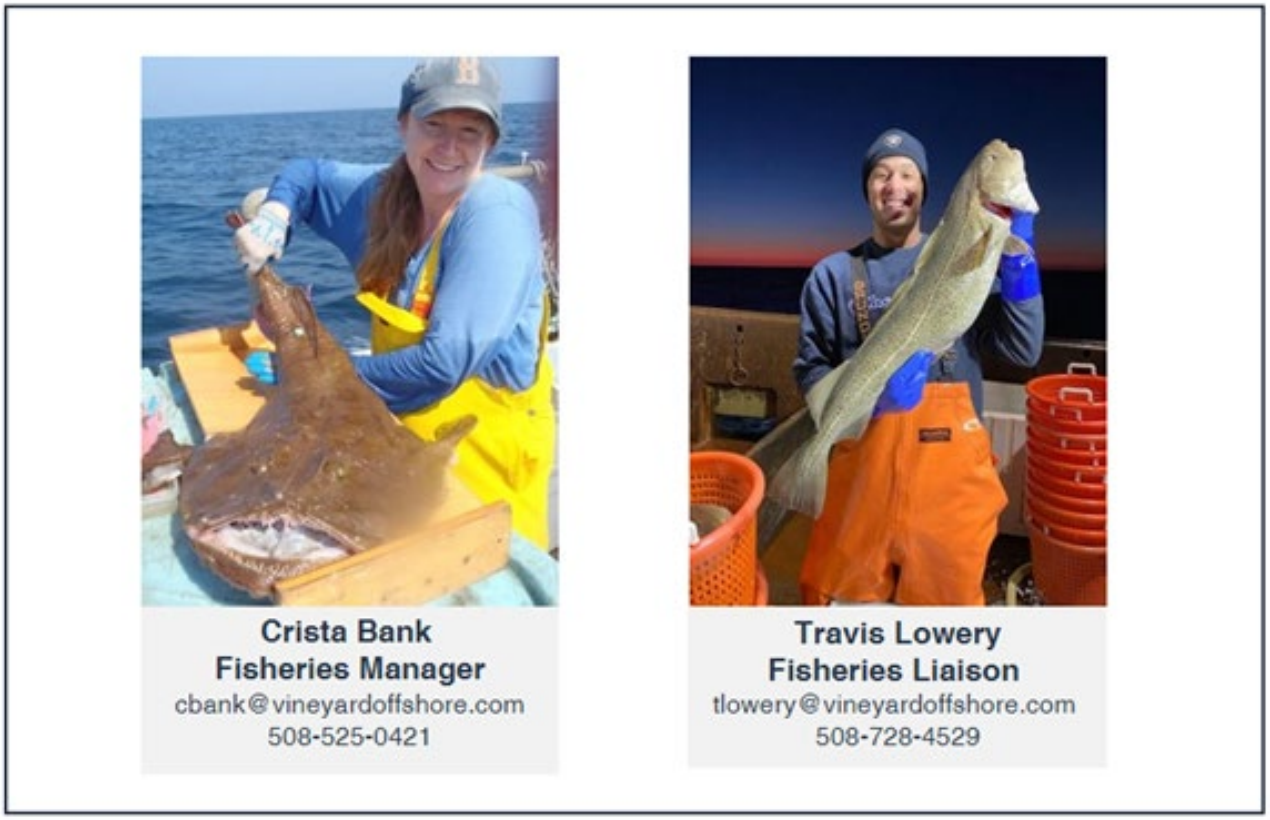

Figure 2: Vineyard Offshore's Fisheries Manager and Liaison

5.1 Fisheries Liaisons

FLs are employed by offshore wind developers to implement FCPs and serve as a communication conduit between offshore wind developers and the fishing industry. At Vineyard Offshore, the FL serves as a readily accessible and knowledgeable point of contact within the company that fishermen and FRs can efficiently and effectively communicate with. The FL is also tasked with:

- developing relationships and direct lines of communication with individuals that are representative of potentially impacted fishing regions, industries, and communities;
- understanding and conveying current fishing industry concerns and feedback to the Vineyard Offshore team to identify and work towards solutions;
- maintaining existing working relationships with FRs, and identifying and onboarding new FRs;
- identifying potentially affected fisheries and developing communication protocols and tools that create two-way communication channels;
- coordinating with the FLs employed by other offshore wind developers to streamline fisheries communication and outreach events, collaborate on fisheries research and support, and standardize programs as appropriate;
- working with scientists, federal and state agencies, fishermen, and fisheries stakeholders to develop monitoring plans for fish species and habitats of concern; and
- identifying and expanding training and work opportunities for fishermen and fishing vessels.

5.2 Fisheries Representatives

FRs do not work on behalf of offshore wind developers but represent a particular fishing community, organization, gear type, port, region, state, or sector(s). FRs are responsible for communicating fisheries concerns, issues, and other input to offshore wind developers. Typically, an FR is an active fisherman or group representing active fishermen within the region, fishery, state, or sector they represent. While FRs are compensated for their time and expenses by offshore wind developers, their duty is to the fishing region, industry, organization, gear type, or sector they represent.

Vineyard Offshore is committed to maintaining an effective network of FRs and is currently seeking FRs for Vineyard Mid-Atlantic. If you are interested or have suggestions, please contact our FM.

5.3 Onboard Fisheries Liaisons and Scout Vessels

OFLs are experienced fishermen employed to assist geophysical and geotechnical site assessment survey vessel captains with on the water communication and to document fishing gear in the area to help avoid interactions. OFLs continue the role of the FLs offshore so that there is effective communication on-site and in real-time. OFLs report to the FLs and serve as the FLs' "eyes, ears, and voice" during offshore operations.

Among other things, the OFL records observed fisheries activities, ensures survey vessel operations are compliant with the FCP and other fisheries-related policies, and seeks to avoid negative fisheries interactions by looking out for fixed gear and establishing communications (usually by very high-frequency [VHF] radio) with fishing vessels when appropriate. In the event of a negative fisheries interaction, the OFL works with the FLs and relevant FRs to resolve the matter safely, fairly, and efficiently.

Vineyard Offshore also employs local fishing vessels to serve as scout vessels. The scout vessels work ahead of the geophysical and geotechnical site assessment survey vessels and report the fixed gear locations back to the OFL on the survey vessel to avoid any gear interaction. The scout vessel identifies fishermen actively working in the area so the FL can reach out to them with detailed survey vessel information throughout the remainder of the survey activity. This approach has proven effective at reducing the risk of fixed gear interactions during offshore activities.

6. Fisheries Engagement

Starting with the Vineyard Wind 1 project, Vineyard Offshore's team has over a decade of experience engaging with commercial and recreational fishermen, vessel owners, fishing advocacy organizations, shore support services, and fisheries research institutions. Our FM and other members of our staff have met with hundreds of fisheries stakeholders in recent years, including fishermen from various gear types and sectors, fishing advocacy organizations, and local fisheries groups who are most likely to be affected by offshore wind development on the OCS. Aside from building relationships with the region's fishermen

and fisheries stakeholders, a key objective of our engagement efforts is to build trust and look for mutually beneficial opportunities to work with the fishing industry.

Vineyard Offshore has and will continue to employ a variety of outreach methods and tools to communicate and maintain relationships with fishermen and fisheries stakeholders. These outreach methods and tools include, but are not limited to, the following:

- organizing bi-weekly meetings with FRs to share project information and discuss concerns and current issues facing the fishing industry;
- working with FRs to distribute flyers, charts, FAQs, and other relevant information through their networks and communication channels;
- creating outreach materials for fishing communities to distribute at different events as well as local bait and tackle shops in the region;
- holding "port hours" with FLs from other offshore wind developers at ports in Montauk, New York, New Bedford, Massachusetts, Narragansett, Rhode Island, and Stonington, Connecticut to provide information to fishing vessel crews who fish in or transit through the New York Bight;
- maintaining a website with information specifically for fishermen, including fisheries science information, charts, mariner updates of offshore vessel activity, and RFIs;
- maintaining a database of fishing vessels interested in offshore wind, survey vessel, and guard vessel work as identified through our Vessel RFI;
- reaching out to local recreational fishing organizations and clubs;
- presenting project information and updates on fisheries science at recreational organization meetings;
- hosting tables at commercial marine expos and recreational fishing shows;
- engaging with recreational fishing tournaments and derby organizers, including sponsoring events; and
- relying on word of mouth (i.e., reaching out to a fisherman at the request of another fisherman).

Vineyard Offshore is in regular contact with the relevant federal and state agencies on fisheries-related matters. In addition, we are active participants in the following technical working groups, advisory boards, councils, and commissions:

- International Council for the Exploration of the Sea (member of Working Group on Offshore Wind Development and Fisheries)
- Massachusetts Fisheries Working Group on Offshore Wind Energy
- Massachusetts Habitat Working Group on Offshore Wind Energy
- Mid-Atlantic Fishery Management Council
- New England Fishery Management Council
- New York State Energy Research and Development Authority's (NYSERDA's) Environmental Technical Working Group
- NYSERDA's Fisheries Technical Working Group
- American Clean Power New York Bight Fisheries Working Group
- Regional Wildlife Science Collaborative for Offshore Wind
- Responsible Offshore Science Alliance

Finally, we understand that some fishermen do not feel adequately represented by fishing organizations or FRs, and therefore prefer to share information and concerns individually and through different channels of communication. We recognize that individuals' concerns

are just as important as group concerns and will continue to reach out to individual fishermen and respect requests for anonymity.

6.1 Offshore Communication Protocols

The offshore communications protocols outlined below will be adjusted and adapted over time to reflect best practices and lessons learned. Similar protocols will be standardized and implemented for construction activities at the appropriate time.

E-mail and text alerts are a critical communication tool to keep fishermen apprised of offshore activities, and we actively encourage all fishermen and fisheries stakeholders to sign up for these alerts on our website.

6.1.1 Fishing Industry Communication Protocol Before and During Offshore Survey Work

Our offshore survey work communication protocol, which incorporates recommendations from fishermen and state agency protocols, is as follows:

- coordinate with the United States Coast Guard to issue Notices to Mariners.
- create OWMUs that include a description of the planned activity, pictures of the vessel(s) and equipment to be deployed, a chart showing the location of the activity, vessel contact information, OFL contact information (if applicable), and scout vessel picture(s) and contact information (if applicable). OWMUs support deconfliction of the marine space such that local mariners, including fishing vessels, can choose to avoid survey locations.
- publish OWMUs on our website and social media channels and send them via email and SMS text alert to those that have opted to receive notifications.
- work with FRs to share information through their email lists and other media channels.
- announce and publicize survey activities through state agencies, fishing organization websites, fish houses, and newsletters.
- send out regular email and/or text updates detailing progress, both for work completed and upcoming work areas, to various parties during offshore work.

6.1.2 Geological Survey Vessel Communication and Fishing Gear Protocols

Vineyard Offshore contracts with local fishermen to serve as OFLs onboard survey vessels to assist vessel captains with communication and document fishing gear in the area to help avoid interactions, as noted above. OFLs with local fishing experience and knowledge of the area are typically contracted for the duration of a survey vessel's operations.

Before a survey trip begins, the FL and OFL attend pre-trip meetings with the survey vessel captain and crew to review the specifics of the fisheries active in the area. If an FL has known coordinates of fixed gear in the area, the information is shared with the survey vessel captain and OFL. The survey vessel captain and crew are instructed to communicate respectfully with fishermen and work around fishing gear to the greatest extent practicable.

The captain, crew chief, Vineyard Offshore's client representative, and OFL review and sign off on the communication and gear interaction protocols, which are outlined below, at the start of a survey campaign and whenever there is a new captain or party chief.

6.1.2.1 Communication Protocol for Survey Vessel Captains

Survey vessel captains and crew implement the following communication protocol during offshore surveys:

- Work around fishing gear to the greatest extent practicable.
- The OFL will have their own VHF unit to monitor radio communications.
- The OFL will communicate directly with fishing vessels in the area, if agreed upon with Captain.
- The OFL will be the main point of contact with the scout vessel.
- Alert OFL to all gear interactions at the time it occurs, waking the OFL if necessary.
- If a fishing vessel is not responding to radio calls, let the OFL try to communicate, waking them up if necessary.
- Plot fixed gear locations while OFL is off watch and relay information when OFL is back on watch.
- Report all communication with fishing vessels to the OFL, both positive and negative when OFL is off watch.
- The OFL will need access to the wheelhouse to set up equipment if practicable.
- OFL will need reliable internet connectivity.

6.1.2.2 Fixed Gear Interaction Protocols for Survey Vessel Crew

If an incident between a survey vessel and static fishing gear does occur, the following outlines the roles and procedures for such an event:

- Immediately alert OFL (wake up if off watch).
- Fishing gear interaction is logged in the daily report, electronic spreadsheet, and the Interaction Log, recording time, location, photos, details of events, etc.
- If the fishing gear is entangled around survey equipment and is brought on board, the OFL will determine if the fishing gear is actively engaged in fishing, or if it is abandoned fishing gear (i.e., ghost gear).
- If it is determined the fishing gear is actively engaged in fishing, and the line needs to be severed to release survey equipment, keep any severed gear on board.
- Photos should be taken and the time and vessel position when the released fishing gear is returned to the water should be recorded.
- If it is determined by the OFL the fishing gear is not actively engaged in fishing, keep the abandoned fishing gear on board the vessel and record position where it was retrieved.
- The gear should be brought back to shore, and if the owner can be identified they will be notified, and the gear will be returned.
- Vessel location and time when an interaction begins and vessel location and time when the incident is over will be recorded.
- Buoy permit number and color is logged.
- Pictures are taken of the gear.
- FM is notified of all gear interactions as soon as possible.

6.2 Safety Management System/Emergency Communication Protocols

An important objective of this FCP is to enhance the safety of all ocean users in and around a project area during development, construction, operations, and decommissioning. Our Safety Management System will describe procedures for notifying the United States Coast Guard of mariners in distress, of potential/actual search and rescue incidents, and any events or incidents that may impact maritime safety or security. Safety planning will be further elaborated on in future updates of the FCP.

7. Fishing Gear Loss and Compensation

Vineyard Offshore has developed a fishing gear loss compensation process that allows fishermen to be quickly and fairly compensated so they can continue fishing. We use a standard gear loss/damage compensation form that is based on the form previously developed through coordination with FRs, FLs, and other developers for the Vineyard Wind 1 project. This form provides a standard approach to fishing gear loss and compensation across several East Coast lease areas and projects. Fishermen can access the form on Vineyard Offshore's website at: https://www.vineyardoffshore.com/fisheries-544.

8. Information and Data Sharing

Vineyard Offshore has established a webpage for the Vineyard Mid-Atlantic project at https://www.vineyardoffshore.com/fisheries-544. This webpage will be updated regularly as the project moves through the development phase and will include information related to:

- Project descriptions
- Project benefits
- Data collected
- Key documents
- Project initiatives
- Key contact information

A dedicated webpage for fishermen supplements the direct communication activities described in Section 6.

9. Tracking Plan Efficacy & Reporting

Vineyard Mid-Atlantic will maintain records of meetings and other key communication with each agency. The following information will be captured for each meeting or engagement:

- Meeting Date
- Meeting Objective(s)
- Concern(s)/Issue(s)/Potential Effect(s) Raised
- Follow-up action(s) and/or approach for resolution
- Concern(s)/Issue(s) Resolved

In semi-annual progress reports, Vineyard Mid-Atlantic will summarize the focus of discussions, potential effects raised, follow-up actions or outcomes, efforts made to address these potential effects, and how the project design or implementation will be informed. Individual names and personal information will not be included in the reports.

The efficacy of this FCP will be measured by the frequency of communications, constructive feedback/guidance/or concerns raised, and the ability to incorporate feedback and/or resolve issues.

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Attachment 8.1-2: [redacted]

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Attachment 8.1-3: FMP References

ATTACHMENT 8.1-3
FMP REFERENCES

[BOEM] Bureau of Ocean Energy Management. 2018. Draft guidance regarding the use of a project design envelope in a construction and operations plan. US Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs. [January 12, 2018]. https://www.boem.gov/sites/default/files/renewable-energy-program/Draft-Design-Envelope-Guidance.pdf.

[BOEM] Bureau of Ocean Energy Management. 2019. Guidelines for providing benthic habitat survey information for renewable energy development on the Atlantic Outer Continental Shelf pursuant to 30 CFR part 585. US Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs. [June 2019] http://www.boem.gov/sites/default/files/renewable-energy-program/Regulatory-Information/BOEM-Renewable-Benthic-Habitat-Guidelines.pdf.

[BOEM] Bureau of Ocean Energy Management. 2020. Information guidelines for a renewable energy construction and operations plan (COP). Version 4.0. US Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs. [May 27, 2020]. https://www.boem.gov/sites/default/files/documents/about-boem/COP%20Guidelines_Technical_Corrections.pdf.

[BOEM] Bureau of Ocean Energy Management. 2021a. Project design criteria and best management practices for protected species associated with offshore wind data collection. Revised November 2021. https://www.boem.gov/sites/default/files/documents//PDCs%20and%20BMPs%20for%20Atlantic%20Data%20Collection%2011222021.pdf.

[BOEM] Bureau of Ocean Energy Management. 2021b. Commercial and research wind lease and grant issuance and site assessment activities on the Atlantic Outer Continental Shelf of the New York Bight, draft environmental assessment. OCS EIS/EA BOEM 2021-041. [August 2021]. https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/NY-Bight-Draft-EA-2021.pdf.

[BOEM] Bureau of Ocean Energy Management. 2022. Guidelines for mitigating impacts to commercial and recreational fisheries in the Outer Continental Shelf pursuant to 30 CFR Part 585. June 23, 2022. https://www.boem.gov/renewable-energy/reducing-or-avoiding-impacts-offshore-wind-energy-fisheries

[BOEM] Bureau of Ocean Energy Management. 2023. Guidelines for providing information on fisheries for renewable energy development on the Atlantic Outer Continental Shelf pursuant to 30 CFR Part 585. US Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs. [Effective March 27, 2023]. https://www.boem.gov/sites/default/files/documents/about-boem/Fishery-Survey-Guidelines.pdf.

[NOAA Fisheries] National Oceanic and Atmospheric Administration Fisheries. 2024a. Descriptions of selected fishery landings and estimates of vessel revenue from areas: a planning-level assessment. [accessed June 26, 2024] https://www.greateratlantic.fisheries.noaa.gov/ro/fso/reports/WIND/WIND_AREA_REPORTS/com/OCS_A_0544_com.html.

[NOAA Fisheries] National Oceanic and Atmospheric Administration Fisheries. 2024b. Landings and revenue data (2008-2023) processed by Greater Atlantic Regional Office, provided to Epsilon Associates [August 2024].

[NOAA Fisheries] National Oceanic and Atmospheric Administration Fisheries. 2024c. Marine Recreational Information Program recreational fisheries statistics queries. [accessed August 2, 2024]. https://www.fisheries.noaa.gov/data-tools/recreational-fisheries-statistics-queries.

[NYSERDA] New York State Energy and Research and Development Authority. 2017. New York State offshore wind master plan: fish and fisheries study. [November 2017] https://www.nyserda.ny.gov/All-Programs/Offshore-Wind/About-Offshore-Wind/Master-Plan.

[NYSERDA] New York State Energy Research and Development Authority. 2021a. Digital aerial baseline survey of marine wildlife in support of offshore wind energy: spatial and temporal marine wildlife distributions in the New York Offshore Planning Area, summer 2016–spring 2019, volume 1: methods, general results, limitations, and discussion. NYSERDA Report Number 21-07a. Prepared by Normandeau Associates, Inc., Gainesville, FL, and APEM, Ltd., Stockport, UK. [October 2021]. https://remote.normandeau.com/docs/21-07a_Digital_Aerial_Baseline_Survey_of_Marine_Wildlife_in_Support_of_Offshore_Wind_Energy.pdf.

[NYSERDA] New York State Energy and Research Development Authority. 2021b. Wildlife data standardization and sharing: environmental data transparency for New York State offshore wind energy. NYSERDA Report 21-11. Prepared by E Jenkins and K Williams, Biodiversity Research Institute, Portland ME. [May 2021] https://www.nyserda.ny.gov/-/media/Project/Nyserda/files/Programs/offshore-wind/21-11-Wildlife-Data-Standardization-and-Sharing-Environmental-Data-Transparency-for-NYS-OSW-Energy.pdf.

[ROSA] Responsible Offshore Science Alliance. 2021. Offshore wind project monitoring framework and guidelines. [accessed September 13, 2023]. https://www.nyftwg.com/wp-content/uploads/2021/06/ROSA-Interim-Monitoring-Guidance-Document.pdf.

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Attachment 8.1-4: [redacted]

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