appointed as special government employees (SGEs) and will be subject to the ethical standards applicable to SGEs. Members are reimbursed for actual and reasonable travel and per diem expenses incurred in performing such duties but will not be reimbursed for their time. As a Federal Advisory Committee, the Board's membership is required to be balanced in terms of viewpoints represented and the functions to be performed as well as the interests of geographic regions of the country and the diverse sectors of U.S. society.

The SAB meets in person three times each year, exclusive of teleconferences or subcommittee, task force, and working group meetings. Board members must be willing to serve as liaisons to SAB working groups and/or participate in periodic reviews of the NOAA Cooperative Institutes and overarching reviews of NOAA's research enterprise.

Nominations: Interested persons may nominate themselves or third parties.

Applications: An application is required to be considered for Board membership, regardless of whether a person is nominated by a third party or self-nominated. The application package must include: (1) The nominee's full name, title, institutional affiliation, and contact information; (2) the nominee's area(s) of expertise; (3) a short description of his/her qualifications relative to the kinds of advice being solicited by NOAA in this Notice; and (4) a current resume (maximum length four [4] pages).

Dated: April 28, 2020.

David Holst,

Director Chief Financial Officer/CAO, Office of Oceanic and Atmospheric Research, National Oceanic and Atmospheric Administration.

[FR Doc. 2020–09641 Filed 5–5–20; 8:45 am]

BILLING CODE 3510–KD–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648–XV180]

Determination of Overfishing or an Overfished Condition

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice.

SUMMARY: This action serves as a notice that NMFS, on behalf of the Secretary of Commerce (Secretary), has found that Saint Matthew Island blue king crab is still overfished, the American Samoa Bottomfish Multi-species Complex is now subject to overfishing and now overfished, and the Guam Bottomfish Multi-species Complex is now overfished. NMFS, on behalf of the Secretary, notifies the appropriate regional fishery management council (Council) whenever it determines that overfishing is occurring, a stock is in an overfished condition, or a stock is approaching an overfished condition.

FOR FURTHER INFORMATION CONTACT: Regina Spallone, (301) 427–8568.

SUPPLEMENTARY INFORMATION: Pursuant to section 304(e)(2) of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), 16 U.S.C. 1854(e)(2), NMFS, on behalf of the Secretary, must notify Councils, and publish in the **Federal Register**, whenever it determines that a stock or stock complex is subject to overfishing, overfished, or approaching an overfished condition.

NMFS has determined that Saint Matthew Island blue king crab is still overfished. This determination is based on the most recent assessment, completed in 2019 using data through 2019, which indicates that the biomass estimate remains below its threshold. NMFS has notified the North Pacific Fishery Management Council of the requirements to rebuild this stock.

NMFS has determined that the American Samoa Bottomfish Multi-species Complex is now subject to overfishing and now overfished. This determination is based on the most recent assessment, completed in 2019, using data through 2017, which indicates that this complex is overfished because the biomass estimate is less than the threshold and subject to overfishing because the fishing mortality rate is greater than the threshold. In addition, NMFS has determined that the Guam Bottomfish Multi-species Complex is now overfished. This determination is based on the most recent assessment, completed in 2019, using data through 2017, which indicates that this complex is overfished because the biomass estimate is less than the threshold. NMFS has notified the Western Pacific Fishery Management Council of its obligation to end overfishing on the American Samoa Multi-species Complex and rebuild both stock complexes.

Dated: April 30, 2020.

Hélène M.N. Scalliet,

Acting Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 2020–09622 Filed 5–5–20; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648–XA132]

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Marine Site Characterization Surveys Off of Massachusetts, Rhode Island, Connecticut, and New York

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice; issuance of an incidental harassment authorization.

SUMMARY: In accordance with the regulations implementing the Marine Mammal Protection Act (MMPA) as amended, notification is hereby given that NMFS has issued an incidental harassment authorization (IHA) to Vineyard Wind, LLC (Vineyard Wind) to incidentally harass, by Level B harassment only, marine mammals during marine site characterization surveys off the coast of Massachusetts in the areas of the Commercial Lease of Submerged Lands for Renewable Energy Development on the Outer Continental Shelf (OCS–A 0501 and OCS–A 0522) and along potential submarine cable routes to a landfall location in Massachusetts, Rhode Island, Connecticut, and New York.

DATES: This authorization is valid from June 1, 2020 through May 31, 2021.

FOR FURTHER INFORMATION CONTACT: Robert Pauline, Office of Protected Resources, NMFS, (301) 427–8401. Electronic copies of the applications and supporting documents, as well as a list of the references cited in this document, may be obtained by visiting the internet at: *www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-other-energy-activities-renewable.* In case of problems accessing these documents, please call the contact listed above.

SUPPLEMENTARY INFORMATION:

Background

The MMPA prohibits the ''take'' of marine mammals, with certain exceptions. Sections 101(a)(5)(A) and

(D) of the MMPA (16 U.S.C. 1361 *et seq.*) direct the Secretary of Commerce (as delegated to NMFS) to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made and either regulations are issued or, if the taking is limited to harassment, a notice of a proposed incidental take authorization may be provided to the public for review.

Authorization for incidental takings shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s) and will not have an unmitigable adverse impact on the availability of the species or stock(s) for taking for subsistence uses (where relevant). Further, NMFS must prescribe the permissible methods of taking and other ''means of effecting the least practicable adverse impact'' on the affected species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of such species or stocks for taking for certain subsistence uses (referred to in shorthand as ''mitigation''); and requirements pertaining to the mitigation, monitoring and reporting of such takings are set forth.

The definitions of all applicable MMPA statutory terms cited above are included in the relevant sections below.

Summary of Request

On October 24, 2019, NMFS received a request from Vineyard Wind for an IHA to take marine mammals incidental to marine site characterization surveys offshore of Massachusetts in the areas of the Commercial Lease of Submerged Lands for Renewable Energy Development on the Outer Continental Shelf (OCS–A 0501 and OCS–A 0522) and along potential submarine offshore export cable corridors (OECC) to landfall locations in Massachusetts, Rhode Island, Connecticut, and New York. NMFS deemed that request to be adequate and complete on January 7, 2020. Vineyard Wind's request is for the take of 14 marine mammal species by Level B harassment that would occur, using multiple concurrently operating vessels, over the course of up to 365 calendar days. Neither Vineyard Wind nor NMFS expects serious injury or mortality to result from this activity and the activity is expected to last no more than one year, therefore, an IHA is appropriate.

Description of the Specified Activity

Vineyard Wind plans to conduct high-resolution geophysical (HRG) surveys in support of offshore wind development projects in the areas of Commercial Lease of Submerged Lands for Renewable Energy Development on the Outer Continental Shelf (#OCS–A 0501 and #OCS–A 0522) (Lease Areas) and along potential submarine cable routes to landfall locations in Massachusetts, Rhode Island, Connecticut, and New York.

The purpose of the marine site characterization surveys is to obtain a baseline assessment of seabed/sub-surface soil conditions in the Lease Area and cable route corridors to support the siting of potential future offshore wind projects. Underwater sound resulting from Vineyard Wind's planned site characterization surveys has the potential to result in incidental take of marine mammals in the form of behavioral harassment. The estimated duration of the activity is expected to be up to 365 survey days starting in June, 2020. This schedule is based on 24-hour operations and includes potential down time due to inclement weather. A maximum of 736 vessel days are planned with up to eight survey vessels operating concurrently. Survey vessels will travel at an average speed of 3.5 knots (kn) and total distance covered by each while actively operating HRG equipment is approximately 100 kilometers (km) per day. The notice of proposed IHA incorrectly stated an average speed of 4 kn.

The HRG survey activities planned by Vineyard Wind are described in detail in the notice of proposed IHA (85 FR 7952; February 12, 2020). The HRG equipment planned for use is shown in Table 1.

TABLE 1—SUMMARY OF GEOPHYSICAL SURVEY EQUIPMENT PLANNED FOR USE BY VINEYARD WIND

HRG equipment category	Specific HRG equipment	Operating frequency (kHz)	Beam width (°)	Source level (dB rms)	Peak source level (dB re 1 μPa m)	Pulse duration (ms)	Repetition rate (Hz)
Shallow subbottom profiler	EdgeTech Chirp 216	2–10	65	178	182	2	3.75
	Innomar SES 2000 Medium	85–115	2	241	247	2	40
Deep seismic profiler	Applied Acoustics AA251 Boomer	0.2–15	180	205	212	0.9	2
	GeoMarine Geo Spark 2000 (400 tip).	0.25–5	180	206	214	2.8	1
Underwater positioning (USBL)	SonarDyne Scout Pro	35–50	180	188	191	Unknown	Unknown
	ixBlue Gaps	20–32	180	191	194	1	10

As described above, detailed description of Vineyard Wind's planned surveys is provided in the notice of proposed IHA (85 FR 7952; February 12, 2020). Since that time, no changes have been made to the activities. Therefore, a detailed description is not provided here. Please refer to that notice for the detailed description of the specified activity. Mitigation, monitoring, and reporting measures are described in detail later in this document (please see Mitigation and Monitoring and Reporting below).

Comments and Responses

A notice of proposed IHA was published in the **Federal Register** on February 12, 2020 (85 FR 7952). During the 30-day public comment period, NMFS received comment letters from: (1) The Marine Mammal Commission (Commission); (2) a group of environmental non-governmental organizations (ENGOs) including the Natural Resources Defense Council, Conservation Law Foundation, and National Wildlife Federation; and (3) the Rhode Island Fisherman's Advisory Board (FAB), which manages the state's coastal program under the Coastal Zone Management Act. NMFS has posted the comments online at: *www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-other-energy-activities-renewable.* A summary of the public comments received from the Commission, the ENGOs, and the FAB as well as NMFS' responses to those comments are below.

Comment 1: The Commission recommended that NMFS incorporate the actual beamwidth of 75° rather than 180° for the Applied Acoustics AA251 boomer for Vineyard Wind and re-

estimate the Level A and B harassment zones accordingly.

Response: None of the HRG sources specified by the Commission's comment were determined to be the dominant source in terms of Level A/B harassment zones and therefore were not used for estimating relevant ensonified zones. Additionally, the Commission's recommendations would result in harassment zone sizes for these particular sources that would be equal to, or lesser than, those described in the proposed IHA, and therefore would not result in a change to the dominant source used to estimate marine mammal exposures. As re-modeling these specific sources would not result in any changes to marine mammal exposure estimates, Level A or Level B harassment take numbers, or our determinations, we have determined that taking these steps is not warranted for this authorization. NMFS will take the Commission's comments into consideration for future ITAs for similar activities and sources.

Comment 2: The Commission recommended that NMFS use the out-of-beam source level of 187 dB re 1 μPa at 1 m from Subacoustech (2018) for the Innomar SES–2000 Medium-100 parametric SBP and re-estimate the Level A and B harassment zones. Otherwise, NMFS should use the in-beam source level and beamwidth to revise the harassment zones accordingly for the parametric SBP.

Response: With respect to the Innomar SES–2000 Medium-100 parametric SBP, NMFS has determined that, based on the very narrow beam width of this source (*i.e.,* 2 degrees), it is extremely unlikely that a marine mammal would be exposed to sound emitted from this particular source. In addition, baleen whales are unlikely to hear signals from this source, which operates at 85–115 kHz. Therefore, we have determined the potential for this source to result in take of marine mammals is so low as to be discountable, and re-modeling harassment isopleths for this source is therefore not warranted.

Comment 3: The Commission recommended that NMFS incorporate water depth when considering the beamwidth for all sources, including in this instance single-beam echosounders, shallow-penetration SBPs, and boomers. The Level A and B harassment zones should be revised accordingly.

Response: NMFS agrees with the Commission that water depth should be incorporated in acoustic modeling for HRG sources and acknowledges that depth was not incorporated in the modeling of HRG sources that was used for modeling exposure estimates in the notice of proposed IHA (85 FR 7952; February 12, 2020). However, NMFS has confirmed using a recently-developed spreadsheet tool that accompanies our interim HRG guidance (NMFS, 2019), which incorporates water depth, that the incorporation of water depth in modeling the HRG sources planned for use by Vineyard Wind would result only in smaller harassment zones for some sources, and would not result in larger zones for any sources. In addition, for the source that was determined to be the dominant source in terms of the Level B harassment zone and was therefore used to model acoustic exposures (the GeoMarine Geo Spark 2000 (400 tip)), using our interim guidance (NMFS, 2019) we determined incorporation of depth resulted in no change to the modeled Level B harassment isopleth. As a result, NMFS will take the Commission's comments into consideration for future ITAs for similar activities and sources to ensure action proponents incorporate depth into acoustic modeling (as we agree is appropriate). However, as taking this step would not change the modeled distances to relevant isopleths for dominant sources, and therefore would result in no change to exposure estimates, authorized take numbers, or our determinations, NMFS has determined that taking this step for this particular authorization is not warranted. We note that the recently-developed spreadsheet tool that accompanies the NMFS interim HRG guidance, referred to above, was not publicly available at the time the Vineyard Wind IHA application was submitted, but is now available to the public upon request. We also note that the NMFS interim HRG guidance did not previously incorporate water depth, but a revised version has been developed since the notice of proposed IHA was published, and this version will be shared with applicants from this point onward. These recent developments will ensure water depth will be incorporated in future IHAs issued for HRG surveys.

Comment 4: The Commission recommended that NMFS and BOEM expedite efforts to develop and finalize, in the next six months, methodological and signal processing standards for HRG sources. Those standards should be used by action proponents that conduct HRG surveys and that either choose to conduct in-situ measurements to inform an authorization application or are required to conduct measurements to fulfill a lease condition set forth by BOEM.

Response: NMFS agrees with the Commission that methodological and signal processing standards for HRG sources is warranted and is working on developing such standards. However, NMFS cannot ensure such standards will be developed within the Commission's preferred time frame.

Comment 5: The Commission recommended that NMFS (1) prohibit Vineyard Wind and other action proponents from using the impulsive Level A harassment thresholds for estimating the extents of the Level A harassment zones for non-impulsive sources (*i.e.,* echosounders, shallow-penetration SBPs, pingers, etc.) and (2) require action proponents to use the correct Level A harassment thresholds in all future applications.

Response: NMFS concurs with the Commission's recommendation. As described in the notice of proposed IHA, NMFS does not agree with Vineyard Wind's characterization of certain HRG sources as impulsive sources. However, this characterization results in more conservative modeling results. Thus, we have assessed the potential for Level A harassment to result from the proposed activities based on the modeled Level A harassment zones with the acknowledgement that these zones are likely conservative. This approach allows us to assess the impacts of the proposed activity conservatively and is appropriate in this case. Therefore, it is unnecessary to make any changes to the analysis for this proposed activity. However, we will proactively work with action proponents to require use of the correct Level A harassment thresholds in all future applications.

Comment 6: The Commission recommended that NMFS (1) re-estimate all of the Level A and Level B harassment zones for Vineyard Wind using its User Spreadsheet that incorporates the operating frequency and beamwidth and (2) provide the spreadsheet to all action proponents that conduct HRG surveys, post it on NMFS's website, and require all action proponents to use it for all future HRG-related authorizations.

Response: NMFS appreciates the Commission's comments and concurs with this recommendation. However, the current Level A harassment User Spreadsheet does not incorporate operating frequency or beam width as inputs for assessing Level A harassment zones. The tool referenced by the Commission is in development and will not be available for use prior to making a decision regarding the issuance of this IHA. In addition, re-estimating the isopleth distances for Level A harassment with the incorporation of

operating frequency and beam width would result in smaller Level A zones and would therefore not result in any change in our determination as to whether Level A harassment is a likely outcome of the activity. Therefore, the Level A harassment zones will not be recalculated. Note that the current User Spreadsheet is available on our website. The current interim guidance for determining Level B harassment zones does incorporate operating frequency and beam width. We strongly recommend that applicants employ these tools, as we believe they are best currently available methodologies. However, applicants are free to develop additional models or use different tools if they believe they are more representative of real-world conditions.

Comment 7: The Commission recommended that NMFS: (1) Continue to prohibit action proponents, including Vineyard Wind, from using a 100-msec integration time to adjust the SPLrms-based source levels when estimating the Level B harassment zones; (2) ensure that the **Federal Register** notice for the final authorization for Vineyard Wind does not incorrectly state that pulse duration was considered in the estimation of the Level B harassment zones: And (3) require action proponents to omit any related discussions regarding integration time from all future applications to avoid unnecessary confusion and errors in future **Federal Register** notices.

Response: As the Commission is aware, NMFS does not have the authority to require action proponents to omit the discussion of particular topics in ITA applications. We will, however, continue to prohibit applicants from using a 100-msec integration time to adjust the SPLrms-based source levels when estimating the Level B harassment zones, as we have done in this IHA. NMFS has removed references to the use of pulse duration for the estimation of Level B harassment zones.

Comment 8: The Commission recommended that NMFS evaluate the impacts of sound sources consistently across all action proponents and deem sources *de minimis* in a consistent manner for all proposed incidental harassment authorizations and rulemakings. This has the potential to reduce burdens on both action proponents and NMFS.

Response: NMFS concurs with the Commission's recommendation and agrees that sound sources should be analyzed in a consistent manner and agrees that sources determined to result in *de minimis* impact should generally be considered unlikely to result in take under the MMPA. As an example, NMFS has determined that most types of geotechnical survey equipment are generally unlikely to result in the incidental take of marine mammals (in the absence of site-specific or species-specific circumstances that may warrant additional analysis). NMFS has not made such a determination with respect to all HRG sources. As NMFS has not made a determination that sound from all HRG sources would be considered *de minimis* we cannot rule out the potential for these sources to result in the incidental take of marine mammals.

Comment 9: The Commission recommended that NMFS consider whether, in such situations involving HRG surveys, incidental harassment authorizations are necessary given the small size of the Level B harassment zones, the proposed shut-down requirements, and the added protection afforded by the lease-stipulated exclusion zones. Specifically, the Commission states that NMFS should evaluate whether taking needs to be authorized for those sources that are not considered *de minimis,* including sparkers and boomers, and for which implementation of the various mitigation measures should be sufficient to avoid Level B harassment takes.

Response: NMFS has evaluated whether taking needs to be authorized for those sources that are not considered *de minimis,* including sparkers and boomers, factoring into consideration the effectiveness of mitigation and monitoring measures, and we have determined that implementation of mitigation and monitoring measures cannot ensure that all take can be avoided during all HRG survey activities under all circumstances at this time. If and when we are able to reach such a conclusion, we will re-evaluate our determination that incidental take authorization is warranted for these activities.

Comment 10: The Commission and ENGOs recommended that NMFS provide justification for reducing the number of Level B harassment takes for North Atlantic right whales.

Response: NMFS understands that the required mitigation and monitoring measures may not be 100 percent effective under all conditions. Due to night time operations over an extended period (736 vessel days), NMFS acknowledges that a limited number of right whales may enter into the Level B harassment zone without being observed. Therefore, NMFS has conservatively authorized take of 10 right whales by Level B harassment. The number of authorized takes was reduced from the calculated take of 30 whales, which does not account for the effectiveness of the required mitigation. There are several reasons justifying this reduction. Vineyard Wind will establish and monitor a shutdown zone at least 2.5 times (500-m) greater than the predicted Level B harassment threshold distance (195 m). Take has also been conservatively calculated based on the largest source, which will not be operating at all times, and take is therefore likely over-estimated to some degree. Furthermore, the potential for incidental take during daylight hours is very low given that two PSOs are required for monitoring.

Additionally, sightings of right whales have been uncommon during previous HRG surveys. Bay State Wind submitted a marine mammal monitoring report on July 19, 2019 describing PSO observations and takes in Lease Area OCS–A500, which is adjacent to part of Vineyard Wind's survey area covered under this IHA. The offshore export cable corridor (OECC) areas for Bay State Wind and Vineyard Wind also overlap. Over 376 vessel days, three separate survey ships recorded a total of 496 marine mammal detections between May 11, 2018 and March 14, 2019. Nevertheless, there were no confirmed observations of right whales on any of the survey ships during the entire survey period. There were a number of unidentifiable whales reported, and it is possible that some of these unidentified animals may have been right whales. Vineyard Wind's marine mammal monitoring report included Lease Areas OCS–A 0501 and OCS–A 0522 from May 31, 2019 through January 7, 2020. No right whales were observed although unidentifiable whales, some of them possibly right whales, were recorded. However, the lack of confirmed observations by both Bay State Wind and Vineyard Wind within or near the Lease Areas included in this issued IHA indicates that right whale sightings have not been common in this region during previous survey work. In summary, the aforementioned factors lead NMFS to conclude that the unadjusted modeled exposure estimate is likely a significant overestimate of actual potential exposure. Accordingly, NMFS has made a reasonable adjustment to conservatively account for these expected impacts on actual taking of right whales.

Comment 11: The Commission recommended that NMFS authorize up to four Level B harassment takes of sei whales, consistent with Table 1 in the draft authorization.

Response: NMFS concurs with the recommendation and has authorized four sei whale takes by Level B

harassment as shown in Table 5 to match the number of takes included in the draft and issued IHA.

Comment 12: The Commission recommended that NMFS require Vineyard Wind to report as soon as possible *and* cease project activities immediately in the event of an unauthorized injury or mortality of a marine mammal from a vessel strike until NMFS's Office of Protected Resources and the New England/Mid-Atlantic Regional Stranding Coordinator determine whether additional measures are necessary to minimize the potential for additional unauthorized takes.

Response: NMFS has imposed a suite of measures in this IHA to reduce the risk of vessel strikes and has not authorized any takes associated with vessel strikes. However, NMFS does not concur and does not adopt the recommendation. NMFS does not agree that a blanket requirement for project activities to cease would be practicable for a vessel that is operating on the open water, and it is unclear what mitigation benefit would result from such a requirement in relation to vessel strike. The Commission does not suggest what measures other than those prescribed in this IHA would potentially prove more effective in reducing the risk of strike. Therefore, we have not included this requirement in the authorization. NMFS retains authority to modify the IHA and cease all activities immediately based on a vessel strike and will exercise that authority if warranted.

Comment 13: The Commission recommended that NMFS refrain from issuing renewals for any authorization and instead use its abbreviated **Federal Register** notice process. That process is similarly expeditious and fulfills NMFS's intent to maximize efficiencies, and that NMFS (1) stipulate that a renewal is a one-time opportunity (a) in all **Federal Register** notices requesting comments on the possibility of a renewal, (b) on its web page detailing the renewal process, and (c) in all draft and final authorizations that include a term and condition for a renewal and, (2) if NMFS refuses to stipulate a renewal being a one-time opportunity, explain why it will not do so in its **Federal Register** notices, on its web page, and in all draft and final authorizations.

Response: NMFS does not agree with the Commission and, therefore, does not adopt the Commission's recommendation. As explained in response to Comment 21, NMFS believes renewals can be issued in certain limited circumstances. NMFS will provide a more detailed explanation of its decision within 120 days, as required by section 202(d) of the MMPA.

Comment 14: The Commission recommends that, for all authorizations and rulemakings, NMFS provide separate, detailed explanations for not following or adopting any Commission recommendation.

Response: NMFS agrees that section 202(d) of the MMPA requires that any recommendations made by the Commission be responded to within 120 days of receipt, and that response to recommendations that are not followed or adopted must be accompanied by a detailed explanation of the reasons why. Therefore, NMFS concurs with the Commission's recommendation that NMFS provide detailed explanations for not following or adopting any Commission recommendation.

However, NMFS disagrees with the Commission's underlying allegation that we have not provided the necessary responses, as required by the MMPA. Section 202(d) requires NMFS to provide detailed explanations of the reasons why recommendations are not adopted within 120 days, however it does not provide the Commission with the authority to assess the adequacy of NMFS' response, and NMFS believes that the explanations provided are sufficient. Regarding certain examples where NMFS does acknowledge having yet to provide the requisite detailed explanation, the Commission notes that it has been ''over a month'' with no response. However, as noted accurately by the Commission, the statute requires only that the explanation be provided within 120 days.

Comment 15: The ENGOs recommended a seasonal restriction on site assessment and characterization activities in the Project Areas with the potential to harass North Atlantic right whales between November 1, 2020 and May 14, 2021.

Response: In evaluating how mitigation may or may not be appropriate to ensure the least practicable adverse impact on species or stocks and their habitat, we carefully consider two primary factors: (1) The manner in which, and the degree to which, the successful implementation of the measure(s) is expected to reduce impacts to marine mammals, marine mammal species or stocks, and their habitat; and (2) the practicability of the measures for applicant implementation, which may consider such things as relative cost and impact on operations.

NMFS is concerned about the status of the North Atlantic right whale population given that an unusual mortality event (UME) has been in effect for this species since June of 2017 and that there have been a number of recent mortalities. While the ensonified areas contemplated for any single HRG vessel are comparatively small and the anticipated resulting effects of exposure relatively lower-level, the potential impacts of multiple HRG vessels (up to 8 according to Vineyard Wind) operating simultaneously in areas of higher right whale density are not well-documented and warrant caution.

NMFS agrees with the recommendation to include a seasonal restriction on survey activity, as described below and determined by NMFS to be both warranted and practicable. NMFS reviewed the best available right whale abundance data for the planned survey area (Roberts *et al.* 2017; Kraus *et al.* 2016). We determined that right whale abundance is significantly higher in the period starting in late winter and extending to late spring in specific sections of the survey area.

Based on this information NMFS has defined seasonal restriction areas that Vineyard Wind must follow when conducting HRG surveys. Survey activities may only occur in the Cape Cod Bay Seasonal Management Area (SMA) and off of the Race Point SMA during the months of August and September to ensure sufficient buffer between the SMA restrictions (January to May 15) and known seasonal occurrence of right whales north and northeast of Cape Cod (fall, winter, and spring).

Vineyard Wind will limit to three the number of survey vessels that will operate concurrently from March through June within the lease areas (OCS–A 0501 and 0487) and OECC areas north of the lease areas up to, but not including, coastal and bay waters. An additional seasonal restriction area has been defined south of Nantucket and will be in effect from December to February in the area delineated by the Dynamic Management Area (DMA) that was effective from January 31, 2020 through February 15, 2020. DMAs have been established during this time frame in this area for the last several years. DMAs are temporary protection zones that are triggered when three or more whales are sighted within 2–3 miles of each other outside of active SMAs. The size of a DMA is larger if more whales are present.

Vineyard Wind is permitted to operate no more than three survey vessels concurrently in the areas described above during the December–February and March–June timeframes when right whale densities are greatest. The seasonal restrictions described above will help to reduce both the

number and intensity of right whale takes. Regarding practicability, the timing of Vineyard Wind's surveys is driven by a complex suite of factors including availability of vessels and equipment (which are used for other surveys and by other companies), other permitting timelines, and the timing of certain restrictions associated with fisheries gear, among other things. Vineyard Wind has indicated that there is enough flexibility to revise their survey plan such that they can both accommodate this measure and satisfy their permitting and operational obligations, and we do not anticipate that these restrictions will impact Vineyard Wind's ability to execute their survey plan within the planned 736 vessel days. Therefore, NMFS determined that this required mitigation measure is sufficient to ensure the least practicable adverse impact on species or stocks and their habitat.

Comment 16: The ENGOs recommended a prohibition on the commencement of geophysical surveys at night or during times of poor visibility. They stated that ramp up should occur during daylight hours only, to maximize the probability that North Atlantic right whales are detected and confirmed clear of the exclusion zone.

Response: We acknowledge the limitations inherent in detection of marine mammals at night. However, no injury is expected to result even in the absence of mitigation, given the very small estimated Level A harassment zones. Any potential impacts to marine mammals authorized for take would be limited to short-term behavioral responses. Restricting surveys in the manner suggested by the commenters may reduce marine mammal exposures by some degree in the short term, but would not result in any significant reduction in either intensity or duration of noise exposure. Vessels would also potentially be on the water for an extended time introducing noise into the marine environment. The restrictions recommended by the commenters could result in the surveys spending increased time on the water, which may result in greater overall exposure to sound for marine mammals; thus the commenters have not demonstrated that such a requirement would result in a net benefit. Furthermore, restricting the ability of the applicant to ramp-up only during daylight hours would have the potential to result in lengthy shutdowns of the survey equipment, which could result in the applicant failing to collect the data they have determined is necessary and, subsequently, the need to conduct additional surveys the following year. This would result in significantly increased costs incurred by the applicant. Thus the restriction suggested by the commenters would not be practicable for the applicant to implement. In consideration of potential effectiveness of the recommended measure and its practicability for the applicant, NMFS has determined that restricting survey start-ups to daylight hours when visibility is unimpeded is not warranted or practicable in this case.

Comment 17: The ENGOs recommended that NMFS require monitoring an exclusion zone (EZ) for North Atlantic right whales of at least 500 meters (m), and ideally 1,000 m, around each vessel conducting activities with noise levels that could result in injury or harassment to this species.

Response: Regarding the recommendation for a 1,000 m EZ specifically for North Atlantic right whales, we have determined that the 500-m EZ, as required in the IHA, is sufficiently protective. We note that the 500-m EZ exceeds the modeled distance to the largest Level B harassment isopleth distance (195 m) by a substantial margin. Thus, we are not requiring shutdown if a right whale is observed beyond 500-m.

Comment 18: The ENGOs recommended a requirement that four PSOs adhere to a two-on/two-off shift schedule to ensure no individual PSO is responsible for monitoring more than 180° of the exclusion zone at any one time.

Response: NMFS typically requires a single PSO to be on duty during daylight hours and 30 minutes prior to and during nighttime ramp-ups for HRG surveys. Vineyard Wind proposed, and has voluntarily committed, to a minimum of two (2) NMFS-approved PSOs on duty and conducting visual observations on all survey vessels at all times when HRG equipment is in use (*i.e.,* daylight and nighttime operations). NMFS adopted Vineyard Wind's PSO proposal. Even in the absence of the mitigation provided by PSOs, the impacts of this survey are quite low and Vineyard Wind has proposed more PSOs monitoring when HRG equipment is in use than NMFS typically requires. We have determined that the PSO requirements in the IHA are sufficient to ensure the least practicable adverse impact on the affected species or stocks and their habitat.

Comment 19: The ENGOs recommended that a combination of visual monitoring by PSOs and passive acoustic monitoring (PAM) should be used at all times. Since PSOs are unable to visually monitor the exclusion area during nighttime hours, the ENGOs also recommended that NMFS require, for efforts that continue into the nighttime, a combination of night-vision, thermal imaging, and PAM.

Response: There are several reasons why we do not agree that use of PAM is warranted for 24-hour HRG surveys such as the one planned by Vineyard Wind. While NMFS agrees that PAM can be an important tool for augmenting detection capabilities in certain circumstances, its utility in further reducing impact for Vineyard Wind's HRG survey activities is limited. First, for this activity, the area expected to be ensonified above the Level B harassment threshold is relatively small (a maximum of 195 m as described in the Estimated Take section)—this reflects the fact that, to start with, the source level is comparatively low and the intensity of any resulting impacts would be lower level and, further, it means that inasmuch as PAM will only detect a portion of any animals exposed within a zone (see below), the overall probability of PAM detecting an animal in the harassment zone is low—together these factors support the limited value of PAM for use in reducing take with smaller zones. PAM is only capable of detecting animals that are actively vocalizing, while many marine mammal species vocalize infrequently or during certain activities, which means that only a subset of the animals within the range of the PAM would be detected (and potentially have reduced impacts). Additionally, localization and range detection can be challenging under certain scenarios. For example, odontocetes are fast moving and often travel in large or dispersed groups which makes localization difficult. In addition, the ability of PAM to detect baleen whale vocalizations is further limited due to being deployed from the stern of a vessel, which puts the PAM hydrophones in proximity to propeller noise and low frequency engine noise which can mask the low frequency sounds emitted by baleen whales, including right whales.

Given that the effects to marine mammals from the types of surveys authorized in this IHA are expected to be limited to low level behavioral harassment even in the absence of mitigation, the limited additional benefit anticipated by adding this detection method (especially for right whales and other low frequency cetaceans, species for which PAM has limited efficacy), and the cost and impracticability of implementing a full-time PAM program, we have determined the current requirements for visual

monitoring are sufficient to ensure the least practicable adverse impact on the affected species or stocks and their habitat. However, we note that Vineyard Wind will voluntarily implement PAM during night operations as an added precautionary measure even though this is not a NMFS requirement.

As stated in the draft IHA, Vineyard Wind is required to use night-vision equipment (*i.e.,* night-vision goggles and/or infrared technology) during night time monitoring.

Comment 20: The ENGOs recommended a requirement that all project vessels (regardless of size) either transiting to/from or operating within the Lease Areas observe a 10 knot speed restriction during times, at minimum, when mother-calf pairs, pregnant females, surface active groups, or aggregations of three or more whales are confirmed or, based on multi-year sightings data, expected to be in the area. The commenters also recommend that a compulsory 10 knot vessel speed restriction should also be required of all project vessels (not just survey vessels) within a DMA established by NMFS. To the extent that any project vessel of any size may exceed a speed of 10 knots, the ENGOs state that this should only be allowed if multiple monitoring measures are in place, including aerial surveys or a combination of vessel-based visual observers and passive acoustic monitoring.

Response: NMFS has analyzed the potential for ship strike resulting from Vineyard Wind's activity and has determined that the mitigation measures specific to ship strike avoidance are sufficient to avoid the potential for ship strike. These include: A requirement that all vessel operators comply with 10 knot (18.5 kilometer (km)/hour) or less speed restrictions in any SMA or DMA; a requirement that all vessel operators reduce vessel speed to 10 knots (18.5 km/hour) or less when any large whale, any mother/calf pairs, pods, or large assemblages of non-delphinoid cetaceans are observed within 100 m of an underway vessel; a requirement that all survey vessels maintain a separation distance of 500-m or greater from any sighted North Atlantic right whale; a requirement that, if underway, vessels must steer a course away from any sighted North Atlantic right whale at 10 knots or less until the 500-m minimum separation distance has been established; and a requirement that, if a North Atlantic right whale is sighted in a vessel's path, or within 500 m of an underway vessel, the underway vessel must reduce speed and shift the engine to neutral. We have determined that the ship strike avoidance measures are sufficient to ensure the least practicable adverse impact on species or stocks and their habitat. As noted previously, occurrence of vessel strike during surveys is extremely unlikely based on the low vessel speed of approximately 3.5 knots (6.5 km/hour) while transiting survey lines. Furthermore, no documented vessel strikes have occurred for any HRG surveys which were issued IHAs from NMFS.

Comment 21: The ENGOs objected to NMFS' process to consider extending any one-year IHA with a truncated 15-day comment period as contrary to the MMPA.

Response: NMFS' IHA Renewal process meets all statutory requirements. All IHAs issued, whether an initial IHA or a Renewal IHA, are valid for a period of not more than one year. And the public has at least 30 days to comment on all proposed IHAs, with a cumulative total of 45 days for IHA Renewals. As noted above, the *Request for Public Comments* section made clear that the agency was seeking comment on both the initial proposed IHA and the potential issuance of a Renewal for this project. Because any Renewal (as explained in the *Request for Public Comments* section) is limited to another year of identical or nearly identical activities in the same location (as described in the *Description of Proposed Activity* section) or the same activities that were not completed within the one-year period of the initial IHA, reviewers have the information needed to effectively comment on both the immediate proposed IHA and a possible one-year Renewal, should the IHA holder choose to request one in the coming months.

While there will be additional documents submitted with a Renewal request, for a qualifying Renewal these will be limited to documentation that NMFS will make available and use to verify that the activities are identical to those in the initial IHA, are nearly identical such that the changes would have either no effect on impacts to marine mammals or decrease those impacts, or are a subset of activities already analyzed and authorized but not completed under the initial IHA. NMFS will also confirm, among other things, that the activities will occur in the same location; involve the same species and stocks; provide for continuation of the same mitigation, monitoring, and reporting requirements; and that no new information has been received that would alter the prior analysis. The Renewal request will also contain a preliminary monitoring report, but that is to verify that effects from the activities do not indicate impacts of a scale or nature not previously analyzed. The additional 15-day public comment period provides the public an opportunity to review these few documents, provide any additional pertinent information and comment on whether they think the criteria for a Renewal have been met. Between the initial 30-day comment period on these same activities and the additional 15 days, the total comment period for a Renewal is 45 days.

In addition to the IHA Renewal process being consistent with all requirements under section 101(a)(5)(D), it is also consistent with Congress' intent for issuance of IHAs to the extent reflected in statements in the legislative history of the MMPA. Through the provision for Renewals in the regulations, description of the process and express invitation to comment on specific potential Renewals in the Request for Public Comments section of each proposed IHA, the description of the process on NMFS' website, further elaboration on the process through responses to comments such as these, posting of substantive documents on the agency's website, and provision of 30 or 45 days for public review and comment on all proposed initial IHAs and Renewals respectively, NMFS has ensured that the public ''is invited and encouraged to participate fully in the agency decision-making process.''

Comment 22: The ENGOs suggested that it should be NMFS' top priority to consider any initial data from State monitoring efforts, passive acoustic monitoring data, opportunistic marine mammal sightings data, satellite telemetry, and other data sources. Further, commenters state that NMFS should take steps now to develop a dataset that more accurately reflects marine mammal presence so that it is in hand for future IHA authorizations and other work.

Response: NMFS will review any recommended data sources and will continue to use the best available information. We welcome future input from interested parties on data sources that may be of use in analyzing the potential presence and movement patterns of marine mammals, including North Atlantic right whales, in New England waters.

Comment 23: The ENGOs stated that the agency's assumptions regarding mitigation effectiveness are unfounded and cannot be used to justify any reduction in the number of takes authorized as was done for right whales. The reasons cited include: (i) The agency's reliance on a 160 dB threshold for behavioral harassment that is not supported by the best available

scientific information in other low- to mid-frequency sources (which commenters assert demonstrates Level B harassment takes will occur with near certainty at exposure levels well below the 160 dB threshold); (ii) the geographic and temporal extent, as well as the 24-hour nature of the survey activities proposed to be authorized; and (iii) the reliance on the assumption that marine mammals will avoid sound despite studies that have found avoidance behavior is not generalizable among species and contexts.

Response: The three comments provided by the ENGOs are addressed individually below.

(i) NMFS acknowledges that the potential for behavioral response to an anthropogenic source is highly variable and context-specific and acknowledges the potential for Level B harassment at exposures to received levels below 160 dB rms. Alternatively, NMFS acknowledges the potential that not all animals exposed to received levels above 160 dB rms will respond in ways constituting behavioral harassment. There are a variety of studies indicating that contextual variables play a very important role in response to anthropogenic noise, and the severity of effects are not necessarily linear when compared to a received level (RL). The studies cited in the comment (Nowacek *et al.,* 2004 and Kastelein *et al.,* 2012 and 2015) showed there were behavioral responses to sources below the 160 dB threshold, but also acknowledge the importance of context in these responses. For example, Nowacek *et al.,* 2004 reported the behavior of five out of six North Atlantic right whales was disrupted at RLs of only 133–148 dB re 1 μPa (returning to normal behavior within minutes) when exposed to an alert signal. However, the authors also reported that none of the whales responded to noise from transiting vessels or playbacks of ship noise even though the RLs were at least as strong, and contained similar frequencies, to those of the alert signal. The authors state that a possible explanation for why whales responded to the alert signal and did not respond to vessel noise is that the whales may have been habituated to vessel noise, while the alert signal was a novel sound. In addition, the authors noted differences between the characteristics of the vessel noise and alert signal which may also have played a part in the differences in responses to the two noise types. Therefore, it was concluded that the signal itself, as opposed to the RL, was responsible for the response. DeRuiter *et al.* (2012) also indicate that variability of responses to acoustic stimuli depends not only on the species receiving the sound and the sound source, but also on the social, behavioral, or environmental contexts of exposure. Finally, Gong *et al.* (2014) highlighted that behavioral responses depend on many contextual factors, including range to source, RL above background noise, novelty of the signal, and differences in behavioral state. Similarly, Kastelein *et al.,* 2015 (cited in the comment) examined behavioral responses of a harbor porpoise to sonar signals in a quiet pool, but stated behavioral responses of harbor porpoises at sea would vary with context such as social situation, sound propagation, and background noise levels.

NMFS uses 160 dB (rms) as the exposure level for estimating Level B harassment takes, while acknowledging that the 160 db rms step-function approach is a simplistic approach. However, there appears to be a misconception regarding the concept of the 160 dB threshold. While it is correct that in practice it works as a step-function, *i.e.,* animals exposed to received levels above the threshold are considered to be ''taken'' and those exposed to levels below the threshold are not, it is in fact intended as a sort of mid-point of likely behavioral responses (which are extremely complex depending on many factors including species, noise source, individual experience, and behavioral context). What this means is that, conceptually, the function recognizes that some animals exposed to levels below the threshold will in fact react in ways that are appropriately considered take, while others that are exposed to levels above the threshold will not. Use of the 160-dB threshold allows for a simplistic quantitative estimate of take, while we can qualitatively address the variation in responses across different received levels in our discussion and analysis.

Overall, we emphasize the lack of scientific consensus regarding what criteria might be more appropriate. Defining sound levels that disrupt behavioral patterns is difficult because responses depend on the context in which the animal receives the sound, including an animal's behavioral mode when it hears sounds (*e.g.,* feeding, resting, or migrating), prior experience, and biological factors (*e.g.,* age and sex). Other contextual factors, such as signal characteristics, distance from the source, and signal to noise ratio, may also help determine response to a given received level of sound. Therefore, levels at which responses occur are not necessarily consistent and can be difficult to predict (Southall *et al.,* 2007; Ellison *et al.,* 2012; Bain and Williams, 2006). Further, we note that the sounds sources and the equipment used in the specified activities are outside (higher than) of the most sensitive range of mysticete hearing.

There is currently no agreement on these complex issues, and NMFS followed the practice at the time of submission and review of this application in assessing the likelihood of disruption of behavioral patterns by using the 160 dB threshold. This threshold has remained in use in part because of the practical need to use a relatively simple threshold based on available information that is both predictable and measurable for most activities. We note that the seminal review presented by Southall *et al.* (2007) did not suggest any specific new criteria due to lack of convergence in the data. NMFS is currently evaluating available information towards development of guidance for assessing the effects of anthropogenic sound on marine mammal behavior. However, undertaking a process to derive defensible exposure-response relationships is complex (*e.g.,* NMFS previously attempted such an approach, but is currently re-evaluating the approach based on input collected during peer review of NMFS (2016)). A recent systematic review by Gomez *et al.* (2016) was unable to derive criteria expressing these types of exposure-response relationships based on currently available data.

NMFS acknowledges that there may be methods of assessing likely behavioral response to acoustic stimuli that better capture the variation and context-dependency of those responses than the simple 160 dB step-function used here, but there is no agreement on what that method should be or how more complicated methods may be implemented by applicants. NMFS is committed to continuing its work in developing updated guidance with regard to acoustic thresholds, but pending additional consideration and process is reliant upon an established threshold that is reasonably reflective of available science.

(ii) Given the geographic and temporal extent of the survey area as well as continuous 24-hour operations, the ENGOs question the effectiveness of the mitigation measures proposed to be authorized. They specifically recommended that seasonal restrictions should be established and consideration should be given to species for which a UME has been declared. Note that NMFS is requiring Vineyard Wind to comply with seasonal restrictions as described in the response to Comment

15. Furthermore, we have established a 500-m shutdown zone for right whales which is precautionary considering the Level B harassment isopleth for the largest source utilized in the specified activities for this IHA is estimated at 195 m. Actual isopleths are no greater than 195 m and are considerably less for a number of other HRG devices employing downward facing beams at various angles. After accounting for these small harassment zones and examining previous marine mammal monitoring reports from nearby areas, the calculated right whale exposures decreased from 30 to 10 animals (as discussed in greater detail in response to Comment 10). At these distances, monitoring by PSOs is expected to be highly effective. Given these factors, we are confident in our decision to authorize 10 takes by Level B harassment. Additionally, similar mitigation measures have been required in several previous HRG survey IHAs and have been successfully implemented.

(iii) The commenters disagreed with NMFS' assumption that marine mammals move away from sound sources. The ENGOs claimed that studies have not found avoidance behavior to be generalizable among species and contexts, and even though avoidance may itself constitute take under the MMPA. Importantly, the commenters mistakenly seem to believe that the NMFS' does not consider avoidance as a take, and that the concept of avoidance is used as a mechanism to reduce overall take—this is not the case. Avoidance of loud sounds is a well-documented behavioral response, and NMFS often accordingly accounts for this avoidance by reducing the number of injurious exposures, which would occur in very close proximity to the source and necessitate a longer duration of exposure. However, when Level A harassment takes are reduced in this manner, they are changed to Level B harassment takes, in recognition of the fact that this avoidance or other behavioral responses occurring as a result of these exposures are still take. NMFS does not reduce the overall amount of take as a result of avoidance.

Comment 24: The ENGOs recommended that the agency must carefully analyze the cumulative impacts from the survey activities and other survey activities contemplated in the other lease areas on the North Atlantic right whale and other protected species.

Response: The MMPA grants exceptions to its broad take prohibition for a ''specified activity.'' 16 U.S.C. 1371(a)(5)(A)(i). Cumulative impacts (also referred to as cumulative effects) is a term that appears in the context of NEPA and the ESA, but it is defined differently in those different contexts. Neither the MMPA nor NMFS's codified implementing regulations address consideration of other unrelated activities and their impacts on populations. However, the preamble for NMFS's implementing regulations (54 FR 40338; September 29, 1989) states in response to comments that the impacts from other past and ongoing anthropogenic activities are to be incorporated into the negligible impact analysis via their impacts on the environmental baseline. Accordingly, NMFS here has factored into its negligible impact analysis the impacts of other past and ongoing anthropogenic activities via their impacts on the baseline (*e.g.,* as reflected in the density/distribution and status of the species, population size and growth rate, and other relevant stressors (such as incidental mortality in commercial fisheries)).

Comment 25: The FAB indicated that NMFS did not adequately justify authorized take numbers, particularly in allowing incidental take of 10 North Atlantic right whale. They also felt that the other numbers for allowed take are unjustified, referring to them as a percentage of the entire population. As NMFS stated in its Notice for the Proposed IHA, ''[a]n estimate of the number of takes alone is not enough information on which to base an impact determination.''

Response: In the Estimated Take section, NMFS describes in detail how authorized take for each species is calculated using the best available scientific data. Please refer to that section. Justification for the authorized take of ten right whales by Level B harassment as well as the take of other species may be found in the response to Comment 23.

Comment 26: The FAB indicated that the assessment of whether there are ''small numbers'' affected, and whether there is only a ''negligible impact,'' should be assessed in further detail rather than simply listing the percentages of potentially-impacted individuals compared to the species as a whole, particularly for North Atlantic Right Whales.

Response: The Negligible Impact Analysis and Determination section of the proposed IHA (85 FR 7952; February 12, 2020) provides a detailed qualitative discussion supporting NMFS's determination that any anticipated impacts from this action would be negligible. The section contains a number of factors that were considered by NMFS based on the best available scientific data and why we concluded that impacts resulting from the specified activity are not reasonably expected to, or reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival.

The MMPA does not define small numbers. NMFS's practice for making small numbers determinations is to compare the number of individuals estimated and authorized to be taken (often using estimates of total instances of take, without regard to whether individuals are exposed more than once) against the best available abundance estimate for that species or stock. In other words, consistent with past practice, when the estimated number of individual animals taken (which may or may not be assumed as equal to the total number of takes, depending on the available information) is up to, but not greater than, one third of the species or stock abundance, NMFS will determine that the numbers of marine mammals taken of a species or stock are small.

In summary, when quantitative take estimates of individual marine mammals are available or inferable through consideration of additional factors, and the number of animals taken is one third or less of the best available abundance estimate for the species or stock, NMFS considers it to be of small numbers. NMFS may appropriately find that one or two predicted group encounters will result in small numbers of take relative to the range and distribution of a species, regardless of the estimated proportion of the abundance. Additional information on NMFS' interpretation of the small numbers finding may be found in the **Federal Register** notice published on December 7, 2018 (83 FR 63268) and we refer the reader to that document.

Comment 27: The FAB stated that a more detailed description of the study equipment planned for use and the potential effects on marine mammals should have been included in the proposed IHA.

Response: The applicant provided detailed descriptions of HRG equipment planned for use. Information pertaining to specific device characteristics necessary to assess impacts to marine mammals including equipment category, source levels, operating frequencies, beam width, pulse duration and repetition rate was provided. Note that the HRG equipment described in the proposed IHA also serves as a proxy for similar equipment types that may be utilized. The potential impacts associated with use of HRG equipment

may be found in the Potential Effects of Specified Activities on Marine Mammals and Their Habitat section of the proposed IHA. The commenter did not provide specific recommendations regarding what additional information is necessary.

Comment 28: The FAB argued that the IHA's revocation language requires amendment because *16 U.S.C.* 1539(a)(2)(C) states that NMFS shall revoke the permit if it finds the permittee is not complying with the terms and conditions of the permit; thus, the language of the draft IHA should reflect this instead of saying that ''[t]his Authorization may be modified, suspended or withdrawn if the holder fails to abide by the conditions prescribed herein. . .''

Response: We do not believe the current discretionary language in the IHA precludes NMFS from complying 16 U.S.C. 1539(a)(2)(C). We also note that the use of the term ''shall'' in a statute can be either mandatory or directory depending on the context and legislative intent.

Comment 29: The FAB indicated that the draft IHA does not adequately discuss whether nighttime survey activity can be effectively monitored by the two required Protected Species Observers using night-vision goggles and/or infrared technology. While these may work under some conditions, the FAB stated it is unlikely they would be sufficient for sea states above a flat calm. Information regarding the efficacy of using night-vision equipment in monitoring marine mammals in the area should be included and addressed.

Response: Currently, there are no existing standards that NMFS could use to approve night vision and infrared equipment. Right whales can be seen at night from a considerable distance, depending on conditions. Note that in a recent IHA monitoring report submitted to NMFS after completion of an HRG survey off the coast of Delaware (Deepwater Wind, 83 FR 28808, June 21, 2018) a single confirmed right whale and a second probable right whale were observed at night by infra-red cameras at distances of 1,251 m and approximately 800 m respectively. Research studies have concluded that the use of IR (thermal) imaging technology may allow for the detection of marine mammals at night as well as improve the detection during all periods through the use of automated detection algorithms (Weissenberger 2011). While we acknowledge that no technology is 100% effective either during daylight or nighttime hours, the equipment used here will enhance PSO's ability to detect marine mammals at night and the fact that not all will be detected is accounted for in the authorized take.

Changes From the Proposed IHA to Final IHA

As described above, the following items have been incorporated in the issued IHA:

- Based on recently analyzed Atlantic Marine Assessment Program for Protected Species (AMAPPS) survey data from 2010 through 2018, NMFS has revised the mean group size for Risso's dolphins to 5.9 dolphins which represent a reduction from 30 dolphins in the proposed IHA (NOAA Fisheries Northeast and Southeast Fisheries Science Centers, 2019, 2018, 2017, 2016, 2015, 2014, 2013, 2012, 2011). Based on this information NMFS has reduced authorized take of Risso's dolphins from 30 to 6.
- NMFS rounded up the calculated take of 3.23 sei whales to an authorized take number of 4 sei whales as shown in Table 5.

None of these modifications affect our negligible impact or small numbers determinations.

Description of Marine Mammals in the Area of Specified Activity

Sections 3 and 4 of the IHA application summarize available information regarding status and trends, distribution and habitat preferences, and behavior and life history, of the potentially affected species. Additional information regarding population trends and threats may be found in NMFS' Stock Assessment Reports (SARs; *www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments*) and more general information about these species (*e.g.,* physical and behavioral descriptions) may be found on NMFS' website (*www.fisheries.noaa.gov/find-species*).

Table 2 summarizes information related to the population or stock, including regulatory status under the MMPA and ESA and potential biological removal (PBR), where known. For taxonomy, we follow Committee on Taxonomy (2019). PBR is defined by the MMPA as the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population (as described in NMFS' SARs). While no mortality is anticipated or authorized here, PBR is included here as a gross indicator of the status of the species and other threats.

Marine mammal abundance estimates presented in this document represent the total number of individuals that make up a given stock or the total number estimated within a particular study or survey area. NMFS' stock abundance estimates for most species represent the total estimate of individuals within the geographic area, if known, that comprises that stock. For some species, this geographic area may extend beyond U.S. waters. All managed stocks in this region are assessed in NMFS' U.S. Atlantic SARs. All values presented in Table 2 are the most recent available at the time of publication and are available in the 2019 draft Atlantic SARs (Hayes *et al.,* 2019), available online at*: www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessment-reports-region.*

TABLE 2—MARINE MAMMALS KNOWN TO OCCUR IN THE PROJECT AREA THAT MAY BE AFFECTED BY VINEYARD WIND'S PLANNED ACTIVITY

Common name (scientific name)	Stock	MMPA and ESA status; strategic (Y/N) [1]	Stock abundance (CV, N_{min}, most recent abundance survey) [2]	Predicted abundance (CV) [3]	PBR [4]	Annual M/SI [4]
Toothed whales (Odontoceti)						
Sperm whale (*Physeter macrocephalus*)	North Atlantic	E; Y	4,349 (0.28; 3,451; n/a)	5,353 (0.12)	6.9	0.0
Long-finned pilot whale (*Globicephala melas*)	W North Atlantic	--; N	39,215 (0.3; 30,627; n/a)	[5] 18,977 (0.11)	306	21
Atlantic white-sided dolphin (*Lagenorhynchus acutus*).	W North Atlantic	--; N	93,233(0.71; 54,443; n/a)	37,180 (0.07)	544	26
Bottlenose dolphin (*Tursiops truncatus*)	W North Atlantic, Offshore	--; N	62,851 (0.23; 51,914; 2011)	[5] 97,476 (0.06)	519	28

TABLE 2—MARINE MAMMALS KNOWN TO OCCUR IN THE PROJECT AREA THAT MAY BE AFFECTED BY VINEYARD WIND'S PLANNED ACTIVITY—Continued

Common name (scientific name)	Stock	MMPA and ESA status; strategic (Y/N) [1]	Stock abundance (CV, N_{min}, most recent abundance survey) [2]	Predicted abundance (CV) [3]	PBR [4]	Annual M/SI [4]
Common dolphin (*Delphinus delphis*)	W North Atlantic	--; N	172,825 (0.21; 145,216; 2011).	86,098 (0.12)	1,452	419
Risso's dolphin (*Grampus griseus*)	W North Atlantic	--; N	35,493 (0.19; 30,289; 2011)	7,732 (0.09)	303	54.3
Harbor porpoise (*Phocoena phocoena*)	Gulf of Maine/Bay of Fundy	--; N	95,543 (0.31; 74,034; 2011)	*45,089 (0.12)	851	217
Baleen whales (Mysticeti)						
North Atlantic right whale (*Eubalaena glacialis*).	W North Atlantic	E; Y	428 (0; 418; n/a)	*535 (0.45)	0.8	6.85
Humpback whale (*Megaptera novaeangliae*)	Gulf of Maine	--; N	1,396 (0; 1,380; n/a)	*1,637 (0.07)	22	12.15
Fin whale (*Balaenoptera physalus*)	W North Atlantic	E; Y	7,418 (0.25; 6,025; n/a)	4,633 (0.08)	12	2.35
Sei whale (*Balaenoptera borealis*)	Nova Scotia	E; Y	6,292 (1.015; 3,098; n/a)	*717 (0.30)	6.2	1.0
Minke whale (*Balaenoptera acutorostrata*)	Canadian East Coast	--; N	24,202 (0.3; 18,902; n/a)	*2,112 (0.05)	8.0	7.0
Earless seals (Phocidae)						
Gray seal [6] (*Halichoerus grypus*)	W North Atlantic	--; N	27,131 (0.19; 23,158; n/a)		1,389	5,410
Harbor seal (*Phoca vitulina*)	W North Atlantic	--; N	75,834 (0.15; 66,884; 2012)		2,006	350

[1] ESA status: Endangered (E), Threatened (T)/MMPA status: Depleted (D). A dash (-) indicates that the species is not listed under the ESA or designated as depleted under the MMPA. Under the MMPA, a strategic stock is one for which the level of direct human-caused mortality exceeds PBR (see footnote 3) or which is determined to be declining and likely to be listed under the ESA within the foreseeable future. Any species or stock listed under the ESA is automatically designated under the MMPA as depleted and as a strategic stock.

[2] Stock abundance as reported in NMFS marine mammal stock assessment reports (SAR) except where otherwise noted. SARs available online at: *www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments.* CV is coefficient of variation; N_{min} is the minimum estimate of stock abundance. In some cases, CV is not applicable. For certain stocks, abundance estimates are actual counts of animals and there is no associated CV. The most recent abundance survey that is reflected in the abundance estimate is presented; there may be more recent surveys that have not yet been incorporated into the estimate. All values presented here are from the 2019 draft Atlantic SARs (Hayes *et al.,* 2019).

[3] This information represents species- or guild-specific abundance predicted by recent habitat-based cetacean density models (Roberts *et al.,* 2016, 2017, 2018). These models provide the best available scientific information regarding predicted density patterns of cetaceans in the U.S. Atlantic Ocean, and we provide the corresponding abundance predictions as a point of reference. Total abundance estimates were produced by computing the mean density of all pixels in the modeled area and multiplying by its area. For those species marked with an asterisk, the available information supported development of either two or four seasonal models; each model has an associated abundance prediction. Here, we report the maximum predicted abundance.

[4] Potential biological removal, defined by the MMPA as the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population size (OSP). Annual M/SI, found in NMFS' SARs, represent annual levels of human-caused mortality plus serious injury from all sources combined (*e.g.,* commercial fisheries, subsistence hunting, ship strike). Annual M/SI values often cannot be determined precisely and is in some cases presented as a minimum value. All M/SI values are as presented in the draft 2019 SARs (Hayes *et al.,* 2019).

[5] Abundance estimates are in some cases reported for a guild or group of species when those species are difficult to differentiate at sea. Similarly, the habitat-based cetacean density models produced by Roberts *et al.* (2016, 2017, 2018) are based in part on available observational data which, in some cases, is limited to genus or guild in terms of taxonomic definition. Roberts *et al.* (2016, 2017, 2018) produced density models to genus level for *Globicephala* spp. and produced a density model for bottlenose dolphins that does not differentiate between offshore and coastal stocks.

[6] NMFS stock abundance estimate applies to U.S. population only, actual stock abundance is approximately 505,000.

Four marine mammal species that are listed under the Endangered Species Act (ESA) may be present in the survey area and are included in the take request: The North Atlantic right whale, fin whale, sei whale, and sperm whale. We consulted under section 7 of the ESA with the NMFS Greater Atlantic Regional Fisheries Office (GARFO) on our authorization of take for these species; please see the Endangered Species Act section below.

A detailed description of the species likely to be affected by Vineyard Wind's surveys, including brief introductions to the species and relevant stocks as well as available information regarding population trends and threats, and information regarding local occurrence, were provided in the notice of proposed IHA (85 FR 7952; February 12, 2020). Since that time, we are not aware of any changes in the status of these species and stocks; therefore, detailed descriptions are not provided here. Please refer to that notice for these descriptions. Please also refer to NMFS' website (*www.fisheries.noaa.gov/find-species*) for generalized species accounts.

Potential Effects of Specified Activities on Marine Mammals and Their Habitat

The effects of underwater noise from Vineyard Wind's survey activities have the potential to result in behavioral harassment of marine mammals in the vicinity of the survey area. The notice of proposed IHA (85 FR 7952; February 12, 2020) included a discussion of the effects of anthropogenic noise on marine mammals and the potential effects of underwater noise from Vineyard Wind's survey activities on marine mammals and their habitat. That information and analysis is incorporated by reference into this final IHA determination and is not repeated here; please refer to the notice of proposed IHA (85 FR 7952; February 12, 2020).

Estimated Take

This section provides an estimate of the number of incidental takes authorized through this IHA, which will inform both NMFS' consideration of ''small numbers'' and the negligible impact determination.

Harassment is the only type of take expected to result from these activities. Except with respect to certain activities not pertinent here, section 3(18) of the MMPA defines ''harassment'' as any act of pursuit, torment, or annoyance, which (i) has the potential to injure a marine mammal or marine mammal stock in the wild (Level A harassment); or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering (Level B harassment).

Authorized takes would be by Level B harassment only, in the form of disruption of behavioral patterns for individual marine mammals resulting from exposure to HRG sources. Based on the nature of the activity and the anticipated effectiveness of the mitigation measures (*i.e.,* exclusion

zones and shutdown measures), discussed in detail below in the Mitigation section, Level A harassment is neither anticipated nor authorized.

As described previously, no mortality is anticipated or authorized for this activity. Below we describe how the take is estimated.

Generally speaking, we estimate take by considering: (1) Acoustic thresholds above which NMFS believes the best available science indicates marine mammals will be behaviorally harassed or incur some degree of permanent hearing impairment; (2) the area or volume of water that will be ensonified above these levels in a day; (3) the density or occurrence of marine mammals within these ensonified areas; and, (4) and the number of days of activities. We note that while these basic factors can contribute to a basic calculation to provide an initial prediction of takes, additional information that can qualitatively inform take estimates is also sometimes available (*e.g.,* previous monitoring results or average group size). Below, we describe the factors considered here in more detail and present the take estimate.

Acoustic Thresholds

Using the best available science, NMFS has developed acoustic thresholds that identify the received level of underwater sound above which exposed marine mammals would be reasonably expected to be behaviorally harassed (equated to Level B harassment) or to incur PTS of some degree (equated to Level A harassment).

Level B Harassment—Though significantly driven by received level, the onset of behavioral disturbance from anthropogenic noise exposure is also informed to varying degrees by other factors related to the source (*e.g.,* frequency, predictability, duty cycle), the environment (*e.g.,* bathymetry), and the receiving animals (hearing, motivation, experience, demography, behavioral context) and can be difficult to predict (Southall *et al.,* 2007, Ellison *et al.,* 2012). Based on what the available science indicates and the practical need to use a threshold based on a factor that is both predictable and measurable for most activities, NMFS uses a generalized acoustic threshold based on received level to estimate the onset of behavioral harassment. NMFS predicts that marine mammals are likely to be behaviorally harassed in a manner we consider Level B harassment when exposed to underwater anthropogenic noise above received levels of 160 dB re 1 µPa (rms) for impulsive and/or intermittent sources (*e.g.,* impact pile driving) and 120 dB rms for continuous sources (*e.g.,* vibratory driving). Vineyard Wind's planned activity includes the use of intermittent sources (geophysical survey equipment) therefore use of the 160 dB re 1 µPa (rms) threshold is applicable.

Level A harassment—NMFS' Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 2.0) (Technical Guidance, 2018) identifies dual criteria to assess auditory injury (Level A harassment) to five different marine mammal groups (based on hearing sensitivity) as a result of exposure to noise from two different types of sources (impulsive or non-impulsive). The components of Vineyard Wind's planned activity that may result in the take of marine mammals include the use of impulsive sources. We note that sources that operate with a repetition rate greater than 10 Hz were assessed by Vineyard Wind with the non-impulsive (intermittent) source criteria and sources with a repetition rate equal to or less than 10 Hz were assessed with the impulsive source criteria. This resulted in all echosounders, sparkers, boomers and sub-bottom profilers (with the exception of one: The Innomar SES-2000 Medium-100 parametric sub-bottom profiler) being categorized as impulsive for purposes of modeling Level A harassment zones.

Predicted distances to Level A harassment isopleths, which vary based on marine mammal functional hearing groups were calculated. The updated acoustic thresholds for impulsive sounds (such as HRG survey equipment) contained in the Technical Guidance (NMFS, 2018) were presented as dual metric acoustic thresholds using both SEL_{cum} and peak sound pressure level metrics. As dual metrics, NMFS considers onset of PTS (Level A harassment) to have occurred when either one of the two metrics is exceeded (*i.e.,* metric resulting in the largest isopleth). The SEL_{cum} metric considers both level and duration of exposure, as well as auditory weighting functions by marine mammal hearing group.

These thresholds are provided in Table 3 below. The references, analysis, and methodology used in the development of the thresholds are described in NMFS 2018 Technical Guidance, which may be accessed at: *www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-acoustic-technical-guidance.*

TABLE 3—THRESHOLDS IDENTIFYING THE ONSET OF PERMANENT THRESHOLD SHIFT

Hearing group	PTS onset acoustic thresholds * (received level)	
	Impulsive	Non-impulsive
Low-Frequency (LF) Cetaceans	*Cell 1:* $L_{pk,flat}$*:* 219 dB; $L_{E,LF,24h}$*:* 183 dB	*Cell 2:* $L_{E,LF,24h}$*:* 199 dB.
Mid-Frequency (MF) Cetaceans	*Cell 3:* $L_{pk,flat}$*:* 230 dB; $L_{E,MF,24h}$*:* 185 dB	*Cell 4:* $L_{E,MF,24h}$*:* 198 dB.
High-Frequency (HF) Cetaceans	*Cell 5:* $L_{pk,flat}$*:* 202 dB; $L_{E,HF,24h}$*:* 155 dB	*Cell 6:* $L_{E,HF,24h}$*:* 173 dB.
Phocid Pinnipeds (PW) (Underwater)	*Cell 7:* $L_{pk,flat}$*:* 218 dB; $L_{E,PW,24h}$*:* 185 dB	*Cell 8:* $L_{E,PW,24h}$*:* 201 dB.
Otariid Pinnipeds (OW) (Underwater)	*Cell 9:* $L_{pk,flat}$*:* 232 dB; $L_{E,OW,24h}$*:* 203 dB	*Cell 10:* $L_{E,OW,24h}$*:* 219 dB.

* Dual metric acoustic thresholds for impulsive sounds: Use whichever results in the largest isopleth for calculating PTS onset. If a non-impulsive sound has the potential of exceeding the peak sound pressure level thresholds associated with impulsive sounds, these thresholds should also be considered.

Note: Peak sound pressure (L_{pk}) has a reference value of 1 µPa, and cumulative sound exposure level (L_E) has a reference value of 1µPa^2s. In this Table, thresholds are abbreviated to reflect American National Standards Institute standards (ANSI 2013). However, peak sound pressure is defined by ANSI as incorporating frequency weighting, which is not the intent for this Technical Guidance. Hence, the subscript ''flat'' is being included to indicate peak sound pressure should be flat weighted or unweighted within the generalized hearing range. The subscript associated with cumulative sound exposure level thresholds indicates the designated marine mammal auditory weighting function (LF, MF, and HF cetaceans, and PW and OW pinnipeds) and that the recommended accumulation period is 24 hours. The cumulative sound exposure level thresholds could be exceeded in a multitude of ways (*i.e.,* varying exposure levels and durations, duty cycle). When possible, it is valuable for action proponents to indicate the conditions under which these acoustic thresholds will be exceeded.

Ensonified Area

Here, we describe operational and environmental parameters of the activity that will feed into identifying the area ensonified above the acoustic thresholds, which include source levels and transmission loss coefficient.

The proposed survey would entail the use of HRG equipment. The distance to the isopleth corresponding to the threshold for Level B harassment was calculated for all HRG equipment with the potential to result in harassment of marine mammals. NMFS has developed an interim methodology for determining the rms sound pressure level (SPL_{rms}) at the 160-dB isopleth for the purposes of estimating take by Level B harassment resulting from exposure to HRG survey equipment (NMFS, 2019). This methodology incorporates frequency and some directionality to refine estimated ensonified zones. Vineyard Wind used the methods specified in the interim methodology (NMFS, 2019) with additional modifications to incorporate a seawater absorption formula and a method to account for energy emitted outside of the primary beam of the source. For sources that operate with different beam widths, the maximum beam width was used. The lowest frequency of the source was used when calculating the absorption coefficient. The formulas used to apply the methodology are described in detail in Appendix B of the IHA application. As described above, NMFS acknowledges that water depth should also be incorporated in modeling of HRG sources but was not incorporated in the modeling of HRG sources in the notice of proposed IHA (85 FR 7952; February 12, 2020). However, also as noted above, NMFS has confirmed using a recently-developed spreadsheet tool that accompanies the NMFS interim HRG guidance (NMFS, 2019), which incorporates water depth, that the incorporation of water depth in modeling the HRG sources proposed for use by Vineyard Wind would result only in smaller harassment zones for some sources, and would not result in larger zones for any sources.

NMFS considers the data provided by Crocker and Fratantonio (2016) to represent the best available information on source levels associated with HRG equipment and therefore recommends that source levels provided by Crocker and Fratantonio (2016) be incorporated in the method described above to estimate isopleth distances to the Level B harassment threshold. In cases when the source level for a specific type of HRG equipment is not provided in Crocker and Fratantonio (2016), NMFS recommends that either the source levels provided by the manufacturer be used, or, in instances where source levels provided by the manufacturer are unavailable or unreliable, a proxy from Crocker and Fratantonio (2016) be used instead. Table 1 shows the HRG equipment types that may be used during the planned surveys and the sound levels associated with those HRG equipment types. Table A–3 in Appendix A of the IHA application shows the literature sources for the sound source levels that were incorporated into the model.

Results of modeling described above indicated that sound produced by the GeoMarine Geo Spark 2000 would propagate furthest to the Level B harassment threshold; therefore, for the purposes of the exposure analysis, it was assumed the GeoMarine Geo Spark 2000 would be active during the entirety of the survey. The distance to the isopleth corresponding to the threshold for Level B harassment for the GeoMarine Geo Spark 2000 (estimated at 195 m; Table 4) was used as the basis of the take calculation for all marine mammals. Note that this likely provides a conservative estimate of the total ensonified area resulting from the planned activities. Vineyard Wind may not operate the GeoMarine Geo Spark 2000 during the entirety of the planned survey, and for any survey segments in which it is not used the distance to the Level B harassment threshold would be less than 195 m and the corresponding ensonified area would also decrease. The model also assumed that the sparker (GeoMarine Geo Spark 2000) is omnidirectional. This assumption, which is made because the beam pattern is unknown, results in precautionary estimates of received levels generally, and in particular is likely to overestimate both SPL and PK. This overestimation of the SPL likely results in an overestimation of the number of takes by Level B harassment for this type of equipment.

TABLE 4—MODELED RADIAL DISTANCES FROM HRG SURVEY EQUIPMENT TO ISOPLETHS CORRESPONDING TO LEVEL A HARASSMENT AND LEVEL B HARASSMENT THRESHOLDS [1]

HRG survey equipment		Level A harassment horizontal impact distance (m)				Level B harassment horizontal impact distance (m)
		Low frequency cetaceans	Mid frequency cetaceans	High frequency cetaceans	Phocid pinnipeds	All
Shallow subbottom profilers	EdgeTech Chirp 216	<1	<1	<1	<1	4
Shallow subbottom profilers	Innomar SES 2000 Medium	<1	<1	60	<1	116
Deep seismic profilers	Applied Acoustics AA251 Boomer	<1	<1	60	<1	178
Deep seismic profilers	GeoMarine Geo Spark 2000 (400 tip).	<1	<1	6	<1	195
Underwater positioning (USBL)	SonarDyne Scout Pro	(*)	(*)	(*)	(*)	24
Underwater positioning (USBL)	ixBlue Gaps	<1 m	<1 m	55	<1 m	35

[1] Note that SEL_{cum} was greater than peak SPL in all instances.

Predicted distances to Level A harassment isopleths, which vary based on marine mammal functional hearing groups (Table 3), were also calculated. The updated acoustic thresholds for impulsive sounds (such as HRG survey equipment) contained in the Technical Guidance (NMFS, 2018) were presented as dual metric acoustic thresholds using both cumulative sound exposure level (SEL_{cum}) and peak sound pressure level metrics. As dual metrics, NMFS considers onset of PTS (Level A harassment) to have occurred when either one of the two metrics is exceeded (*i.e.,* the metric resulting in the largest isopleth). The SEL_{cum} metric considers both level and duration of exposure, as well as auditory weighting functions by marine mammal hearing group.

Modeling of distances to isopleths corresponding to the Level A harassment threshold was performed for all types of HRG equipment proposed for use with the potential to result in harassment of marine mammals.

Vineyard Wind used a new model developed by JASCO to calculate distances to Level A harassment isopleths based on both the peak SPL and the SEL_{cum} metric. For the peak SPL metric, the model is a series of equations that accounts for both seawater absorption and HRG equipment beam patterns (for all HRG sources with beam widths larger than 90°, it was assumed these sources were omnidirectional). For the SEL_{cum} metric, a model was developed that accounts for the hearing sensitivity of the marine mammal group, seawater absorption, and beam width for downwards-facing transducers. Details of the modeling methodology for both the peak SPL and SEL_{cum} metrics are provided in Appendix A of the IHA application. This model entails the following steps:

1. Weighted broadband source levels were calculated by assuming a flat spectrum between the source minimum and maximum frequency, weighted the spectrum according to the marine mammal hearing group weighting function (NMFS 2018), and summed across frequency.

2. Propagation loss was modeled as a function of oblique range.

3. Per-pulse SEL was modeled for a stationary receiver at a fixed distance off a straight survey line, using a vessel transit speed of 3.5 knots and source-specific pulse length and repetition rate. The off-line distance is referred to as the closest point of approach (CPA) and was performed for CPA distances between 1 m and 10 km. The survey line length was modeled as 10 km long (analysis showed longer survey lines increased SEL by a negligible amount). SEL is calculated as $SPL + 10 \log_{10} T/15$ dB, where T is the pulse duration.

4. The SEL for each survey line was calculated to produce curves of weighted SEL as a function of CPA distance.

5. The curves from Step 4 above were used to estimate the CPA distance to the impact criteria.

We note that in the modeling methods described above and in Appendix A of the IHA application, sources that operate with a repetition rate greater than 10 Hz were assessed with the non-impulsive (intermittent) source criteria while sources with a repetition rate equal to or less than 10 Hz were assessed with the impulsive source criteria. This resulted in all echosounders, sparkers, boomers and sub-bottom profilers (with the exception of one: The Innomar SES–2000 Medium-100 parametric sub-bottom profiler) being categorized as impulsive for purposes of modeling Level A harassment zones. As noted above, NMFS does not agree with this step in the modeling assessment, which results in nearly all HRG sources being classified as impulsive. However, we note that the classification of the majority of HRG sources as impulsive results in more conservative modeling results. Therefore, we are retaining the analysis of Level A harassment zones from the notice of proposed IHA (85 FR 7952; February 12, 2020), though this analysis does incorporate a 10 Hz repetition rate as a cutoff between impulsive and non-impulse sources. We acknowledge that this modeling approach results in zones are likely conservative for some sources.

Modeled isopleth distances to Level A harassment thresholds for all types of HRG equipment and all marine mammal functional hearing groups are shown in Table 4. The dual criteria (peak SPL and SEL_{cum}) were applied to all HRG sources using the modeling methodology as described above, and the largest isopleth distances for each functional hearing group were then carried forward in the exposure analysis to be conservative. For all HRG sources the SEL_{cum} metric resulted in larger isopleth distances. Distances to the Level A harassment threshold based on the larger of the dual criteria (peak SPL and SEL_{cum}) are shown in Table 4.

Modeled distances to isopleths corresponding to the Level A harassment threshold are very small (<1 m) for three of the four marine mammal functional hearing groups that may be impacted by the proposed activities (*i.e.,* low frequency and mid frequency cetaceans, and phocid pinnipeds; see Table 4). Based on the very small Level A harassment zones for these functional hearing groups, the potential for species within these functional hearing groups to be taken by Level A harassment is considered so low as to be discountable. These three functional hearing groups encompass all but one of the marine mammal species listed in Table 2 that may be impacted by the proposed activities. There is one species (harbor porpoise) within the high frequency functional hearing group that may be impacted by the proposed activities. The largest modeled distance to the Level A harassment threshold for the high frequency functional hearing group was 60 m (Table 4). However, as noted above, modeled distances to isopleths corresponding to the Level A harassment threshold are assumed to be conservative. Level A harassment would also be more likely to occur at close approach to the sound source or as a result of longer duration exposure to the sound source, and mitigation measures—including a 100-m exclusion zone for harbor porpoises—are expected to minimize the potential for close approach or longer duration exposure to active HRG sources. In addition, harbor porpoises are a notoriously shy species which is known to avoid vessels, and would also be expected to avoid a sound source prior to that source reaching a level that would result in injury (Level A harassment). Therefore, we have determined that the potential for take by Level A harassment of harbor porpoises is so low as to be discountable. As NMFS has determined that the likelihood of take of any marine mammals in the form of Level A harassment occurring as a result of the planned surveys is so low as to be discountable, we therefore do not authorize the take by Level A harassment of any marine mammals.

Marine Mammal Occurrence

In this section we provide the information about the presence, density, or group dynamics of marine mammals that will inform the take calculations.

The habitat-based density models produced by the Duke University Marine Geospatial Ecology Laboratory (Roberts *et al.,* 2016, 2017, 2018) represent the best available information regarding marine mammal densities in the planned survey area. The density data presented by Roberts *et al.* (2016, 2017, 2018) incorporates aerial and shipboard line-transect survey data from NMFS and other organizations and incorporates data from 8 physiographic and 16 dynamic oceanographic and biological covariates, and controls for the influence of sea state, group size, availability bias, and perception bias on the probability of making a sighting. These density models were originally developed for all cetacean taxa in the U.S. Atlantic (Roberts *et al.,* 2016). In subsequent years, certain models have been updated on the basis of additional data as well as certain methodological improvements. Our evaluation of the changes leads to a conclusion that these represent the best scientific evidence available. More information is available online at *seamap.env.duke.edu/models/Duke-EC-GOM-2015/*. Marine mammal density estimates in the project area (animals/km^2) were obtained using these model results (Roberts *et al.,* 2016, 2017, 2018). The updated models incorporate additional sighting data, including sightings from the NOAA Atlantic Marine Assessment Program for Protected Species (AMAPPS) surveys from 2010–2014 (NEFSC & SEFSC, 2011, 2012, 2014a, 2014b, 2015, 2016).

For purposes of the exposure analysis, density data from Roberts *et al.* (2016, 2017, 2018) were mapped using a

geographic information system (GIS). The density coverages that included any portion of the planned project area were selected for all survey months. Monthly density data for each species were then averaged over the year to come up with a mean annual density value for each species. The mean annual density values used to estimate take numbers are shown in Table 5 below.

Roberts *et al.* (2018) produced density models for all seals and did not differentiate by seal species. Because the seasonality and habitat use by gray seals roughly overlaps with that of harbor seals in the survey areas, it was assumed that modeled takes of seals could occur to either of the respective species, thus the total number of modeled takes for seals was applied to each species. This approach represents a double-counting of expected total seal takes and is therefore conservative.

Take Calculation and Estimation

Here we describe how the information provided above is brought together to produce a quantitative take estimate.

In order to estimate the number of marine mammals predicted to be exposed to sound levels that would result in harassment, radial distances to predicted isopleths corresponding to harassment thresholds are calculated, as described above. Those distances are then used to calculate the area(s) around the HRG survey equipment predicted to be ensonified to sound levels that exceed harassment thresholds. The area estimated to be ensonified to relevant thresholds in a single day is then calculated, based on areas predicted to be ensonified around the HRG survey equipment and the estimated trackline distance traveled per day by the survey vessel. Vineyard Wind estimates that survey vessels will achieve a maximum daily track line distance of 100 km per day during planned HRG surveys. This distance accounts for the vessel traveling at roughly 3.5 kn during active survey periods. Based on the maximum estimated distance to the Level B harassment threshold of 195 m (Table 5) and the maximum estimated daily track line distance of 100 km, an area of 39.12 km^2 would be ensonified to the Level B harassment threshold per day during Vineyard Wind's planned HRG surveys. As described above, this is a conservative estimate as it assumes the HRG sources that result in the greatest isopleth distances to the Level B harassment threshold would be operated at all times during all 736 vessel days.

The number of marine mammals expected to be incidentally taken per day is then calculated by estimating the number of each species predicted to occur within the daily ensonified area (animals/km^2) by incorporating the estimated marine mammal densities as described above. Estimated numbers of each species taken per day are then multiplied by the total number of vessel days (*i.e.,* 736). The product is then rounded, to generate an estimate of the total number of instances of harassment expected for each species over the duration of the survey. A summary of this method is illustrated in the following formula:

Estimated Take = D × ZOI × # of days

Where: D = average species density (per km^2) and ZOI = maximum daily ensonified area to relevant thresholds.

Using this method to calculate take, Vineyard wind estimated that there would be take of several species by Level A harassment including Atlantic White-sided dolphin, bottlenose dolphin, common dolphin, harbor porpoise, gray seal, and harbor seal in the absence of mitigation (see Table 10 in the IHA application for the estimated number of Level A harassment takes for all potential HRG equipment types). However, as described above, due to the very small estimated distances to Level A harassment thresholds (Table 4), and in consideration of the mitigation measures, the likelihood of survey activities resulting in take in the form of Level A harassment is considered so low as to be discountable; therefore, we did not authorize take of any marine mammals by Level A harassment. Authorized take numbers by Level B harassment are shown in Table 5.

TABLE 5—TOTAL NUMBERS OF AUTHORIZED INCIDENTAL TAKES OF MARINE MAMMALS AND TAKES AS A PERCENTAGE OF POPULATION

Species	Annual density mean (km^{-2})	Estimated Level B harassment takes	Authorized takes by Level B harassment	% Population[1]
Fin whale	0.0023	67.28	67	1.4
Humpback whale	0.0016	45.73	46	2.8
Minke whale	0.001	41.20	41	1.9
North Atlantic right whale	0.001	30.32	10	1.9
Sei whale	0.000	3.23	4	0.06
Atlantic white sided dolphin	0.0351	1,011.19	1,011	2.7
Bottlenose dolphin (WNA Offshore)	0.0283	814.91	815	0.8
Pilot whales	0.0049	141.98	142	0.7
Risso's dolphin	0.000	5.74	6	0.08
Common dolphin	0.071	2,035.87	2,036	2.3
Sperm whale	0.000	3.82	4	0.07
Harbor porpoise	0.0363	1,044.87	1,045	2.3
Gray seal	0.1404	4,043.67	4,044	14.9
Harbor seal	0.1404	4,043.67	4,044	5.3

[1] Calculations of percentage of stock taken are based on the best available abundance estimate as shown in Table 23. In most cases the best available abundance estimate is provided by Roberts *et al.* (2016, 2017, 2018), when available, to maintain consistency with density estimates derived from Roberts *et al.* (2016, 2017, 2018). For North Atlantic right whales the best available abundance estimate is derived from the North Atlantic Right Whale Consortium 2019 Annual Report Card (Pettis *et al.,* 2019). For bottlenose dolphins and seals, Roberts *et al.* (2016, 2017, 2018) provides only a single abundance estimate and does not provide abundance estimates at the stock or species level (respectively), so abundance estimates used to estimate percentage of stock taken for bottlenose dolphins, gray and harbor seals are derived from NMFS SARs (Hayes *et al.,* 2019).

For the North Atlantic right whale, NMFS required a 500-m EZ which substantially exceeds the distance to the level B harassment isopleth (195 m). However, Vineyard Wind will be operating up to 24 hours per day for a

total of 736 vessel days. Even with the implementation of mitigation measures (including night-vision goggles and thermal clip-ons) it is reasonable to assume that night time operations for an extended period could result in a limited number of right whales being exposed to underwater sound at Level B harassment levels. Given the fact that take has been conservatively calculated based on the largest source, which will not be operating at all times, and is thereby likely over-estimated to some degree, the fact that Vineyard Wind will implement a shutdown zone 2.5 times the predicted Level B harassment threshold distance (see below) for that largest source (and significantly more than that for the smaller sources), and the fact that night vision goggles with thermal clips will be used for nighttime operations, NMFS predicts that no more than 10 right whales may be taken by Level B harassment.

Additionally, sightings of right whales have been uncommon during previous HRG surveys. Bay State Wind submitted a marine mammal monitoring report HRG survey on July 19, 2019 described PSO observations and takes in Lease Area OCS–A500, which is part of the survey area covered under this IHA as well as along several ECR corridors closer to shore. Over 376 vessel days, three separate survey ships recorded a total of 496 marine mammal detections between May 11, 2018 and March 14, 2019. There were no confirmed observations of right whales on any of the survey ships during the entire survey period. There were a number of unidentifiable whales reported, and it is possible that some of these unidentified animals may have been right whales. However, the lack of confirmed observations indicates that right whale sightings are not common in this region during previous survey work.

Vineyard Wind provided a marine mammal monitoring report associated with survey activity for which Vineyard Wind determined that no take of marine mammals was reasonably anticipated to occur, and therefore no incidental take authorization requested. The survey activity covered the Renewable Lease Numbers OCS–A 0501 and OCS–A 0522 (Lease) and associated potential cable routes located offshore of Massachusetts. These are the same Lease Areas covered by the IHA NMFS has issued to Vineyard Wind. Survey operations began on May 31, 2019 and concluded on January 7, 2020. Six survey vessels were employed and engaged in both day and night survey operations. There was a total of 412 marine mammal sightings but no marine mammals were observed within Level B harassment zones estimated by Vineyard Wind. Similar to the Bay State Wind findings, no confirmed observations of right whales on any of the survey ships occurred during the entire survey period. While some of the unidentified animals could also have been right whales, the absence of verified sightings demonstrates that right whale observations are uncommon.

In summary, given the low observation rate, and expected efficacy of the required mitigation measures, we believe a reduction of 30 calculated right whale exposures down to 10 authorized takes by Level B harassment is reasonable.

Mitigation

In order to issue an IHA under Section 101(a)(5)(D) of the MMPA, NMFS must set forth the permissible methods of taking pursuant to such activity, and other means of effecting the least practicable impact on such species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of such species or stock for taking for certain subsistence uses (latter not applicable for this action). NMFS regulations require applicants for incidental take authorizations to include information about the availability and feasibility (economic and technological) of equipment, methods, and manner of conducting such activity or other means of effecting the least practicable adverse impact upon the affected species or stocks and their habitat (50 CFR 216.104(a)(11)).

In evaluating how mitigation may or may not be appropriate to ensure the least practicable adverse impact on species or stocks and their habitat, as well as subsistence uses where applicable, we carefully consider two primary factors:

(1) The manner in which, and the degree to which, the successful implementation of the measure(s) is expected to reduce impacts to marine mammals, marine mammal species or stocks, and their habitat. This considers the nature of the potential adverse impact being mitigated (likelihood, scope, range). It further considers the likelihood that the measure will be effective if implemented (probability of accomplishing the mitigating result if implemented as planned), the likelihood of effective implementation (probability implemented as planned), and;

(2) The practicability of the measures for applicant implementation, which may consider such things as cost, impact on operations, and, in the case of a military readiness activity, personnel safety, practicality of implementation, and impact on the effectiveness of the military readiness activity.

Mitigation Measures

NMFS has required that the following mitigation measures be implemented during Vineyard Wind's planned marine site characterization surveys.

Marine Mammal Exclusion Zones, Buffer Zone and Monitoring Zone

Marine mammal exclusion zones (EZ) would be established around the HRG survey equipment and monitored by protected species observers (PSO) during HRG surveys as follows:

- A 500-m EZ would be required for North Atlantic right whales.
- A 100-m EZ would be required for all other marine mammals (with the exception of certain small dolphin species specified below).

If a marine mammal is detected approaching or entering the EZs during the planned survey, the vessel operator would adhere to the shutdown procedures described below. In addition to the EZs described above, PSOs would visually monitor a 200-m Buffer Zone. During use of acoustic sources with the potential to result in marine mammal harassment (*i.e.,* anytime the acoustic source is active, including ramp-up), occurrences of marine mammals within the Buffer Zone (but outside the EZs) would be communicated to the vessel operator to prepare for potential shutdown of the acoustic source. The Buffer Zone is not applicable when the EZ is greater than 100 meters. PSOs would also be required to observe a 500-m Monitoring Zone and record the presence of all marine mammals within this zone. In addition, observation of any marine mammals within the Level B harassment zone will be documented. The zones described above would be based upon the radial distance from the active equipment (rather than being based on distance from the vessel itself).

Visual Monitoring

NMFS only requires a single PSO to be on duty during daylight hours and 30 minutes prior to and during nighttime ramp-ups for HRG surveys. Vineyard Wind proposed, and has voluntarily committed, to a minimum of two (2) NMFS-approved PSOs on duty and conducting visual observations on all survey vessels at all times when HRG equipment is in use (*i.e.,* daylight and nighttime operations). Visual monitoring would begin no less than 30 minutes prior to ramp-up of HRG

equipment and would continue until 30 minutes after use of the acoustic source ceases or until 30 minutes past sunset. However, as noted, Vineyard Wind has committed to 24-hr use of PSOs. PSOs would establish and monitor the applicable EZs, Buffer Zone and Monitoring Zone as described above. Visual PSOs would coordinate to ensure 360° visual coverage around the vessel from the most appropriate observation posts, and would conduct visual observations using binoculars and the naked eye while free from distractions and in a consistent, systematic, and diligent manner. PSOs would estimate distances to marine mammals located in proximity to the vessel and/or relevant using range finders. It would be the responsibility of the Lead PSO on duty to communicate the presence of marine mammals as well as to communicate and enforce the action(s) that are necessary to ensure mitigation and monitoring requirements are implemented as appropriate. Position data would be recorded using hand-held or vessel global positioning system (GPS) units for each confirmed marine mammal sighting.

Pre-Clearance of the Exclusion Zones

Prior to initiating HRG survey activities, Vineyard Wind would implement a 30-minute pre-clearance period. During pre-clearance monitoring (*i.e.,* before ramp-up of HRG equipment begins), the Buffer Zone would also act as an extension of the 100-m EZ in that observations of marine mammals within the 200-m Buffer Zone would also preclude HRG operations from beginning. During this period, PSOs would ensure that no marine mammals are observed within 200 m of the survey equipment (500 m in the case of North Atlantic right whales). HRG equipment would not start up until this 200-m zone (or, 500-m zone in the case of North Atlantic right whales) is clear of marine mammals for at least 30 minutes. The vessel operator would notify a designated PSO of the proposed start of HRG survey equipment as agreed upon with the lead PSO; the notification time should not be less than 30 minutes prior to the planned initiation of HRG equipment order to allow the PSOs time to monitor the EZs and Buffer Zone for the 30 minutes of pre-clearance. A PSO conducting pre-clearance observations would be notified again immediately prior to initiating active HRG sources.

If a marine mammal were observed within the relevant EZs or Buffer Zone during the pre-clearance period, initiation of HRG survey equipment would not begin until the animal(s) has been observed exiting the respective EZ or Buffer Zone, or, until an additional time period has elapsed with no further sighting (*i.e.,* minimum 15 minutes for small odontocetes and seals, and 30 minutes for all other species). The pre-clearance requirement would include small delphinids that approach the vessel (*e.g.,* bow ride). PSOs would also continue to monitor the zone for 30 minutes after survey equipment is shut down or survey activity has concluded.

Ramp-Up of Survey Equipment

When technically feasible, a ramp-up procedure would be used for geophysical survey equipment capable of adjusting energy levels at the start or re-start of survey activities. The ramp-up procedure would be used at the beginning of HRG survey activities in order to provide additional protection to marine mammals near the Project Area by allowing them to detect the presence of the survey and vacate the area prior to the commencement of survey equipment operation at full power. Ramp-up of the survey equipment would not begin until the relevant EZs and Buffer Zone has been cleared by the PSOs, as described above. HRG equipment would be initiated at their lowest power output and would be incrementally increased to full power. If any marine mammals are detected within the EZs or Buffer Zone prior to or during ramp-up, the HRG equipment would be shut down (as described below).

Shutdown Procedures

If an HRG source is active and a marine mammal is observed within or entering a relevant EZ (as described above) an immediate shutdown of the HRG survey equipment would be required. When shutdown is called for by a PSO, the acoustic source would be immediately deactivated and any dispute resolved only following deactivation. Any PSO on duty would have the authority to delay the start of survey operations or to call for shutdown of the acoustic source if a marine mammal is detected within the applicable EZ. The vessel operator would establish and maintain clear lines of communication directly between PSOs on duty and crew controlling the HRG source(s) to ensure that shutdown commands are conveyed swiftly while allowing PSOs to maintain watch. Subsequent restart of the HRG equipment would only occur after the marine mammal has either been observed exiting the relevant EZ, or, until an additional time period has elapsed with no further sighting of the animal within the relevant EZ (*i.e.,* 15 minutes for small odontocetes and seals, and 30 minutes for all other species).

Upon implementation of shutdown, the HRG source may be reactivated after the marine mammal that triggered the shutdown has been observed exiting the applicable EZ (*i.e.,* the animal is not required to fully exit the Buffer Zone where applicable) or, following a clearance period of 15 minutes for small odontocetes and seals and 30 minutes for all other species with no further observation of the marine mammal(s) within the relevant EZ. If the HRG equipment shuts down for brief periods (*i.e.,* less than 30 minutes) for reasons other than mitigation (*e.g.,* mechanical or electronic failure) the equipment may be re-activated as soon as is practicable at full operational level, without 30 minutes of pre-clearance, only if PSOs have maintained constant visual observation during the shutdown and no visual detections of marine mammals occurred within the applicable EZs and Buffer Zone during that time. For a shutdown of 30 minutes or longer, or if visual observation was not continued diligently during the pause, pre-clearance observation is required, as described above.

The shutdown requirement would be waived for certain genera of small delphinids (*i.e., Delphinus, Lagenorhynchus,* and *Tursiops*) under certain circumstances. If a delphinid(s) from these genera is visually detected approaching the vessel (*i.e.,* to bow ride) or towed survey equipment, shutdown would not be required. If there is uncertainty regarding identification of a marine mammal species (*i.e.,* whether the observed marine mammal(s) belongs to one of the delphinid genera for which shutdown is waived), PSOs would use best professional judgment in making the decision to call for a shutdown.

If a species for which authorization has not been granted, or, a species for which authorization has been granted but the authorized number of takes have been met, approaches or is observed within the area encompassing the Level B harassment isopleth (195 m), shutdown would occur.

Vessel Strike Avoidance

Vessel strike avoidance measures would include, but would not be limited to, the following, except under circumstances when complying with these requirements would put the safety of the vessel or crew at risk:

- All vessel operators and crew will maintain vigilant watch for cetaceans and pinnipeds, and slow down or stop their vessel to avoid striking these protected species;

• All survey vessels, regardless of size, must observe a 10-knot speed restriction in specific areas designated by NMFS for the protection of North Atlantic right whales from vessel strikes: Any DMAs when in effect, and the Block Island Seasonal Management Area (SMA) (from November 1 through April 30), Cape Cod Bay SMA (from January 1 through May 15), Off Race Point SMA (from March 1 through April 30) and Great South Channel SMA (from April 1 through July 31). Note that this requirement includes vessels, regardless of size, to adhere to a 10 knot speed limit in SMAs and DMAs, not just vessels 65 ft or greater in length.

• All vessel operators will reduce vessel speed to 10 knots (18.5 km/hr) or less when any large whale, any mother/calf pairs, large assemblages of non-delphinoid cetaceans are observed near (within 100 m (330 ft)) an underway vessel;

• All vessels will maintain a separation distance of 500 m (1640 ft) or greater from any sighted North Atlantic right whale;

• If underway, vessels must steer a course away from any sighted North Atlantic right whale at 10 knots (18.5 km/hr) or less until the 500-m (1640 ft) minimum separation distance has been established. If a North Atlantic right whale is sighted in a vessel's path, or within 100 m (330 ft) to an underway vessel, the underway vessel must reduce speed and shift the engine to neutral. Engines will not be engaged until the North Atlantic right whale has moved outside of the vessel's path and beyond 100 m. If stationary, the vessel must not engage engines until the North Atlantic right whale has moved beyond 100 m;

• All vessels will maintain a separation distance of 100 m (330 ft) or greater from any sighted non-delphinoid cetacean. If sighted, the vessel underway must reduce speed and shift the engine to neutral, and must not engage the engines until the non-delphinoid cetacean has moved outside of the vessel's path and beyond 100 m. If a survey vessel is stationary, the vessel will not engage engines until the non-delphinoid cetacean has moved out of the vessel's path and beyond 100 m;

• All vessels will maintain a separation distance of 50 m (164 ft) or greater from any sighted delphinoid cetacean. Any vessel underway remain parallel to a sighted delphinoid cetacean's course whenever possible, and avoid excessive speed or abrupt changes in direction. Any vessel underway reduces vessel speed to 10 knots (18.5 km/hr) or less when pods (including mother/calf pairs) or large assemblages of delphinoid cetaceans are observed. Vessels may not adjust course and speed until the delphinoid cetaceans have moved beyond 50 m and/or the abeam of the underway vessel;

• All vessels will maintain a separation distance of 50 m (164 ft) or greater from any sighted pinniped; and

• All vessels underway will not divert or alter course in order to approach any whale, delphinoid cetacean, or pinniped. Any vessel underway will avoid excessive speed or abrupt changes in direction to avoid injury to the sighted cetacean or pinniped.

Project-specific training will be conducted for all vessel crew prior to the start of survey activities. Confirmation of the training and understanding of the requirements will be documented on a training course log sheet. Signing the log sheet will certify that the crew members understand and will comply with the necessary requirements throughout the survey activities.

Seasonal Operating Requirements

Vineyard Wind will conduct HRG survey activities in the Cape Cod Bay SMA and Off Race Point SMA only during the months of August and September to ensure sufficient buffer between the SMA restrictions (January to May 15) and known seasonal occurrence of the NARW north and northeast of Cape Cod (fall, winter, and spring). Vineyard Wind will also limit to three the number survey vessels that will operate concurrently from March through June within the lease areas (OCS–A 0501 and 0487) and OECC areas north of the lease areas up to, but not including, coastal and bay waters. The boundaries of this area are delineated by a polygon with the following vertices: 40.746 N 70.748 W; 40.953 N 71.284 W; 41.188 N 71.284 W; 41.348 N 70.835 W; 41.35 N 70.455 W; 41.097 N 70.372 W; and 41.021 N 70.37 W. This area is delineated by the dashed line shown in Figure 1. Another seasonal restriction area south of Nantucket will be in effect from December to February in the area delineated by the DMA that was effective from January 31, 2020 through February 15, 2020. The winter seasonal restriction area is delineated by latitudes and longitudes of 41.183 N; 40.366 N; 69.533 W; and 70.616 W. This area is delineated by the solid line in Figure 1.

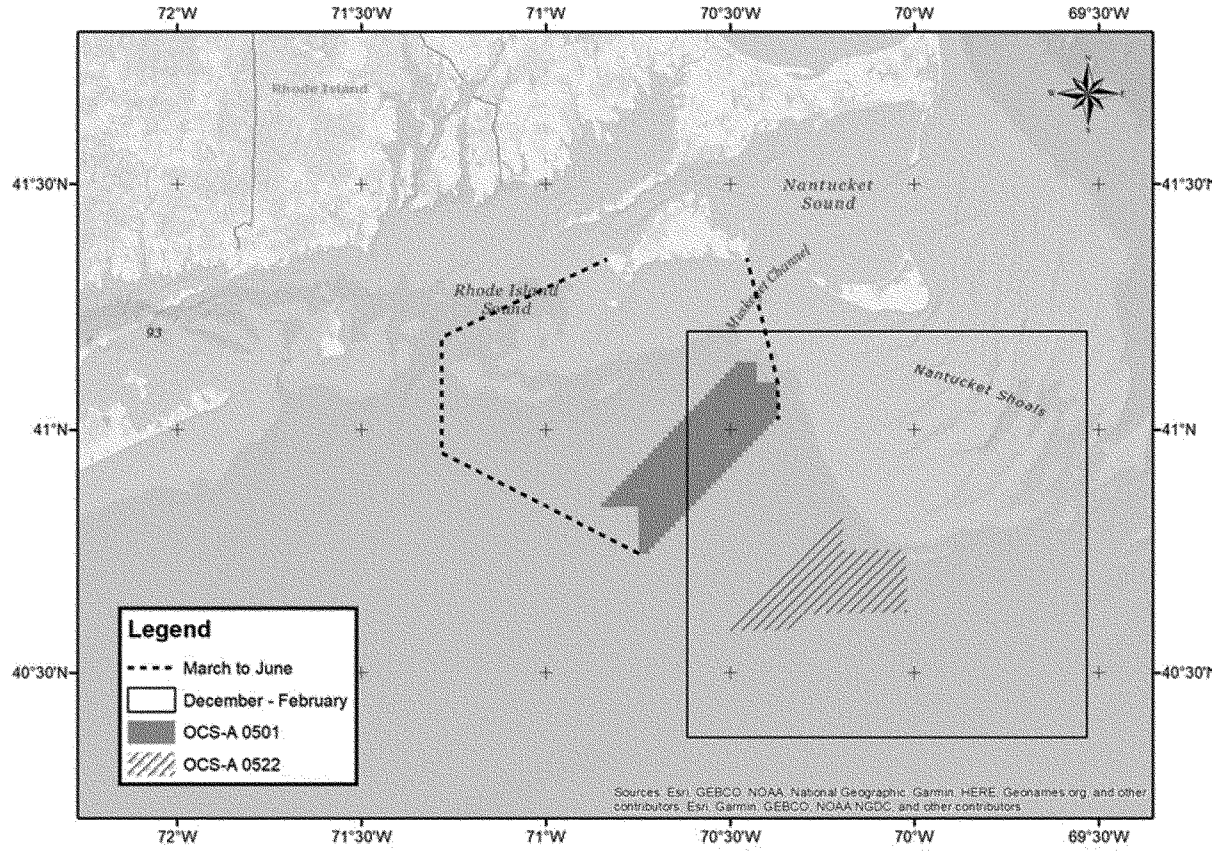

Figure 1. Seasonally Restricted Areas

Vineyard Wind would operate no more than three survey vessels concurrently in the areas described above during the December–February and March–June timeframes when right whale densities are greatest. The seasonal restrictions described above will help to reduce both the number and intensity of right whale takes.

Although not required by NMFS, Vineyard Wind would also employ passive acoustic monitoring (PAM) to support monitoring during night time operations to provide for acquisition of species detections at night.

Based on our evaluation of the applicant's proposed measures, as well as other measures considered by NMFS, NMFS has determined that the required mitigation measures provide the means effecting the least practicable impact on the affected species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance.

Monitoring and Reporting

In order to issue an IHA for an activity, Section 101(a)(5)(D) of the MMPA states that NMFS must set forth requirements pertaining to the monitoring and reporting of such taking. The MMPA implementing regulations at 50 CFR 216.104 (a)(13) indicate that requests for authorizations must include the suggested means of accomplishing the necessary monitoring and reporting that will result in increased knowledge of the species and of the level of taking or impacts on populations of marine mammals that are expected to be present in the planned action area. Effective reporting is critical both to compliance as well as ensuring that the most value is obtained from the required monitoring.

Monitoring and reporting requirements prescribed by NMFS should contribute to improved understanding of one or more of the following:

- Occurrence of marine mammal species or stocks in the area in which take is anticipated (*e.g.,* presence, abundance, distribution, density).
- Nature, scope, or context of likely marine mammal exposure to potential stressors/impacts (individual or cumulative, acute or chronic), through better understanding of: (1) Action or environment (*e.g.,* source characterization, propagation, ambient noise); (2) affected species (*e.g.,* life history, dive patterns); (3) co-occurrence of marine mammal species with the action; or (4) biological or behavioral context of exposure (*e.g.,* age, calving or feeding areas).
- Individual marine mammal responses (behavioral or physiological) to acoustic stressors (acute, chronic, or cumulative), other stressors, or cumulative impacts from multiple stressors.
- How anticipated responses to stressors impact either: (1) Long-term fitness and survival of individual marine mammals; or (2) populations, species, or stocks.
- Effects on marine mammal habitat (*e.g.,* marine mammal prey species, acoustic habitat, or other important physical components of marine mammal habitat).
- Mitigation and monitoring effectiveness.

Monitoring Measures

As described above, visual monitoring would be performed by qualified and NMFS-approved PSOs. Vineyard Wind would use independent, dedicated, trained PSOs, meaning that the PSOs must be employed by a third-party observer provider, must have no tasks other than to conduct observational

effort, collect data, and communicate with and instruct relevant vessel crew with regard to the presence of marine mammals and mitigation requirements (including brief alerts regarding maritime hazards), and must have successfully completed an approved PSO training course appropriate for their designated task. Vineyard Wind would provide resumes of all proposed PSOs (including alternates) to NMFS for review and approval prior to the start of survey operations.

During survey operations (*e.g.,* any day on which use of an HRG source is planned to occur), a minimum of two PSOs must be on duty and conducting visual observations at all times on all active survey vessels when HRG equipment is operating, including both daytime and nighttime operations. Visual monitoring would begin no less than 30 minutes prior to initiation of HRG survey equipment and would continue until one hour after use of the acoustic source ceases. Note that NMFS only requires that a minimum of one PSO must be on duty and conducting visual observations during daylight hours (*i.e.,* from 30 minutes prior to sunrise through 30 minutes following sunset) and during nighttime ramp-ups of HRG equipment. PSOs would coordinate to ensure 360° visual coverage around the vessel from the most appropriate observation posts, and would conduct visual observations using binoculars and the naked eye while free from distractions and in a consistent, systematic, and diligent manner. PSOs may be on watch for a maximum of four consecutive hours followed by a break of at least two hours between watches and may conduct a maximum of 12 hours of observation per 24-hour period. In cases where multiple vessels are surveying concurrently, any observations of marine mammals would be communicated to PSOs on all survey vessels.

PSOs would be equipped with binoculars and have the ability to estimate distances to marine mammals located in proximity to the vessel and/or exclusion zone using range finders. Reticulated binoculars will also be available to PSOs for use as appropriate based on conditions and visibility to support the monitoring of marine mammals. Position data would be recorded using hand-held or vessel GPS units for each sighting. Observations would take place from the highest available vantage point on the survey vessel. General 360-degree scanning would occur during the monitoring periods, and target scanning by the PSO would occur when alerted of a marine mammal presence.

During good conditions (*e.g.,* daylight hours; Beaufort sea state (BSS) 3 or less), to the maximum extent practicable, PSOs would conduct observations when the acoustic source is not operating for comparison of sighting rates and behavior with and without use of the acoustic source and between acquisition periods. Any observations of marine mammals by crew members aboard any vessel associated with the survey would be relayed to the PSO team.

Data on all PSO observations would be recorded based on standard PSO collection requirements. This would include dates, times, and locations of survey operations; dates and times of observations, location and weather; details of marine mammal sightings (*e.g.,* species, numbers, behavior); and details of any observed marine mammal take that occurs (*e.g.,* noted behavioral disturbances).

Reporting Measures

Within 90 days after completion of survey activities, a final technical report will be provided to NMFS that fully documents the methods and monitoring protocols, summarizes the data recorded during monitoring, summarizes the number of marine mammals estimated to have been taken during survey activities (by species, when known), summarizes the mitigation actions taken during surveys (including what type of mitigation and the species and number of animals that prompted the mitigation action, when known), and provides an interpretation of the results and effectiveness of all mitigation and monitoring. Any recommendations made by NMFS must be addressed in the final report prior to acceptance by NMFS.

In the event that Vineyard Wind personnel discover an injured or dead marine mammal, Vineyard Wind shall report the incident to the Office of Protected Resources (OPR), NMFS and to the New England/Mid-Atlantic Regional Stranding Coordinator as soon as feasible. The report must include the following information:

- Time, date, and location (latitude/longitude) of the first discovery (and updated location information if known and applicable);
- Species identification (if known) or description of the animal(s) involved;
- Condition of the animal(s) (including carcass condition if the animal is dead);
- Observed behaviors of the animal(s), if alive;
- If available, photographs or video footage of the animal(s); and
- General circumstances under which the animal was discovered.

In the event of a ship strike of a marine mammal by any vessel involved in the activities covered by the authorization, the IHA-holder shall report the incident to OPR, NMFS and to the New England/Mid-Atlantic Regional Stranding Coordinator as soon as feasible. The report must include the following information:

- Time, date, and location (latitude/longitude) of the incident;
- Species identification (if known) or description of the animal(s) involved;
- Vessel's speed during and leading up to the incident;
- Vessel's course/heading and what operations were being conducted (if applicable);
- Status of all sound sources in use;
- Description of avoidance measures/requirements that were in place at the time of the strike and what additional measures were taken, if any, to avoid strike;
- Environmental conditions (*e.g.,* wind speed and direction, Beaufort sea state, cloud cover, visibility) immediately preceding the strike;
- Estimated size and length of animal that was struck;
- Description of the behavior of the marine mammal immediately preceding and following the strike;
- If available, description of the presence and behavior of any other marine mammals immediately preceding the strike;
- Estimated fate of the animal (*e.g.,* dead, injured but alive, injured and moving, blood or tissue observed in the water, status unknown, disappeared); and
- To the extent practicable, photographs or video footage of the animal(s).

Negligible Impact Analysis and Determination

NMFS has defined negligible impact as ''an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival'' (50 CFR 216.103). A negligible impact finding is based on the lack of likely adverse effects on annual rates of recruitment or survival (*i.e.,* population-level effects). An estimate of the number of takes alone is not enough information on which to base an impact determination. In addition to considering estimates of the number of marine mammals that might be ''taken'' through harassment, NMFS considers other factors, such as the likely nature of any responses (*e.g.,* intensity, duration), the context of any responses

(*e.g.,* critical reproductive time or location, migration), as well as effects on habitat, and the likely effectiveness of the mitigation. We also assess the number, intensity, and context of estimated takes by evaluating this information relative to population status. Consistent with the 1989 preamble for NMFS's implementing regulations (54 FR 40338; September 29, 1989), the impacts from other past and ongoing anthropogenic activities are incorporated into this analysis via their impacts on the environmental baseline (*e.g.,* as reflected in the regulatory status of the species, population size and growth rate where known, ongoing sources of human-caused mortality, or ambient noise levels).

To avoid repetition, our analysis applies to all the species listed in Table 2, given that NMFS expects the anticipated effects of the planned survey to be similar in nature. As discussed in the ''Potential Effects of the Specified Activity on Marine Mammals and Their Habitat'' section of the proposed notice, PTS, masking, non-auditory physical effects, and vessel strike are not expected to occur.

The majority of impacts to marine mammals are expected to be short-term disruption of behavioral patterns, primarily in the form of avoidance or potential interruption of foraging. Marine mammal feeding behavior is not likely to be significantly impacted.

Regarding impacts to marine mammal habitat, prey species are mobile, and are broadly distributed throughout the Project Area and the footprint of the activity is small; therefore, marine mammals that may be temporarily displaced during survey activities are expected to be able to resume foraging once they have moved away from areas with disturbing levels of underwater noise. Because of the availability of similar habitat and resources in the surrounding area the impacts to marine mammals and the food sources that they utilize are not expected to cause significant or long-term consequences for individual marine mammals or their populations. The HRG survey equipment itself will not result in physical habitat disturbance. Avoidance of the area around the HRG survey activities by marine mammal prey species is possible. However, any avoidance by prey species would be expected to be short term and temporary.

ESA-listed species for which takes are authorized are right, fin, sei, and sperm whales, and these effects are anticipated to be limited to lower level behavioral effects. NMFS does not anticipate that serious injury or mortality would occur to any species, even in the absence of mitigation and no serious injury or mortality is authorized. As discussed in the *Potential Effects* section, non-auditory physical effects and vessel strike are not expected to occur. We expect that most potential takes would be in the form of short-term Level B behavioral harassment in the form of temporary avoidance of the area or decreased foraging (if such activity were occurring), reactions that are considered to be of low severity and with no lasting biological consequences (*e.g.,* Southall *et al.,* 2007). The planned survey is not anticipated to affect the fitness or reproductive success of individual animals. Since impacts to individual survivorship and fecundity are unlikely, the planned survey is not expected to result in population-level effects for any ESA-listed species or alter current population trends of any ESA-listed species.

The status of the North Atlantic right whale population is of heightened concern and, therefore, merits additional analysis. NMFS has rigorously assessed potential impacts to right whales from this survey. We have established a 500-m shutdown zone for right whales which is precautionary considering the Level B harassment isopleth for the largest source utilized (*i.e.,* GeoMarine Geo Spark 2000 (400 tip) is estimated to be 195 m.

NMFS is also requiring Vineyard Wind to limit the number of survey vessels operating concurrently to no more than three in specified areas during periods when right whale densities are likely to be elevated. This includes a specified area approximately 31 miles due south of Nantucket including Lease Area OCS–A 0522 from December to February as well as Lease Area OCS–A 0501 and surrounding Project Areas south and southwest of Martha's Vineyard from March to June. Numerous right whale aggregations have been reported in these areas during the winter and spring. Furthermore, surveys in right whale critical habitat area will be limited to August and September when the whales are unlikely to be present. Due to the length of the survey and continuous night operations, it is conceivable that a limited number of right whales could enter into the Level B harassment zone without being observed. Any potential impacts to right whales would consist of, at most, low-level, short-term behavioral harassment in a limited number of animals. The authorized takes of right whales would not exacerbate or compound the ongoing UME in any way.

The planned Project Area encompasses or is in close proximity to feeding BIAs for right whales (February–April), humpback whales (March–December), fin whales (March–October), and sei whales (May–November) as well as a migratory BIA or right whales (March–April and November–December. Most of these feeding BIAs are extensive and sufficiently large (705 km^2 and 3,149 km^2 for right whales; 47,701 km^2 for humpback whales; 2,933 km^2 for fin whales; and 56,609 km^2 for sei whales), and the acoustic footprint of the planned survey is sufficiently small that feeding opportunities for these whales would not be reduced appreciably. Any whales temporarily displaced from the planned Project Area would be expected to have sufficient remaining feeding habitat available to them, and would not be prevented from feeding in other areas within the biologically important feeding habitat. In addition, any displacement of whales from the BIA or interruption of foraging bouts would be expected to be temporary in nature. Therefore, we do not expect whales with feeding BIAs to be negatively impacted by the planned survey.

A migratory BIA for North Atlantic right whales (effective March–April and November–December) extends from Massachusetts to Florida (LaBrecque, *et al.,* 2015). Off the south coast of Massachusetts and Rhode Island, this BIA extends from the coast to beyond the shelf break. The fact that the spatial acoustic footprint of the planned survey is very small relative to the spatial extent of the available migratory habitat means that right whale migration is not expected to be impacted by the survey. Required vessel strike avoidance measures will also decrease risk of ship strike during migration. NMFS is expanding the standard avoidance measures by requiring that all vessels, regardless of size, adhere to a 10 knot speed limit in SMAs and DMA. Additionally, limited take by Level B harassment of North Atlantic right whales has been authorized as HRG survey operations are required to shut down at 500 m to minimize the potential for behavioral harassment of this species.

As noted previously, elevated humpback whale mortalities have occurred along the Atlantic coast from Maine through Florida since January 2016. Of the cases examined, approximately half had evidence of human interaction (ship strike or entanglement). The UME does not yet provide cause for concern regarding population-level impacts. Despite the UME, the relevant population of humpback whales (the West Indies breeding population, or distinct population segment (DPS)) remains

healthy. Beginning in January 2017, elevated minke whale strandings have occurred along the Atlantic coast from Maine through South Carolina, with highest numbers in Massachusetts, Maine, and New York. This event does not provide cause for concern regarding population level impacts, as the likely population abundance is greater than 20,000 whales. Elevated North Atlantic right whale mortalities began in June 2017, primarily in Canada. Overall, preliminary findings support human interactions, specifically vessel strikes or rope entanglements, as the cause of death for the majority of the right whales. Elevated numbers of harbor seal and gray seal mortalities were first observed in July, 2018 and have occurred across Maine, New Hampshire and Massachusetts. Based on tests conducted so far, the main pathogen found in the seals is phocine distemper virus although additional testing to identify other factors that may be involved in this UME are underway. The UME for seals does not yet provide cause for concern regarding population-level impacts to any of these stocks. For harbor seals, the population abundance is over 75,000 and annual M/SI (345) is well below PBR (2,006) (Hayes *et al.,* 2018). For gray seals, the population abundance in the United States is over 27,000, with an estimated abundance including seals in Canada of approximately 505,000, and abundance is likely increasing in the U.S. Atlantic EEZ as well as in Canada (Hayes *et al.,* 2018).

Direct physical interactions (ship strikes and entanglements) appear to be responsible for many of the UME humpback and right whale mortalities recorded. The HRG survey will require ship strike avoidance measures which would minimize the risk of ship strikes while fishing gear and in-water lines will not be employed as part of the survey. Furthermore, the planned activities are not expected to promote the transmission of infectious disease among marine mammals. The survey is not expected to result in the deaths of any marine mammals or combine with the effects of the ongoing UMEs to result in any additional impacts not analyzed here. Accordingly, Vineyard Wind did not request, and NMFS is not authorizing, take of marine mammals by serious injury, or mortality.

The required mitigation measures are expected to reduce the number and/or severity of takes by giving animals the opportunity to move away from the sound source before HRG survey equipment reaches full energy and preventing animals from being exposed to sound levels that have the potential to cause injury (Level A harassment) and more severe Level B harassment during HRG survey activities, even in the biologically important areas described above. No Level A harassment is anticipated or authorized.

NMFS expects that most takes would primarily be in the form of short-term Level B behavioral harassment in the form of brief startling reaction and/or temporary vacating of the area, or decreased foraging (if such activity were occurring)—reactions that (at the scale and intensity anticipated here) are considered to be of low severity and with no lasting biological consequences. Since both the source and the marine mammals are mobile, only a smaller area would be ensonified by sound levels that could result in take for only a short period. Additionally, required mitigation measures would reduce exposure to sound that could result in more severe behavioral harassment.

In summary and as described above, the following factors primarily support our determination that the impacts resulting from this activity are not expected to adversely affect the species or stock through effects on annual rates of recruitment or survival:

- No mortality or serious injury is anticipated or authorized;
- No Level A harassment is anticipated or authorized;
- Any foraging interruptions are expected to be short term and unlikely to cause significant impacts;
- Impacts on marine mammal habitat and species that serve as prey species for marine mammals are expected to be minimal and the alternate areas of similar habitat value for marine mammals are readily available;
- Take is anticipated to be primarily Level B behavioral harassment consisting of brief startling reactions and/or temporary avoidance of the ensonified area;
- Survey activities would occur in such a comparatively small portion of the biologically important areas for North Atlantic right whale migration, including a small area of designated critical habitat, that any avoidance of the Project Area due to activities would not affect migration. In addition, mitigation measures to shut down at 500 m to minimize potential for Level B behavioral harassment would limit both the number and severity of take of the species.
- Similarly, due to the relatively small footprint of the survey activities in relation to the size of a biologically important areas for right, humpback, fin, and sei whales foraging, the survey activities would not affect foraging behavior of this species; and
- Required mitigation measures, including visual monitoring and shutdowns, are expected to minimize the intensity of potential impacts to marine mammals.

Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, and taking into consideration the implementation of the required monitoring and mitigation measures, NMFS finds that the total marine mammal take from Vineyard Wind's planned HRG survey activities will have a negligible impact on the affected marine mammal species or stocks.

Small Numbers

As noted above, only small numbers of incidental take may be authorized under Sections 101(a)(5)(A) and (D) of the MMPA for specified activities other than military readiness activities. The MMPA does not define small numbers and so, in practice, where estimated numbers are available, NMFS compares the number of individuals taken to the most appropriate estimation of abundance of the relevant species or stock in our determination of whether an authorization is limited to small numbers of marine mammals. Additionally, other qualitative factors may be considered in the analysis, such as the temporal or spatial scale of the activities.

The numbers of marine mammals that we have authorized for take, for all species and stocks, would be considered small relative to the relevant stocks or populations (less than 15 percent for all species and stocks) as shown in Table 5. Based on the analysis contained herein of the planned activity (including the required mitigation and monitoring measures) and the anticipated take of marine mammals, NMFS finds that small numbers of marine mammals will be taken relative to the population size of the affected species or stocks.

Unmitigable Adverse Impact Analysis and Determination

There are no relevant subsistence uses of the affected marine mammal stocks or species implicated by this action. Therefore, NMFS has determined that the total taking of affected species or stocks would not have an unmitigable adverse impact on the availability of such species or stocks for taking for subsistence purposes.

National Environmental Policy Act

To comply with the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. 4321 *et seq.*) and NOAA Administrative Order (NAO)

216–6A, NMFS must evaluate our proposed action (*i.e.,* the promulgation of regulations and subsequent issuance of incidental take authorization) and alternatives with respect to potential impacts on the human environment.

This action is consistent with categories of activities identified in Categorical Exclusion B4 of the Companion Manual for NAO 216–6A, which do not individually or cumulatively have the potential for significant impacts on the quality of the human environment and for which we have not identified any extraordinary circumstances that would preclude this categorical exclusion. Accordingly, NMFS has determined that the proposed action qualifies to be categorically excluded from further NEPA review.

Endangered Species Act

Section 7(a)(2) of the Endangered Species Act of 1973 (16 U.S.C. 1531 *et seq.*) requires that each Federal agency insure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat. To ensure ESA compliance for the issuance of IHAs, NMFS consults internally, in this case with the NMFS Greater Atlantic Regional Fisheries Office (GARFO), whenever we propose to authorize take for endangered or threatened species.

The NMFS Office of Protected Resources Permits and Conservation Division is authorizing the incidental take of four species of marine mammals which are listed under the ESA: The North Atlantic right, fin, sei and sperm whale. We requested initiation of consultation under Section 7 of the ESA with NMFS GARFO on February 12, 2020, for the issuance of this IHA. BOEM consulted with NMFS GARFO under section 7 of the ESA on commercial wind lease issuance and site assessment activities on the Atlantic Outer Continental Shelf in Massachusetts, Rhode Island, New York and New Jersey Wind Energy Areas. The NMFS GARFO issued a Biological Opinion concluding that these activities may adversely affect but are not likely to jeopardize the continued existence of the North Atlantic right, fin, sei and sperm whale. Upon request from the NMFS Office of Protected Resources, NMFS GARFO issued an amended incidental take statement associated with this Biological Opinion to include the take of the ESA-listed marine mammal species authorized through this IHA in April, 2020.

Authorization

NMFS has issued an IHA to Vineyard Winds for conducting marine site characterization surveys offshore of Massachusetts in the areas of the Commercial Lease of Submerged Lands for Renewable Energy Development on the Outer Continental Shelf (OCS–A 0501 and OCS–A 0522) and along potential submarine offshore export cable corridors (OECC) to landfall locations in Massachusetts, Rhode Island, Connecticut, and New York from June 1, 2020 through May 31, 2021, provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated.

Dated: April 30, 2020.

Donna Wieting,

Director, Office of Protected Resources, National Marine Fisheries Service.

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648–XR110]

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to the Chevron Richmond Refinery Long Wharf Maintenance and Efficiency Project in San Francisco Bay, California

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice; request for comments on proposed Renewal incidental harassment authorization.

SUMMARY: NMFS received a request from Chevron Products Company (Chevron) for the Renewal of their currently active incidental harassment authorization (IHA) to take marine mammals incidental to the Long Wharf Maintenance and Efficiency Project (LWMEP) in San Francisco Bay, California. These activities consist of activities that are covered by the current authorization but will not be completed prior to its expiration. Pursuant to the Marine Mammal Protection Act, prior to issuing the currently active IHA, NMFS requested comments on both the proposed IHA and the potential for renewing the authorization if certain requirements were satisfied. The Renewal requirements have been satisfied, and NMFS is now providing an additional 15-day comment period to allow for any additional comments on the proposed Renewal not previously provided during the initial 30-day comment period.

DATES: Comments and information must be received no later than May 21, 2020.

ADDRESSES: Comments should be addressed to Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service. Physical comments should be sent to 1315 East-West Highway, Silver Spring, MD 20910 and electronic comments should be sent to *ITP.DeJoseph@noaa.gov.*

Instructions: NMFS is not responsible for comments sent by any other method, to any other address or individual, or received after the end of the comment period. Comments received electronically, including all attachments, must not exceed a 25-megabyte file size. All comments received are a part of the public record and will generally be posted online at *https://www.fisheries.noaa.gov/permit/incidental-take-authorizations-under-marine-mammal-protection-act* without change. All personal identifying information (*e.g.,* name, address) voluntarily submitted by the commenter may be publicly accessible. Do not submit confidential business information or otherwise sensitive or protected information.

FOR FURTHER INFORMATION CONTACT: Bonnie DeJoseph, Office of Protected Resources, NMFS, (301) 427–8401. Electronic copies of the original application, Renewal request, and supporting documents (including NMFS **Federal Register** notices of the proposed and final authorizations for both the 2019 and 2018 IHAs, and the 2019 IHA), as well as a list of the references cited in this document, may be obtained online at: *https://www.fisheries.noaa.gov/permit/incidental-take-authorizations-under-marine-mammal-protection-act.* In case of problems accessing these documents, please call the contact listed above.

SUPPLEMENTARY INFORMATION:

Background

The Marine Mammal Protection Act (MMPA) prohibits the ''take'' of marine mammals, with certain exceptions. Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) direct the Secretary of Commerce (as delegated to NMFS) to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made and either regulations are issued or, if the taking is