summarize each comment in our request to OMB to approve this ICR. Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you may ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Sheleen Dumas,

Department PRA Clearance Officer, Office of the Chief Information Officer, Commerce Department.

[FR Doc. 2022–24104 Filed 11–3–22; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

Agency Information Collection Activities; Submission to the Office of Management and Budget (OMB) for Review and Approval; Comment Request; NOAA Teacher at Sea Program

AGENCY: National Oceanic & Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of information collection, request for comment.

SUMMARY: The Department of Commerce, in accordance with the Paperwork Reduction Act of 1995 (PRA), invites the general public and other Federal agencies to comment on proposed, and continuing information collections, which helps us assess the impact of our information collection requirements and minimize the public's reporting burden. The purpose of this notice is to allow for 60 days of public comment preceding submission of the collection to OMB.

DATES: To ensure consideration, comments regarding this proposed information collection must be received on or before January 3, 2023.

ADDRESSES: Interested persons are invited to submit written comments to Adrienne Thomas, NOAA PRA Officer, at *NOAA.PRA@noaa.gov.* Please reference OMB Control Number 0648–0283 in the subject line of your comments. Do not submit Confidential Business Information or otherwise sensitive or protected information.

FOR FURTHER INFORMATION CONTACT: Requests for additional information or specific questions related to collection activities should be directed to Jennifer Hammond, Director, NOAA Teacher at Sea Program, 200 Harry S Truman Hwy, Annapolis, MD 21401 240–628–5210, *jennifer.hammond@noaa.gov.*

SUPPLEMENTARY INFORMATION:

I. Abstract

This request is for extension of a currently approved information collection.

NOAA provides educators an opportunity to gain first-hand experience with field research activities through the Teacher at Sea Program. Through this program, educators spend up to 3 weeks at sea on a NOAA research vessel, participating in an ongoing research project with NOAA scientists. The application solicits information from interested educators including: basic personal information, teaching experience, and ideas for applying program experience in their classrooms, plus two recommendation and a NOAA Health Services Questionnaire required of anyone selected to participate in the program.

Once educators are selected and participate on a cruise, they write a report detailing the events of the cruise and ideas for classroom activities based on what they learned while at sea. These materials are then made available to other educators so they may benefit from the experience, without actually going out to sea by themselves. This collection supports NOAA's mission by providing educators an opportunity to gain first-hand experience with field research activities through the Teacher at Sea Program.

NOAA does not collect information from this universe of respondents for any other purpose than to determine which educators will participate in the NOAA Teacher at Sea Program.

II. Method of Collection

Internet via Teacher at Sea website form.

III. Data

OMB Control Number: 0648–0283.

Form Number(s): NOAA Form 57–10–01.

Type of Review: Regular submission.

Affected Public: Individuals.

Estimated Number of Respondents: 375.

Estimated Time per Response: Application: 1 hr. 15 min; Recommendations: 15 minutes; NOAA Health Services Questionnaire and Tuberculosis Screening Document: 45 minutes; Follow-up Report: 2 hours.

Estimated Total Annual Burden Hours: 781.

Estimated Total Annual Cost to Public: $0.

Respondent's Obligation: Voluntary.

Legal Authority: National Marine Sanctuaries Act.

IV. Request for Comments

We are soliciting public comments to permit the Department/Bureau to: (a) Evaluate whether the proposed information collection is necessary for the proper functions of the Department, including whether the information will have practical utility; (b) Evaluate the accuracy of our estimate of the time and cost burden for this proposed collection, including the validity of the methodology and assumptions used; (c) Evaluate ways to enhance the quality, utility, and clarity of the information to be collected; and (d) Minimize the reporting burden on those who are to respond, including the use of automated collection techniques or other forms of information technology.

Comments that you submit in response to this notice are a matter of public record. We will include or summarize each comment in our request to OMB to approve this ICR. Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you may ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Sheleen Dumas,

Department PRA Clearance Officer, Office of the Chief Information Officer, Commerce Department.

[FR Doc. 2022–24092 Filed 11–3–22; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648–XC355]

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Marine Site Characterization Surveys in the New York Bight and Central Atlantic

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

ACTION: Notice; proposed incidental harassment authorization; request for

comments on proposed authorization and possible renewal.

SUMMARY: NMFS has received a request from TerraSond Limited (TerraSond) for authorization to take marine mammals incidental to marine site characterization surveys in the New York Bight (off of New York and New Jersey) and in the Central Atlantic (from Delaware to North Carolina). Pursuant to the Marine Mammal Protection Act (MMPA), NMFS is requesting comments on its proposal to issue an incidental harassment authorization (IHA) to incidentally take marine mammals during the specified activities. NMFS is also requesting comments on a possible one-time, 1 year renewal that could be issued under certain circumstances and if all requirements are met, as described in Request for Public Comments at the end of this notice. NMFS will consider public comments prior to making any final decision on the issuance of the requested MMPA authorization and agency responses will be summarized in the final notice of our decision.

DATES: Comments and information must be received no later than December 5, 2022.

ADDRESSES: Comments should be addressed to Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service and should be submitted via email to *ITP.Laws@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, 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 *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: Ben Laws, Office of Protected Resources, NMFS, (301) 427–8401. Electronic copies of the application and supporting documents, as well as a list of the references cited in this document, may be obtained online 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 proposed or, if the taking is limited to harassment, a notice of a proposed IHA is 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 the 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 the takings are set forth. The definitions of all applicable MMPA statutory terms cited above are included in the relevant sections below.

On August 1, 2022, NMFS announced proposed changes to the existing North Atlantic right whale vessel speed regulations to further reduce the likelihood of mortalities and serious injuries to endangered right whales from vessel collisions, which are a leading cause of the species' decline and a primary factor in an ongoing Unusual Mortality Event (87 FR 46921). Should a final vessel speed rule be issued and become effective during the effective period of this IHA (or any other MMPA incidental take authorization), the authorization holder would be required to comply with any and all applicable requirements contained within the final rule. Specifically, where measures in any final vessel speed rule are more protective or restrictive than those in this or any other MMPA authorization, authorization holders would be required to comply with the requirements of the rule. Alternatively, where measures in this or any other MMPA authorization are more restrictive or protective than those in any final vessel speed rule, the measures in the MMPA authorization would remain in place. These changes would become effective immediately upon the effective date of any final vessel speed rule and would not require any further action on NMFS' part.

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 review our proposed action (*i.e.,* the issuance of an IHA) with respect to potential impacts on the human environment.

This action is consistent with categories of activities identified in Categorical Shutdown B4 (IHAs with no anticipated serious injury or mortality) of the Companion Manual for NOAA Administrative Order 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 Shutdown. Accordingly, NMFS has preliminarily determined that the issuance of the proposed IHA qualifies to be categorically excluded from further NEPA review.

We will review all comments submitted in response to this notice prior to concluding our NEPA process or making a final decision on the IHA request.

Summary of Request

On May 19, 2022, NMFS received a request from TerraSond for an IHA to take marine mammals incidental to site characterization surveys in the New York Bight. Following NMFS' review of the application, TerraSond submitted a revised version on July 11, 2022, adding additional planned survey activity in the Central Atlantic. This revised application was deemed adequate and complete. TerraSond's request is for take of 21 species of marine mammals, by Level B harassment only. Neither TerraSond nor NMFS expect serious injury or mortality to result from this activity and, therefore, an IHA is appropriate.

Description of Proposed Activity

Overview

TerraSond proposes to conduct marine site characterization surveys, including high-resolution geophysical (HRG) surveys, off the coasts of New Jersey and New York (New York Bight)

and from Delaware to North Carolina (Central Atlantic). The former portion of survey effort would be conducted on Bureau of Ocean Energy Management (BOEM) Lease Areas OCS–A 0539, 0541, and 0542, while the latter portion of survey effort would be conducted in continental shelf waters of BOEM's Central Atlantic Call Area. The planned survey effort would be conducted in support of wind energy development.

The planned marine site characterization survey effort is designed to obtain data sufficient to meet BOEM guidelines for providing geophysical, geotechnical, and geohazard information for site assessment plan surveys and/or construction and operations plan development. The objective of the surveys is to acquire data on bathymetry, seafloor morphology, subsurface geology, environmental/biological sites, seafloor obstructions, soil conditions, and locations of any man-made, historical or archaeological resources within the respective survey areas. Underwater sound resulting from TerraSond's proposed site characterization survey activities, specifically HRG surveys, has the potential to result in incidental take of marine mammals in the form of Level B behavioral harassment.

Dates and Duration

The estimated duration of Central Atlantic HRG survey activity is expected to include a maximum of 1,052 survey days (minimum 661 survey days, depending on final survey plan) over the course of the 1 year period of effectiveness for the proposed IHA, with a ''survey day'' defined as a 24-hour (hr) activity period in which active acoustic sound sources are used. The estimated duration of New York Bight survey activity is expected to include 385 survey days. Therefore, the total survey days would range from 1,046 to a maximum of 1,437. For both components of the activity, survey activities are anticipated to occur over a minimum of 6–8 months using multiple vessels concurrently, and likely throughout most of a year. TerraSond proposes to start survey activity as soon as possible upon issuance of an IHA, if appropriate. The IHA would be effective for one year from the date of issuance.

Specific Geographic Region

The proposed survey activities will occur within the aforementioned BOEM Central Atlantic Call Area and within BOEM's Lease Areas OCS–A 0539, 0541, and 0542 in the New York Bight. Please see Figures 1 and 2 below or, for color versions, see the same figures in TerraSond's application. The Central Atlantic survey area comprises approximately 11,500 square kilometers (km^2), covering water depths from 20–60 meters (m), and the New York Bight survey area comprises approximately 1,171 km^2, covering water depths from 30–65 m.

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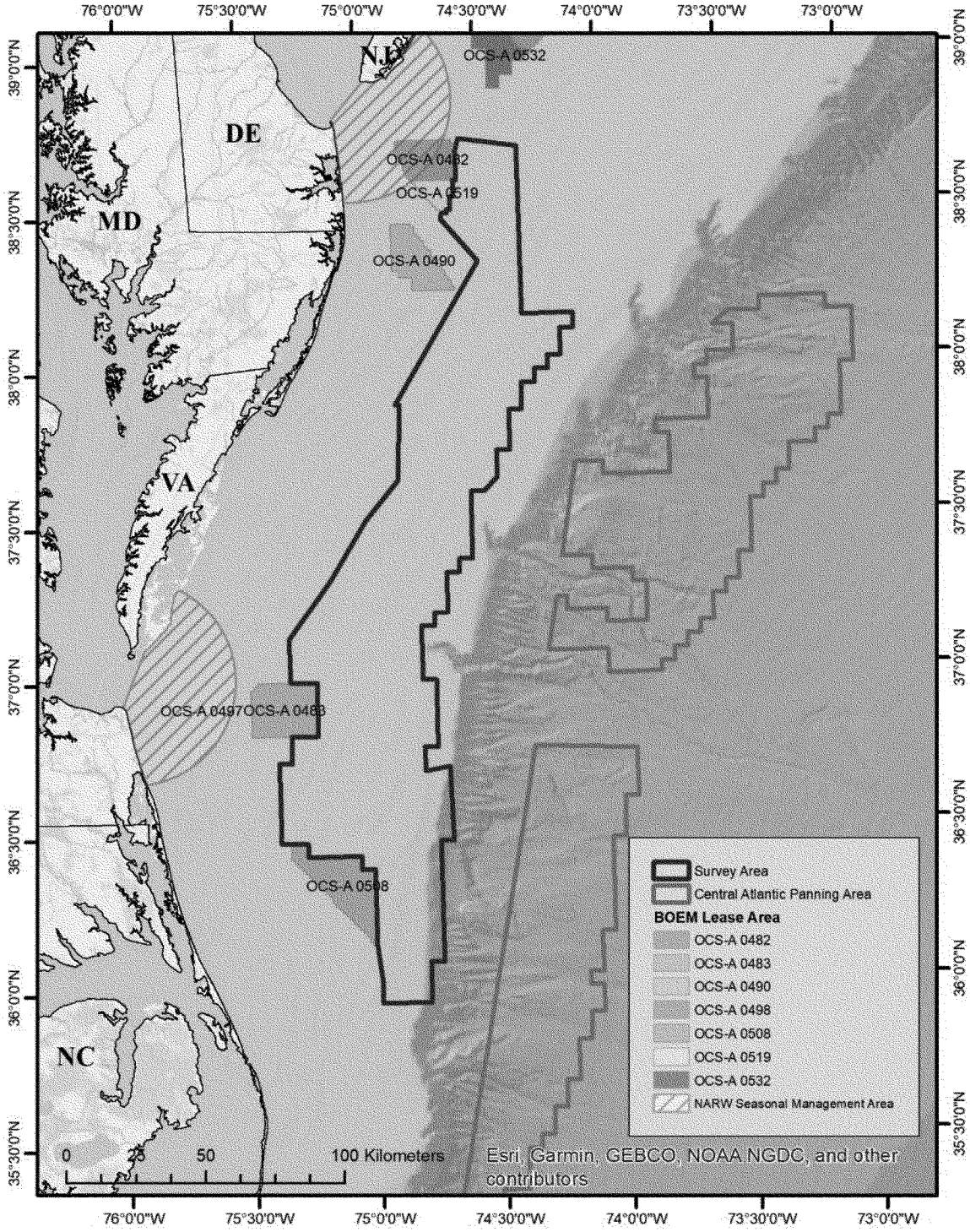

Figure 1—Central Atlantic Site Characterization Survey Location

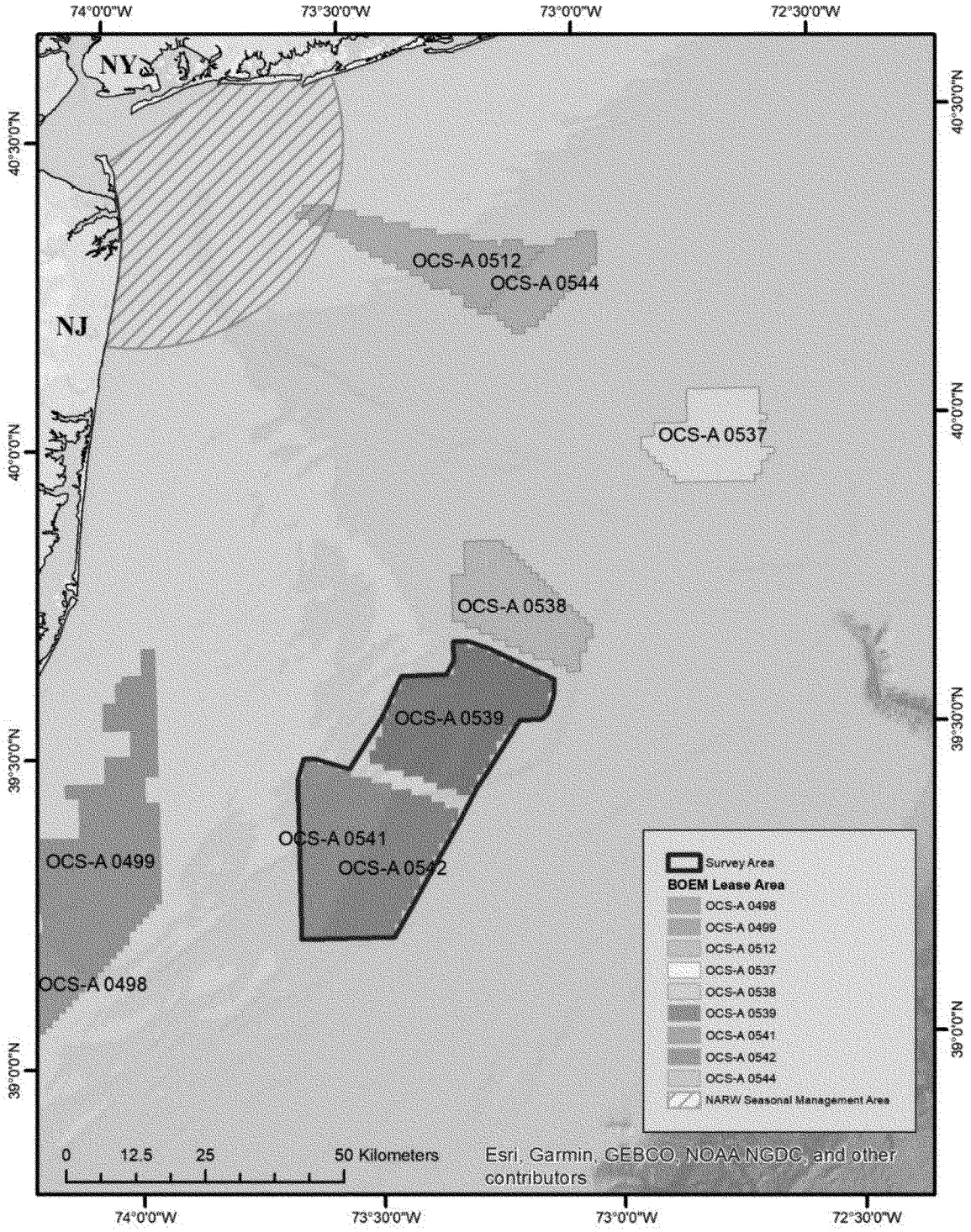

Figure 2—New York Bight Site Characterization Survey Location

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Detailed Description of Specific Activity

TerraSond proposes to conduct HRG survey operations, including multibeam depth sounding, seafloor imaging, and shallow and medium penetration sub-bottom profiling. The HRG surveys may be conducted using any or all of the following equipment types: side scan sonar, multibeam echosounder, gradiometers, parametric sub-bottom profiler, or sparkers. TerraSond assumes that HRG survey operations would be conducted 24 hours per day, with an assumed daily survey distance of 100 km. This average distance per day was calculated by TerraSond from the maximum achievable survey distance assuming 24-hour survey operations and an average vessel speed of 3.5 knots (6.5 km/hour) and then reducing from there based on prior experience to account for expected downtime related to weather,

equipment malfunction, and other factors.

Both activity components (Central Atlantic and New York Bight) would also include geotechnical sampling activities, in addition to HRG survey activities. Geotechnical sampling activities, including use of vibracores and seabed core penetration tests, would occur during the same period as the HRG survey activities, and may entail use of additional survey vessels and/or take place from the same vessels used for HRG survey activities. NMFS does not expect geotechnical sampling activities to present reasonably anticipated risk of causing incidental take of marine mammals, and these activities are not discussed further in this notice.

The only acoustic source planned for use during HRG survey activities proposed by TerraSond with expected potential to cause incidental take of marine mammals is the sparker. Sparkers are medium penetration, impulsive sources used to map deeper subsurface stratigraphy, and which may be operated with different numbers of electrode tips to allow tuning of the acoustic waveform for specific applications. Sparkers create omnidirectional acoustic pulses from 50 Hz to 4 kHz, and are typically towed behind the vessel. The sparker system planned for use is the Applied Acoustics Dura-Spark UHRS 400 + 400 (electrode tips), which is essentially two of the same Applied Acoustics Dura-Spark sources stacked on top of each other creating two ''decks'' to the sparker. However, the decks will not be discharged simultaneously, but will be used in an alternating ''flip-flop'' pattern (as discussed below). Thus, for all source configurations below, the maximum power expected when discharging the sparker source (single deck) will be 800 Joules (J). Crocker and Fratantonio (2016) measured the Applied Acoustics Dura-Spark, but did not provide data for an energy setting near 800 J (for a 400-tip configuration, Crocker and Fratantonio (2016) provide measurements at 500 and 2,000 J). Therefore, TerraSond proposes to use a similar alternative system, which was measured with an input voltage of 750 J, as a surrogate. NMFS concurs with this selection, which is described in Table 1.

TABLE 1—SUMMARY OF REPRESENTATIVE HRG EQUIPMENT

Equipment	Operating frequency (kHz)	SL_{rms} (dB re 1 μPa m)	$SL_{0\text{-}pk}$ (dB re 1 μPa m)	Pulse duration (width) (millisecond)	Repetition rate (second)	Beamwidth (degrees)
SIG ELC 820 sparker (750 J) [1]	0.3–1.2	203	213	1.1	0.25	Omni.

μPa = micropascal; dB = decibel; Omni = omnidirectional source; re = referenced to; PK = zero-to-peak sound pressure level; SL = source level; SPL = root-mean-square sound pressure level.
[1] Proxy for Applied Acoustics Dura-Spark UHRS (800 J).

Operation of the following additional survey equipment types is not expected to present reasonable risk of marine mammal take, and will not be discussed further beyond the brief summaries provided below.

- Non-impulsive, parametric SBPs are used for providing high data density in sub-bottom profiles that are typically required for cable routes, very shallow water, and archaeological surveys. These sources generate short, very narrow-beam (1° to 3.5°) signals at high frequencies (generally around 85–115 kHz). The narrow beamwidth significantly reduces the potential that a marine mammal could be exposed to the signal, while the high frequency of operation means that the signal is rapidly attenuated in seawater (and cannot be heard by mysticetes). These sources are typically deployed on a pole rather than towed behind the vessel.
- Ultra-short baseline (USBL) positioning systems are used to provide high accuracy ranges by measuring the time between the acoustic pulses transmitted by the vessel transceiver and a transponder (or beacon) necessary to produce the acoustic profile. It is a two-component system with a pole-mounted transceiver and one or several transponders mounted on other survey equipment. USBLs are expected to produce extremely small acoustic propagation distances in their typical operating configuration.
- Multibeam echosounders (MBESs) are used to determine water depths and general bottom topography. The proposed MBESs all have operating frequencies greater than 180 kHz and are therefore outside the general hearing range of marine mammals.
- Side scan sonars (SSS) are used for seabed sediment classification purposes and to identify natural and man-made acoustic targets on the seafloor. The proposed SSSs all have operating frequencies greater than 180 kHz and are therefore outside the general hearing range of marine mammals.

Central Atlantic—The Central Atlantic activity component includes two different survey phases that may occur involving different survey line spacing and potential survey equipment tow configurations. There are two possible survey methods that may be used during Phase 1, which the applicant refers to as Alternative 1 and Alternative 2. Alternative 1 would involve the use of a single source vessel towing one sparker source composed of two ''decks'' of 400 electrode tips each stacked on top of each other. The two decks would be discharged in alternating fashion such that only one deck is discharged at a time. Alternative 2 would involve the use of a single source vessel towing 3 of the same sparker sources with a horizontal separation between the sources of 150 m. Alternative 1 would require acquisition along 58,607 km of trackline, while Alternative 2 would require acquisition along 19,536 km of trackline. Only one of these two methods would be used for survey acquisition. Phase 2 would involve a single vessel towing two of the same sparker sources with a horizontal separation between the sources of 30 m, and would require acquisition along 46,573 km of trackline. At an assumed 100 km per day, Phase 1 would require approximately 586 or 195 days, depending on which Alternative is ultimately used, and Phase 2 would require approximately 466 days. Therefore, the Central Atlantic portion of survey effort is expected to require either 661 or 1,052 survey days. Up to a total of four source vessels may be active concurrently to accomplish this.

New York Bight—The New York Bight activity component includes three different survey phases that may occur involving different survey line spacing and potential survey equipment tow configurations. Phase 1 involves the use of a single source vessel towing one sparker source composed of two ''decks'' of 400 electrode tips each stacked on top of each other. As discussed above, the two decks will

typically be discharged in alternating fashion such that only one deck is discharged at a time. Phases 2 and 3 would involve a single vessel towing two of the same sparker sources with a horizontal separation between the sources of 30 m. These Phases involve acquisition along 14,833, 200, and 23,311 km of trackline, respectively, requiring a total of approximately 385 days. Up to a total of three source vessels may be active concurrently to accomplish this.

Proposed mitigation, monitoring, and reporting measures are described in detail later in this document (please see Proposed Mitigation and Proposed Monitoring and Reporting).

Description of Marine Mammals in the Area of Specified Activities

Sections 3 and 4 of the application summarize available information regarding status and trends, distribution and habitat preferences, and behavior and life history of the potentially affected species. NMFS fully considered all of this information, and we refer the reader to these descriptions, incorporated here by reference, instead of reprinting the information. 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 (*https://www.fisheries.noaa.gov/find-species*).

Table 2 lists all species or stocks for which take is expected and proposed to be authorized for this activity, and summarizes information related to the population or stock, including regulatory status under the MMPA and Endangered Species Act (ESA) and potential biological removal (PBR), where known. 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 serious injury or mortality is expected to occur, PBR and annual serious injury and mortality from anthropogenic sources are included here as gross indicators of the status of the species or stocks 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 stocks managed under the MMPA in this region are assessed in NMFS' U.S. Atlantic and Gulf of Mexico SARs. All values presented in Table 2 are the most recent available at the time of publication (2021 SARs) and are available online at: *www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments.*

TABLE 2—SPECIES LIKELY IMPACTED BY THE SPECIFIED ACTIVITIES

Common name	Scientific name	Stock	ESA/MMPA status; strategic (Y/N) [1]	Stock abundance (CV, N_{min}, most recent abundance survey) [2]	PBR	Annual M/SI [3]
Order Artiodactyla—Infraorder Cetacea—Mysticeti (baleen whales)						
Family Balaenidae:						
North Atlantic right whale.	*Eubalaena glacialis*	Western North Atlantic (WNA).	E/D; Y	368 (0; 364; 2019) [5]	0.7	7.7
Family Balaenopteridae (rorquals):						
Humpback whale	*Megaptera novaeangliae*	Gulf of Maine	-/-; Y	1,393 (0; 1,380; 2016)	22	12.15
Minke whale	*Balaenoptera acutorostrata*	Canadian East Coast	-/-; N	21,968 (0.31; 17,002; 2016)	170	10.6
Sei whale	*Balaenoptera borealis*	Nova Scotia	E/D; Y	6,292 (1.02; 3,098; 2016)	6.2	0.8
Fin whale	*Balaenoptera physalus*	WNA	E/D; Y	6,802 (0.24; 5,573; 2016)	11	1.8
Odontoceti (toothed whales, dolphins, and porpoises)						
Family Ziphiidae (beaked whales):						
Cuvier's beaked whale	*Ziphius cavirostris*	WNA	-; N	5,744 (0.36; 4,282; 2016)	43	0.2
Mesoplodont beaked whales[6].	*Mesoplodon* spp.	WNA	-; N	10,107 (0.27; 8,085; 2016)	81	0.4
Family Physeteridae:						
Sperm whale	*Physeter macrocephalus*	North Atlantic	E/D; Y	4,349 (0.28; 3,451; 2016)	3.9	0
Family Delphinidae:						
Rough-toothed dolphin	*Steno bredanensis*	WNA	-; N	136 (1.0; 67; 2016)	0.7	0
Bottlenose dolphin	*Tursiops truncatus*	WNA Offshore	-/-; N	62,851 (0.23; 51,914; 2016)	519	28
WNA Northern Migratory Coastal.	-/D;Y	6,639 (0.41, 4,759, 2016)	48	12.2–21.5.		
Atlantic spotted dolphin	*Stenella frontalis*	WNA	-/-; N	39,921 (0.27; 32,032; 2016)	320	0
Common dolphin	*Delphinus delphis*	WNA	-/-; N	172,974 (0.21; 145,216; 2016).	1,452	390
Atlantic white-sided dolphin.	*Lagenorhynchus acutus*	WNA	-/-; N	93,233 (0.71; 54,443; 2016)	544	27
Risso's dolphin	*Grampus griseus*	WNA	-/-; N	35,215 (0.19; 30,051; 2016)	301	34
Short finned pilot whale	*Globicephala macrorhynchus.*	WNA	-/-; N	28,924 (0.24; 23,637; 2016)	236	136
Long-finned pilot whale	*G. melas*	WNA	-/-; N	39,215 (0.30; 30,627; 2016)	306	9
Family Phocoenidae (porpoises):						
Harbor porpoise	*Phocoena phocoena*	Gulf of Maine/Bay of Fundy	-/-; N	95,543 (0.31; 74,034; 2016)	851	164

TABLE 2—SPECIES LIKELY IMPACTED BY THE SPECIFIED ACTIVITIES—Continued

Common name	Scientific name	Stock	ESA/ MMPA status; strategic (Y/N) [1]	Stock abundance (CV, N_{min}, most recent abundance survey) [2]	PBR	Annual M/SI [3]
Order Carnivora—Pinnipedia						
Family Phocidae (earless seals):						
Gray seal [4]	*Halichoerus grypus*	WNA	-/-; N	27,300 (0.22; 22,785, 2016)	1,458	4,452
Harbor seal	*Phoca vitulina*	WNA	-/-; N	61,336 (0.08; 57,637, 2018)	1,729	339

[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 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] NMFS marine mammal stock assessment reports online at: *www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments.* CV is coefficient of variation; Nmin is the minimum estimate of stock abundance. In some cases, CV is not applicable.

[3] These values, found in NMFS' SARs, represent annual levels of human-caused mortality plus serious injury from all sources combined (*e.g.,* commercial fisheries, ship strike).

[4] NMFS' stock abundance estimate (and associated PBR value) applies to U.S. population only. Total stock abundance (including animals in Canada) is approximately 451,600. The annual M/SI value given is for the total stock.

[5] The draft 2022 SARs have yet to be released; however, NMFS has updated its species web page to recognize the population estimate for NARWs is now below 350 animals (*www.fisheries.noaa.gov/species/north-atlantic-right-whale*).

[6] Mesoplodont beaked whales in the U.S. Atlantic include the Gervais beaked whale (*M. europaeus*), Blainville's beaked whale (*M. densirostris*), Sowerby's beaked whale (*M. bidens*), and True's beaked whale (*M. mirus*). These species are difficult to identify to the species level at sea; therefore, much of the available characterization for beaked whales is to genus level only and the species are managed together as a stock.

As indicated above, all 22 species (with 20 managed stocks) in Table 2 temporally and spatially co-occur with the activity to the degree that take is reasonably likely to occur. Although other species have been documented in the area, the temporal and/or spatial occurrence of these species is such that take is not expected to occur and they are not analyzed further. In addition to what is included in Sections 3 and 4 of the application, the SARs, and NMFS' website, further detail informing the baseline for select species (*i.e.,* information regarding current Unusual Mortality Events (UME) and important habitat areas) is provided below.

North Atlantic Right Whale

Since 2010, the North Atlantic right whale population has been in decline (Pace *et al.,* 2017), with a 40 percent decrease in calving rate (Kraus *et al.,* 2016). In 2018, no new North Atlantic right whale calves were documented in their calving grounds; this represented the first time since annual NOAA aerial surveys began in 1989 that no new right whale calves were observed. Calf numbers have increased since 2018, with twenty right whale calves documented in 2021 and fifteen in 2022. As described in Table 2, the current SAR population estimate for North Atlantic right whales is 368; however, NMFS has updated its species web page to recognize the population estimate for NARWs is below 350 animals (*www.fisheries.noaa.gov/species/north-atlantic-right-whale*).

Elevated North Atlantic right whale mortalities have occurred since June 7, 2017, along the U.S. and Canadian coast. This event has been declared an Unusual Mortality Event (UME), with human interactions, including entanglement in fixed fishing gear and vessel strikes, implicated in at least 31 of the mortalities or serious injuries thus far. As of October 20, 2022, a total of 91 confirmed cases of mortality, serious injury, or morbidity (sublethal injury or illness) have been documented. The preliminary cause of most of these cases is from rope entanglements or vessel strikes. More information is available online at: *www.fisheries.noaa.gov/national/marine-life-distress/2017-2022-north-atlantic-right-whale-unusual-mortality-event.*

The proposed survey area is part of a migratory corridor Biologically Important Area (BIA) for North Atlantic right whales (effective March-April and November-December) that extends from Massachusetts to Florida (LeBrecque *et al.,* 2015). The migratory corridor covers the survey area, extending from the coast to beyond the shelf break. This important migratory area is approximately 269,488 km² in size (compared with the approximately 12,671 km² of total planned survey area) and is comprised of the waters of the continental shelf offshore the East Coast of the United States, extending from Florida through Massachusetts. NMFS does not expect that the potential acoustic effects of the planned survey activity are likely to meaningfully impact North Atlantic right whale migratory behavior through this corridor.

Humpback Whale

NMFS recently evaluated the status of the species, and on September 8, 2016, NMFS divided the species into 14 distinct population segments (DPS), removed the species-level listing, and in its place listed four DPSs as endangered and one DPS as threatened (81 FR 62260, September 8, 2016). The remaining nine DPSs were not listed. The West Indies DPS, which is not listed under the ESA, is the only DPS of humpback whale that is expected to occur in the survey area. Bettridge *et al.* (2015) estimated the size of this population at 12,312 (95 percent CI 8,688–15,954) whales in 2004–05, which is consistent with previous population estimates of approximately 10,000–11,000 whales (Stevick *et al.,* 2003; Smith *et al.,* 1999) and the increasing trend for the West Indies DPS (Bettridge *et al.,* 2015). Whales occurring in the survey area are considered to be from the West Indies DPS, but are not necessarily from the Gulf of Maine feeding population managed as a stock by NMFS.

Since January 2016, elevated humpback whale mortalities have occurred along the Atlantic coast from Maine to Florida. Partial or full necropsy examinations have been conducted on approximately half of the 161 known cases to date. Of the whales examined, about 50 percent had evidence of human interaction, either ship strike or entanglement. While a portion of the whales have shown evidence of pre-mortem vessel strike, this finding is not consistent across all whales examined and more research is needed. NOAA is consulting with researchers that are conducting studies on the humpback whale populations, and these efforts may provide information on changes in whale distribution and habitat use that could

provide additional insight into how these vessel interactions occurred. More information is available at: *www.fisheries.noaa.gov/national/marine-life-distress/2016-2022-humpback-whale-unusual-mortality-event-along-atlantic-coast.*

Minke Whale

Since January 2017, elevated minke whale mortalities have occurred along the Atlantic coast from Maine through South Carolina, with a total of 123 strandings to date. This event has been declared a UME. Full or partial necropsy examinations were conducted on more than 60 percent of the whales. Preliminary findings in several of the whales have shown evidence of human interactions or infectious disease, but these findings are not consistent across all of the whales examined, so more research is needed. More information is available at: *www.fisheries.noaa.gov/national/marine-life-distress/2017-2022-minke-whale-unusual-mortality-event-along-atlantic-coast.*

Seals

Since June 2022, elevated numbers of harbor seal and gray seal mortalities have occurred across the southern and central coast of Maine. This event has been declared a UME. Preliminary testing of samples has found some harbor and gray seals positive for highly pathogenic avian influenza.

The above event was preceded by a different UME occurring between 2018–2020 (closure of the 2018–2020 UME is pending). Beginning in July 2018, elevated numbers of harbor seal and gray seal mortalities occurred across Maine, New Hampshire and Massachusetts. Additionally, stranded seals have shown clinical signs as far south as Virginia, although not in elevated numbers, therefore the UME investigation encompassed all seal strandings from Maine to Virginia. A total of 3,152 reported strandings (of all species) had occurred from July 1, 2018, through March 13, 2020. Full or partial necropsy examinations have been conducted on some of the seals and samples have been collected for testing. Based on tests conducted thus far, the main pathogen found in the seals is phocine distemper virus. NMFS is performing additional testing to identify any other factors that may be involved in this UME, which is pending closure. Information on this UME is available online at: *www.fisheries.noaa.gov/new-england-mid-atlantic/marine-life-distress/2018–2020-pinniped-unusual-mortality-event-along.*

Marine Mammal Hearing

Hearing is the most important sensory modality for marine mammals underwater, and exposure to anthropogenic sound can have deleterious effects. To appropriately assess the potential effects of exposure to sound, it is necessary to understand the frequency ranges marine mammals are able to hear. Not all marine mammal species have equal hearing capabilities (*e.g.,* Richardson *et al.,* 1995; Wartzok and Ketten, 1999; Au and Hastings, 2008). To reflect this, Southall *et al.* (2007, 2019) recommended that marine mammals be divided into hearing groups based on directly measured (behavioral or auditory evoked potential techniques) or estimated hearing ranges (behavioral response data, anatomical modeling, etc.). Note that no direct measurements of hearing ability have been successfully completed for mysticetes (*i.e.,* low-frequency cetaceans). Subsequently, NMFS (2018) described generalized hearing ranges for these marine mammal hearing groups. Generalized hearing ranges were chosen based on the approximately 65 decibel (dB) threshold from the normalized composite audiograms, with the exception for lower limits for low-frequency cetaceans where the lower bound was deemed to be biologically implausible and the lower bound from Southall *et al.* (2007) retained. Marine mammal hearing groups and their associated hearing ranges are provided in Table 3.

TABLE 3—MARINE MAMMAL HEARING GROUPS

[NMFS, 2018]

Hearing group	Generalized hearing range *
Low-frequency (LF) cetaceans (baleen whales)	7 Hz to 35 kHz.
Mid-frequency (MF) cetaceans (dolphins, toothed whales, beaked whales, bottlenose whales)	150 Hz to 160 kHz.
High-frequency (HF) cetaceans (true porpoises, *Kogia,* river dolphins, Cephalorhynchid, *Lagenorhynchus cruciger* & *L. australis*).	275 Hz to 160 kHz.
Phocid pinnipeds (PW) (underwater) (true seals)	50 Hz to 86 kHz.
Otariid pinnipeds (OW) (underwater) (sea lions and fur seals)	60 Hz to 39 kHz.

* Represents the generalized hearing range for the entire group as a composite (*i.e.,* all species within the group), where individual species' hearing ranges are typically not as broad. Generalized hearing range chosen based on ~65 dB threshold from normalized composite audiogram, with the exception for lower limits for LF cetaceans (Southall *et al.* 2007) and PW pinniped (approximation).

The pinniped functional hearing group was modified from Southall *et al.* (2007) on the basis of data indicating that phocid species have consistently demonstrated an extended frequency range of hearing compared to otariids, especially in the higher frequency range (Hemilä *et al.,* 2006; Kastelein *et al.,* 2009; Reichmuth and Holt, 2013).

For more detail concerning these groups and associated frequency ranges, please see NMFS (2018) for a review of available information.

Potential Effects of Specified Activities on Marine Mammals and Their Habitat

This section provides a discussion of the ways in which components of the specified activity may impact marine mammals and their habitat. Detailed descriptions of the potential effects of similar specified activities have been provided in other recent **Federal Register** notices, including for survey activities using the same methodology, over a similar amount of time, and occurring in the mid-Atlantic region, including the New York Bight and Central Atlantic areas (*e.g.,* 85 FR 36537, June 17, 2020; 85 FR 37848, June 24, 2020; 85 FR 48179, August 10, 2020; 87 FR 38067, June 27, 2022). No significant new information is available, and we refer the reader to these documents rather than repeating the details here. The Estimated Take section later in this document includes a quantitative analysis of the number of individuals that are expected to be taken by this activity. The Negligible Impact Analysis and Determination section considers the content of this section, the Estimated Take section, and the Proposed Mitigation section, to draw conclusions regarding the likely impacts of these activities on the reproductive success or

survivorship of individuals and whether those impacts are reasonably expected to, or reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival.

Summary on Specific Potential Effects of Acoustic Sound Sources

Underwater sound from active acoustic sources can include one or more of the following: temporary or permanent hearing impairment, non-auditory physical or physiological effects, behavioral disturbance, stress, and masking. The degree of effect is intrinsically related to the signal characteristics, received level, distance from the source, and duration of the sound exposure. Marine mammals exposed to high-intensity sound, or to lower-intensity sound for prolonged periods, can experience hearing threshold shift (TS), which is the loss of hearing sensitivity at certain frequency ranges (Finneran, 2015). TS can be permanent (PTS), in which case the loss of hearing sensitivity is not fully recoverable, or temporary (TTS), in which case the animal's hearing threshold would recover over time (Southall *et al.,* 2007).

Animals in the vicinity of TerraSond's proposed HRG survey activity are unlikely to incur even TTS due to the characteristics of the sound sources, which include relatively low source levels and generally very short pulses and potential duration of exposure. These characteristics mean that instantaneous exposure is unlikely to cause TTS, as it is unlikely that exposure would occur close enough to the vessel for received levels to exceed peak pressure TTS criteria, and that the cumulative duration of exposure would be insufficient to exceed cumulative sound exposure level (SEL) criteria. Even for high-frequency cetacean species (*e.g.,* harbor porpoises), which have the greatest sensitivity to potential TTS, individuals would have to make a very close approach and also remain very close to vessels operating these sources in order to receive multiple exposures at relatively high levels, as would be necessary to cause TTS. Intermittent exposures—as would occur due to the brief, transient signals produced by these sources—require a higher cumulative SEL to induce TTS than would continuous exposures of the same duration (*i.e.,* intermittent exposure results in lower levels of TTS). Moreover, most marine mammals would more likely avoid a loud sound source rather than swim in such close proximity as to result in TTS. Kremser *et al.* (2005) noted that the probability of a cetacean swimming through the area of exposure when a sub-bottom profiler emits a pulse is small—because if the animal was in the area, it would have to pass the transducer at close range in order to be subjected to sound levels that could cause TTS and would likely exhibit avoidance behavior to the area near the transducer rather than swim through at such a close range.

Behavioral disturbance may include a variety of effects, including subtle changes in behavior (*e.g.,* minor or brief avoidance of an area or changes in vocalizations), more conspicuous changes in similar behavioral activities, and more sustained and/or potentially severe reactions, such as displacement from or abandonment of high-quality habitat. Behavioral responses to sound are highly variable and context-specific and any reactions depend on numerous intrinsic and extrinsic factors (*e.g.,* species, state of maturity, experience, current activity, reproductive state, auditory sensitivity, time of day), as well as the interplay between factors. Available studies show wide variation in response to underwater sound; therefore, it is difficult to predict specifically how any given sound in a particular instance might affect marine mammals perceiving the signal.

In addition, sound can disrupt behavior through masking, or interfering with, an animal's ability to detect, recognize, or discriminate between acoustic signals of interest (*e.g.,* those used for intraspecific communication and social interactions, prey detection, predator avoidance, navigation). Masking occurs when the receipt of a sound is interfered with by another coincident sound at similar frequencies and at similar or higher intensity, and may occur whether the sound is natural (*e.g.,* snapping shrimp, wind, waves, precipitation) or anthropogenic (*e.g.,* shipping, sonar, seismic exploration) in origin.

Sound may affect marine mammals through impacts on the abundance, behavior, or distribution of prey species (*e.g.,* crustaceans, cephalopods, fish, zooplankton) (*i.e.,* effects to marine mammal habitat). Prey species exposed to sound might move away from the sound source, experience TTS, experience masking of biologically relevant sounds, or show no obvious direct effects. The most likely impacts (if any) for most prey species in a given area would be temporary avoidance of the area. Surveys using active acoustic sound sources move through an area relatively quickly, limiting exposure to multiple pulses. In all cases, sound levels would return to ambient once a survey ends and the noise source is shut down and, when exposure to sound ends, behavioral and/or physiological responses are expected to end relatively quickly. Finally, the HRG survey equipment will not have significant impacts to the seafloor and does not represent a source of pollution.

Vessel Strike

Vessel collisions with marine mammals, or ship strikes, can result in death or serious injury of the animal. These interactions are typically associated with large whales, which are less maneuverable than are smaller cetaceans or pinnipeds in relation to large vessels. Ship strikes generally involve commercial shipping vessels, which are generally larger and of which there is much more traffic in the ocean than geophysical survey vessels. Jensen and Silber (2004) summarized ship strikes of large whales worldwide from 1975–2003 and found that most collisions occurred in the open ocean and involved large vessels (*e.g.,* commercial shipping). For vessels used in geophysical survey activities, vessel speed while towing gear is typically only 4–5 knots. At these speeds, both the possibility of striking a marine mammal and the possibility of a strike resulting in serious injury or mortality are so low as to be discountable. At average transit speed for geophysical survey vessels, the probability of serious injury or mortality resulting from a strike is less than 50 percent. However, the likelihood of a strike actually happening is again low given the smaller size of these vessels and generally slower speeds. Notably in the Jensen and Silber study, no strike incidents were reported for geophysical survey vessels during that time period.

The potential effects of TerraSond's specified survey activity are expected to be limited to Level B behavioral harassment. No permanent or temporary auditory effects, or significant impacts to marine mammal habitat, including prey, are expected.

Estimated Take

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

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 sound produced by the sparker. Based primarily on the characteristics of the signals produced by the acoustic sources planned for use, Level A harassment is neither anticipated (even absent mitigation), nor proposed to be authorized. Consideration of the anticipated effectiveness of the mitigation measures (*i.e.,* Shutdown zones and shutdown measures), discussed in detail below in the Proposed Mitigation section, further strengthens the conclusion that Level A harassment is not a reasonably anticipated outcome of the survey activity. As described previously, no serious injury or mortality is anticipated or proposed to be authorized for this activity. Below we describe how the proposed take numbers are estimated.

For acoustic impacts, 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) the number of days of activities. We note that while these factors can contribute to a basic calculation to provide an initial prediction of potential 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 proposed take estimates.

Acoustic Thresholds

NMFS recommends the use of 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 or exposure context (*e.g.,* frequency, predictability, duty cycle, duration of the exposure, signal-to-noise ratio, distance to the source), the environment (*e.g.,* bathymetry, other noises in the area, predators in the area), and the receiving animals (hearing, motivation, experience, demography, life stage, depth) and can be difficult to predict (*e.g.,* Southall *et al.,* 2007, 2021, Ellison *et al.,* 2012). Based on what the available science indicates and the practical need to use a threshold based on a metric that is both predictable and measurable for most activities, NMFS typically uses a generalized acoustic threshold based on received level to estimate the onset of behavioral harassment. NMFS generally predicts that marine mammals are likely to be behaviorally harassed in a manner considered to be Level B harassment when exposed to underwater anthropogenic noise above root-mean-squared pressure received levels (RMS SPL) of 160 dB (referenced to 1 micropascal (re 1 μPa)) for impulsive (*e.g.,* seismic airguns) or intermittent (*e.g.,* scientific sonar) sources. Generally speaking, Level B harassment take estimates based on these behavioral harassment thresholds are expected to include any likely takes by TTS as, in most cases, the likelihood of TTS occurs at distances from the source less than those at which behavioral harassment is likely. TTS of a sufficient degree can manifest as behavioral harassment, as reduced hearing sensitivity and the potential reduced opportunities to detect important signals (conspecific communication, predators, prey) may result in changes in behavior patterns that would not otherwise occur.

TerraSond's proposed activity includes the use of impulsive (sparker) sources, and therefore the RMS SPL thresholds of 160 dB re 1 μPa 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 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.*

TerraSond's proposed activity includes the use of impulsive (*i.e.,* sparkers) sources. However, as discussed above, NMFS has concluded that Level A harassment is not a reasonably likely outcome for marine mammals exposed to noise through use of the sources proposed for use here, and the potential for Level A harassment is not evaluated further in this document. Please see TerraSond's application for details of a quantitative exposure analysis exercise, *i.e.,* calculated Level A harassment isopleths and estimated Level A harassment exposures. TerraSond did not request authorization of take by Level A harassment, and no take by Level A harassment is proposed for authorization by NMFS.

Ensonified Area

Here, we describe operational and environmental parameters of the activity that are used in estimating the area ensonified above the acoustic thresholds, including source levels and transmission loss coefficient.

NMFS has developed a user-friendly methodology for estimating the extent of the Level B harassment isopleths associated with relevant HRG survey equipment (NMFS, 2020). This methodology incorporates frequency and directionality (when relevant) to refine estimated ensonified zones. For acoustic sources that operate with different beamwidths, the maximum beamwidth is used, and the lowest frequency of the source is used when calculating the frequency-dependent absorption coefficient (Table 1). The sparkers proposed for use by TerraSond are omnidirectional and, therefore, beamwidth does not factor into the calculations.

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 harassment thresholds. 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 provides relevant source parameters used in the calculations. Results of modeling using the methodology described above

produced an estimated Level B harassment isopleth 141 m.

Central Atlantic—Phase 1, Alternative 1 would involve a single towed source, and daily ensonified area was calculated as follows: (100 km × 2 × 0.141 km) + (π × (0.141² km). Distributing the 58,607 km of Phase 1, Alternative 1 survey activity across the 12-month period of anticipated activity results in approximately 48.8 survey days per month, which was multiplied by the daily ensonified area to give a monthly ensonified area of 1,380 km. Phase 1, Alternative 2 would involve three towed sources with 150 m horizontal separation between them. Daily ensonified area was calculated as follows: (100 km × 2 × (0.141 km + 0.15 km) + (π × (0.291² km). Distributing the 19,536 km of Phase 1, Alternative 2 survey activity across the 12-month period of anticipated activity results in approximately 16.3 survey days per month, which was multiplied by the daily ensonified area to give a monthly ensonified area of 952 km². Because only one of the alternatives would ultimately be selected, the monthly ensonified area associated with Alternative 1 was used to estimate potential marine mammal take for Phase 1.

Phase 2 would involve two towed sources with 30 m horizontal separation between them. Daily ensonified area was calculated as follows: (100 km × 2 × (0.141 km + 0.015 km) + (π × (0.156² km). Distributing the 46,573 km of Phase 2 survey activity across the 12-month period of anticipated activity results in approximately 38.8 survey days per month, which was multiplied by the daily ensonified area to give a monthly ensonified area of 1,214 km².

New York Bight—Phase 1 would involve a single towed source, and ensonified area was calculated in the same manner as described above for Central Atlantic Phase 1, Alternative 1. Distributing the 14,833 km of Phase 1 survey activity across the 12-month period of anticipated activity results in approximately 12.4 survey days per month, which was multiplied by the daily ensonified area to give a monthly ensonified area of 349 km². Phases 2 and 3 would each use a dual source configuration with a horizontal separation distance of 30 m between the sources, and ensonified area was calculated in the same manner as described above for Central Atlantic Phase 2. For Phase 2, TerraSond assumes that there would be two days of survey activity, giving a total ensonified area of 62.6 km². Distributing the combined 23,311 km of Phase 3 survey activity across the 12-month period of anticipated activity results in approximately 19.4 survey days per month, which was multiplied by the daily ensonified area to give a monthly ensonified area of 608 km².

Marine Mammal Occurrence

In this section we provide information about the occurrence of marine mammals, including density or other relevant information that will inform the take calculations.

Habitat-based density models produced by the Duke University Marine Geospatial Ecology Laboratory (Roberts and Halpin, 2022) represent the best available information regarding marine mammal densities in the survey area. These density data incorporate aerial and shipboard line-transect survey data from NMFS and other organizations and incorporate data from numerous physiographic and dynamic oceanographic and biological covariates, and control 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, the models have been updated based on additional data as well as certain methodological improvements. More information is available online at *https://seamap.env.duke.edu/models/Duke/EC/.* Marine mammal density estimates in the survey area (animals/km²) were obtained using the most recent model results for all taxa.

In order to select a representative sample of grid cells in and near each survey area, TerraSond created a 10-km wide perimeter around each area (Figures 1 and 2) in GIS. The perimeter was then used to select grid cells in and around each area containing the monthly or annual estimates for each species. The average monthly abundance for each species in the each area was calculated as the mean value of the selected grid cells in each month. See Tables 10 and 11 in TerraSond's application for density values used in the analysis.

Density information is presented for seals generically. In order to generate species-specific density values, TerraSond multiplied seal density values by the proportion of total SAR-estimated seal abundance attributed to each species. Roberts and Halpin (2022) similarly provide generic density information for pilot whales and bottlenose dolphin. In the Central Atlantic survey area, where both species of pilot whales could be encountered, TerraSond requested that the density-based take estimate be divided equally across the two species. In the New York Bight survey area, only the long-finned pilot whale is expected to be present, and all estimated takes are attributed to that species. For bottlenose dolphin, although the northern coastal migratory stock could be present in the region, all survey effort is in sufficiently deep water (20–65 m) that we assume all potential bottlenose dolphin takes are appropriately assigned to the offshore stock.

Densities from each of the selected density blocks were averaged for each month available to provide monthly density estimates for each species (when available based on the temporal resolution of the model products), along with the average annual density. Please see Tables 7 and 8 of TerraSond's application for density values used in the exposure estimation process for the Lease Area and the potential ECRs, respectively. Note that no density estimates are available for the portion of the ECR area in Delaware Bay, so the marine mammal densities from the density models of Roberts *et al.* were assumed to apply to this area. Additional data regarding average group sizes from survey effort in the region was considered to ensure adequate take estimates are evaluated.

Take Estimation

Here we describe how the information provided above is synthesized to produce a quantitative estimate of the take that is reasonably likely to occur and proposed for authorization.

Estimates of the potential number of takes by Level B harassment were calculated by multiplying the monthly density for each species in the respective survey areas (Central Atlantic and New York Bight) by the respective monthly ensonified area for each Phase and then summing across the 12 months. TerraSond evaluated monitoring reports from the vicinity of the survey areas, finding that the common dolphin estimated take number for the New York Bight survey area may be underestimated. Based on these observational data, TerraSond assumes that 16 common dolphins may be encountered within the harassment zone on each survey data. Based on the planned 385 survey days in the New York Bight survey area, this produces an estimate of 6,160 takes. This larger value is substituted for the density-based take estimate for common dolphins. Table 4 provides information about the take estimates and take proposed for authorization.

TABLE 4—ESTIMATED TAKE NUMBERS AND TOTAL TAKE PROPOSED FOR AUTHORIZATION

Species	Estimated take—Central Atlantic	Estimated take—New York Bight	Proposed take authorization	Percent abundance			
				Phase 1	Phase 2	Phase 1	Phase 2
North Atlantic right whale	5.1	4.5	1.9	0.0	3.3	15	4.1
Humpback whale	21.6	19.0	4.0	0.1	7.0	52	3.7
Minke whale	30.7	27.0	14.7	0.2	25.5	98	0.4
Sei whale	4.9	4.3	1.2	0.0	2.2	13	0.2
Fin whale	44.1	38.8	8.0	0.1	14.0	105	1.5
Cuvier's beaked whale	29.1	25.6	0	0	0	55	1.0
Mesoplodont beaked whales	5.7	5.0	0	0	0	11	0.1
Sperm whale	16.0	14.1	0.6	0	1.1	32	0.7
Rough-toothed dolphin[1]	2.0	1.6	0	0	0	10	7.4
Bottlenose dolphin	1,427.7	1,255.6	116.6	1.8	202.8	3,005	4.8
Atlantic spotted dolphin	605.6	532.6	20.9	0.3	36.3	1,196	3.0
Common dolphin[2]	5,097.1	4,482.4	597.5	8.9	1,039.1	11,225	6.5
Atlantic white-sided dolphin	117.6	103.4	45.1	0.7	78.4	345	0.4
Risso's dolphin	171.9	151.2	5.7	0.1	9.9	339	1.0
Short-finned pilot whale	238.8	210.1	0	0	0	449	1.6
Long-finned pilot whale	238.9	210.0	11.1	0.2	19.3	480	1.2
Harbor porpoise	124.0	109.1	102.1	1.5	177.6	514	0.5
Gray seal	439.7	386.7	60.6	0.9	105.4	993	0.2
Harbor seal	237.5	208.9	136.2	2.0	236.9	822	1.3

[1] For rough-toothed dolphin, we propose to authorize take in the form of one encounter with a group of average size, as assumed average group size (10) is larger than the total estimated take number (4). Mean group sizes were calculated from regional sightings data (Whitt *et al.,* 2015; Kraus *et al.,* 2016; Palka *et al.,* 2017).

[2] For common dolphin, estimated take numbers for the New York Bight survey area were calculated based on an assumption (based on monitoring data from the area) that 16 dolphins per day could be encountered within the harassment zone. These values were larger than and used instead of the results of density-based calculations.

Proposed 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 the activity, and other means of effecting the least practicable impact on the species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of the 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 the 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, NMFS considers 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, as well as subsistence uses. 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, and impact on operations.

NMFS proposes that the following mitigation measures be implemented during TerraSond's planned marine site characterization surveys. Pursuant to section 7 of the ESA, TerraSond would also be required to adhere to relevant Project Design Criteria (PDC) of the NMFS' Greater Atlantic Regional Fisheries Office (GARFO) programmatic consultation (specifically PDCs 4, 5, and 7) regarding geophysical surveys along the U.S. Atlantic coast (*www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-take-reporting-programmatics-greater-atlantic#offshore-wind-site-assessment-and-site-characterization-activities-programmatic-consultation*).

Visual Monitoring and Shutdown Zones

During survey operations (*e.g.,* any day on which use of the sparker source is planned to occur, and whenever the sparker source is in the water, whether activated or not), a minimum of one visual marine mammal observer (PSO) must be on duty on each source vessel and conducting visual observations at all times during daylight hours (*i.e.,* from 30 minutes prior to sunrise through 30 minutes following sunset). A minimum of two PSOs must be on duty on each source vessel during nighttime hours. Visual monitoring must begin no less than 30 minutes prior to ramp-up (described below) and must continue until one hour after use of the sparker source ceases.

Visual PSOs shall coordinate to ensure 360° visual coverage around the vessel from the most appropriate observation posts and shall conduct visual observations using binoculars and the naked eye while free from distractions and in a consistent, systematic, and diligent manner. PSOs shall establish and monitor applicable shutdown zones (see below). These zones shall be based upon the radial distance from the sparker source (rather than being based around the vessel itself).

Two shutdown zones are defined, depending on the species and context. Here, an extended shutdown zone encompassing the area at and below the sea surface out to a radius of 500 meters from the sparker source (0–500 meters) is defined for North Atlantic right whales. For all other marine mammals, the shutdown zone encompasses a standard distance of 100 meters (0–100 meters). Any observations of marine mammals by crew members aboard any vessel associated with the survey shall be relayed to the PSO team.

Visual PSOs may be on watch for a maximum of four consecutive hours followed by a break of at least one hour between watches and may conduct a maximum of 12 hours of observation per 24-hour period.

Pre-Start Clearance and Ramp-Up

A ramp-up procedure, involving a gradual increase in source level output, is required at all times as part of the activation of the sparker source when technically feasible. Operators should ramp up sparkers to half power for 5 minutes and then proceed to full power. A 30-minute pre-start clearance observation period must occur prior to the start of ramp-up. The intent of pre-start clearance observation (30 minutes) is to ensure no marine mammals are within the shutdown zones prior to the beginning of ramp-up. The intent of ramp-up is to warn marine mammals of pending operations and to allow sufficient time for those animals to leave the immediate vicinity. All operators must adhere to the following pre-start clearance and ramp-up requirements:

- The operator must notify a designated PSO of the planned start of ramp-up as agreed upon with the lead PSO; the notification time should not be less than 60 minutes prior to the planned ramp-up in order to allow the PSOs time to monitor the shutdown zones for 30 minutes prior to the initiation of ramp-up (pre-start clearance). During this 30 minute pre-start clearance period the entire shutdown zone must be visible, except as indicated below.
- Ramp-ups shall be scheduled so as to minimize the time spent with the source activated.
- A visual PSO conducting pre-start clearance observations must be notified again immediately prior to initiating ramp-up procedures and the operator must receive confirmation from the PSO to proceed.
- Any PSO on duty has the authority to delay the start of survey operations if a marine mammal is detected within the applicable pre-start clearance zone.
- The operator must establish and maintain clear lines of communication directly between PSOs on duty and crew controlling the acoustic source to ensure that mitigation commands are conveyed swiftly while allowing PSOs to maintain watch.
- The pre-start clearance requirement is waived for small delphinids and pinnipeds. Detection of a small delphinid (individual belonging to the following genera of the Family Delphinidae: *Steno, Delphinus, Lagenorhynchus, Stenella,* and *Tursiops*) or pinniped within the shutdown zone does not preclude beginning of ramp-up, unless the PSO confirms the individual to be of a genus other than those listed, in which case normal pre-clearance requirements apply.
- 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 the pre-clearance requirement is waived), PSOs may use best professional judgment in making the decision to call for a shutdown.
- Ramp-up may not be initiated if any marine mammal to which the pre-start clearance requirement applies is within the shutdown zone. If a marine mammal is observed within the shutdown zone during the 30 minute pre-start clearance period, ramp-up may not begin until the animal(s) has been observed exiting the zones or until an additional time period has elapsed with no further sightings (30 minutes for all baleen whale species and sperm whales and 15 minutes for all other species).
- PSOs must monitor the shutdown zones 30 minutes before and during ramp-up, and ramp-up must cease and the source must be shut down upon observation of a marine mammal within the applicable shutdown zone.
- Ramp-up may occur at times of poor visibility, including nighttime, if appropriate visual monitoring has occurred with no detections of marine mammals in the 30 minutes prior to beginning ramp-up. Sparker activation may only occur at night where operational planning cannot reasonably avoid such circumstances.
- If the acoustic source is shut down for brief periods (*i.e.,* less than 30 minutes) for reasons other than implementation of prescribed mitigation (*e.g.,* mechanical difficulty), it may be activated again without ramp-up if PSOs have maintained constant visual observation and no detections of marine mammals have occurred within the applicable shutdown zone. For any longer shutdown, pre-start clearance observation and ramp-up are required.

Shutdown

All operators must adhere to the following shutdown requirements:

- Any PSO on duty has the authority to call for shutdown of the sparker source if a marine mammal is detected within the applicable shutdown zone.
- The operator must establish and maintain clear lines of communication directly between PSOs on duty and crew controlling the source to ensure that shutdown commands are conveyed swiftly while allowing PSOs to maintain watch.
- When the sparker source is active and a marine mammal appears within or enters the applicable shutdown zone, the source must be shut down. When shutdown is instructed by a PSO, the source must be immediately deactivated and any dispute resolved only following deactivation.
- The shutdown requirement is waived for small delphinids and pinnipeds. If a small delphinid (individual belonging to the following genera of the Family Delphinidae: *Steno, Delphinus, Lagenorhynchus, Stenella,* and *Tursiops*) or pinniped is visually detected within the shutdown zone, no shutdown is required unless the PSO confirms the individual to be of a genus other than those listed, in which case a shutdown is 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 or one of the species with a larger shutdown zone), PSOs may use best professional judgment in making the decision to call for a shutdown.
- Upon implementation of shutdown, the source may be reactivated after the marine mammal has been observed exiting the applicable shutdown zone or following a clearance period (30 minutes for all baleen whale species and sperm whales and 15 minutes for all other species) with no further detection of the marine mammal.

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 Level B harassment zone, shutdown would occur.

Vessel Strike Avoidance

Crew and supply vessel personnel should use an appropriate reference guide that includes identifying information on all marine mammals that may be encountered. Vessel operators must comply with the below measures except under extraordinary circumstances when the safety of the vessel or crew is in doubt or the safety of life at sea is in question. These requirements do not apply in any case where compliance would create an imminent and serious threat to a person or vessel or to the extent that a vessel is restricted in its ability to maneuver and, because of the restriction, cannot comply.

- Vessel operators and crews must maintain a vigilant watch for all marine mammals and slow down, stop their vessel, or alter course, as appropriate and regardless of vessel size, to avoid striking any marine mammal. A single marine mammal at the surface may indicate the presence of submerged animals in the vicinity of the vessel; therefore, precautionary measures

should always be exercised. A visual observer aboard the vessel must monitor a vessel strike avoidance zone around the vessel (species-specific distances detailed below). Visual observers monitoring the vessel strike avoidance zone may be third-party observers (*i.e.,* PSOs) or crew members, but crew members responsible for these duties must be provided sufficient training to (1) distinguish marine mammal from other phenomena and (2) broadly to identify a marine mammal as a right whale, other whale (defined in this context as sperm whales or baleen whales other than right whales), or other marine mammals.

- All 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. These include all Seasonal Management Areas (SMA) (when in effect), any dynamic management areas (DMA) (when in effect), and Slow Zones. See *www.fisheries.noaa.gov/national/endangered-species-conservation/reducing-ship-strikes-north-atlantic-right-whales* for specific detail regarding these areas.
- Vessel speeds must also be reduced to 10 knots or less when mother/calf pairs, pods, or large assemblages of cetaceans are observed near a vessel.
- All vessels must maintain a minimum separation distance of 500 m from right whales. If a right whale is sighted within the relevant separation distance, the vessel must steer a course away at 10 knots or less until the 500-m separation distance has been established. If a whale is observed but cannot be confirmed as a species other than a right whale, the vessel operator must assume that it is a right whale and take appropriate action.
- All vessels must maintain a minimum separation distance of 100 m from sperm whales and all other baleen whales.
- All vessels must, to the maximum extent practicable, attempt to maintain a minimum separation distance of 50 m from all other marine mammals, with an understanding that at times this may not be possible (*e.g.,* for animals that approach the vessel).
- When marine mammals are sighted while a vessel is underway, the vessel shall take action as necessary to avoid violating the relevant separation distance (*e.g.,* attempt to remain parallel to the animal's course, avoid excessive speed or abrupt changes in direction until the animal has left the area, reduce speed and shift the engine to neutral). This does not apply to any vessel towing gear or any vessel that is navigationally constrained.

Members of the PSO team will consult NMFS' North Atlantic right whale reporting system and Whale Alert, daily and as able, for the presence of North Atlantic right whales throughout survey operations, and for the establishment of DMAs and/or Slow Zones. It is TerraSond's responsibility to maintain awareness of the establishment and location of any such areas and to abide by these requirements accordingly.

Based on our evaluation of the applicant's proposed measures, as well as other measures considered by NMFS, NMFS has preliminarily determined that the proposed mitigation measures provide the means of 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.

Proposed 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 while conducting the activities. 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 activity; 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); and,
- Mitigation and monitoring effectiveness.

TerraSond must 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 mammal and mitigation requirements (including brief alerts regarding maritime hazards), and must have successfully completed an approved PSO training course for geophysical surveys. Visual monitoring must be performed by qualified, NMFS-approved PSOs. PSO resumes must be provided to NMFS for review and approval prior to the start of survey activities.

PSO names must be provided to NMFS by the operator for review and confirmation of their approval for specific roles prior to commencement of the survey. For prospective PSOs not previously approved, or for PSOs whose approval is not current, NMFS must review and approve PSO qualifications. Resumes should include information related to relevant education, experience, and training, including dates, duration, location, and description of prior PSO experience. Resumes must be accompanied by relevant documentation of successful completion of necessary training.

NMFS may approve PSOs as conditional or unconditional. A conditionally-approved PSO may be one who is trained but has not yet attained the requisite experience. An unconditionally-approved PSO is one who has attained the necessary experience. For unconditional approval, the PSO must have a minimum of 90 days at sea performing the role during a geophysical survey, with the conclusion of the most recent relevant experience not more than 18 months previous.

At least one of the visual PSOs aboard the vessel must be unconditionally-approved. One unconditionally-approved visual PSO shall be

designated as the lead for the entire PSO team. This lead should typically be the PSO with the most experience, who would coordinate duty schedules and roles for the PSO team and serve as primary point of contact for the vessel operator. To the maximum extent practicable, the duty schedule shall be planned such that unconditionally-approved PSOs are on duty with conditionally-approved PSOs.

PSOs must successfully complete relevant training, including completion of all required coursework and passing (80 percent or greater) a written and/or oral examination developed for the training program.

PSOs must have successfully attained a bachelor's degree from an accredited college or university with a major in one of the natural sciences, a minimum of 30 semester hours or equivalent in the biological sciences, and at least one undergraduate course in math or statistics. The educational requirements may be waived if the PSO has acquired the relevant skills through alternate experience. Requests for such a waiver shall be submitted to NMFS and must include written justification. Alternate experience that may be considered includes, but is not limited to (1) secondary education and/or experience comparable to PSO duties; (2) previous work experience conducting academic, commercial, or government-sponsored marine mammal surveys; and (3) previous work experience as a PSO (PSO must be in good standing and demonstrate good performance of PSO duties).

TerraSond must work with the selected third-party PSO provider to ensure PSOs have all equipment (including backup equipment) needed to adequately perform necessary tasks, including accurate determination of distance and bearing to observed marine mammals, and to ensure that PSOs are capable of calibrating equipment as necessary for accurate distance estimates and species identification. Such equipment, at a minimum, shall include:

- At least one thermal (infrared) imagine device suited for the marine environment;
- Reticle binoculars (*e.g.,* 7 × 50) of appropriate quality (at least one per PSO, plus backups);
- Global Positioning Units (GPS) (at least one plus backups);
- Digital cameras with a telephoto lens that is at least 300-mm or equivalent on a full-frame single lens reflex (SLR) (at least one plus backups). The camera or lens should also have an image stabilization system;
- Equipment necessary for accurate measurement of distances to marine mammal;
- Compasses (at least one plus backups);
- Means of communication among vessel crew and PSOs; and
- Any other tools deemed necessary to adequately and effectively perform PSO tasks.

The equipment specified above may be provided by an individual PSO, the third-party PSO provider, or the operator, but TerraSond is responsible for ensuring PSOs have the proper equipment required to perform the duties specified in the IHA.

The PSOs will be responsible for monitoring the waters surrounding the survey vessel to the farthest extent permitted by sighting conditions, including shutdown zones, during all HRG survey operations. PSOs will visually monitor and identify marine mammals, including those approaching or entering the established shutdown zones during survey activities. It will be the responsibility of the PSO(s) on duty to communicate the presence of marine mammals as well as to communicate the action(s) that are necessary to ensure mitigation and monitoring requirements are implemented as appropriate.

PSOs must be equipped with binoculars and have the ability to estimate distance and bearing to detect marine mammals, particularly in proximity to shutdown zones. Reticulated binoculars must also be available to PSOs for use as appropriate based on conditions and visibility to support the sighting and monitoring of marine mammals. During nighttime operations, night-vision goggles with thermal clip-ons and infrared technology must be available for use. Position data would be recorded using hand-held or vessel GPS units for each sighting.

During good conditions (*e.g.,* daylight hours; Beaufort sea state (BSS) 3 or less), to the maximum extent practicable, PSOs should also conduct observations when the acoustic source is not operating for comparison of sighting rates and behavior with and without use of the active acoustic sources. Any observations of marine mammals by crew members aboard the 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 (see *Proposed Reporting Measures*). 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 behavior that occurs (*e.g.,* noted behavioral disturbances).

Proposed Reporting Measures

TerraSond shall submit a draft summary report on all activities and monitoring results within 90 days of the completion of the survey or expiration of the IHA, whichever comes sooner. The report must describe all activities conducted and sightings of marine mammals, must provide full documentation of methods, results, and interpretation pertaining to all monitoring, and must summarize the dates and locations of survey operations and all marine mammals sightings (dates, times, locations, activities, associated survey activities). The draft report shall also include geo-referenced, time-stamped vessel tracklines for all time periods during which acoustic sources were operating. Tracklines should include points recording any change in acoustic source status (*e.g.,* when the sources began operating, when they were turned off, or when they changed operational status such as from full array to single gun or vice versa). GIS files shall be provided in ESRI shapefile format and include the UTC date and time, latitude in decimal degrees, and longitude in decimal degrees. All coordinates shall be referenced to the WGS84 geographic coordinate system. In addition to the report, all raw observational data shall be made available. The report must summarize the information. A final report must be submitted within 30 days following resolution of any comments on the draft report. All draft and final marine mammal monitoring reports must be submitted to *PR.ITP.MonitoringReports@noaa.gov* and *nmfs.gar.incidental-take@noaa.gov.*

PSOs must use standardized electronic data forms to record data. PSOs shall record detailed information about any implementation of mitigation requirements, including the distance of marine mammal to the acoustic source and description of specific actions that ensued, the behavior of the animal(s), any observed changes in behavior before and after implementation of mitigation, and if shutdown was implemented, the length of time before any subsequent ramp-up of the acoustic source. If required mitigation was not implemented, PSOs should record a description of the circumstances. At a minimum, the following information must be recorded:

1. Vessel name (source vessel), vessel size and type, maximum speed capability of vessel;

2. Dates of departures and returns to port with port name;
3. PSO names and affiliations;
4. Date and participants of PSO briefings;
5. Visual monitoring equipment used;
6. PSO location on vessel and height of observation location above water surface;
7. Dates and times (Greenwich Mean Time) of survey on/off effort and times corresponding with PSO on/off effort;
8. Vessel location (decimal degrees) when survey effort begins and ends and vessel location at beginning and end of visual PSO duty shifts;
9. Vessel location at 30-second intervals if obtainable from data collection software, otherwise at practical regular interval;
10. Vessel heading and speed at beginning and end of visual PSO duty shifts and upon any change;
11. Water depth (if obtainable from data collection software);
12. Environmental conditions while on visual survey (at beginning and end of PSO shift and whenever conditions change significantly), including BSS and any other relevant weather conditions including cloud cover, fog, sun glare, and overall visibility to the horizon;
13. Factors that may contribute to impaired observations during each PSO shift change or as needed as environmental conditions change (*e.g.,* vessel traffic, equipment malfunctions); and
14. Survey activity information (and changes thereof), such as acoustic source power output while in operation, number and volume of airguns operating in an array, tow depth of an acoustic source, and any other notes of significance (*i.e.,* pre-start clearance, ramp-up, shutdown, testing, shooting, ramp-up completion, end of operations, streamers, etc.).
15. Upon visual observation of any marine mammal, the following information must be recorded:
a. Watch status (sighting made by PSO on/off effort, opportunistic, crew, alternate vessel/platform);
b. Vessel/survey activity at time of sighting (*e.g.,* deploying, recovering, testing, shooting, data acquisition, other);
c. PSO who sighted the animal;
d. Time of sighting;
e. Initial detection method;
f. Sightings cue;
g. Vessel location at time of sighting (decimal degrees);
h. Direction of vessel's travel (compass direction);
i. Speed of the vessel(s) from which the observation was made;
j. Identification of the animal (*e.g.,* genus/species, lowest possible taxonomic level or unidentified); also note the composition of the group if there is a mix of species;
k. Species reliability (an indicator of confidence in identification);
l. Estimated distance to the animal and method of estimating distance;
m. Estimated number of animals (high/low/best);
n. Estimated number of animals by cohort (adults, yearlings, juveniles, calves, group composition, etc.);
o. Description (as many distinguishing features as possible of each individual seen, including length, shape, color, pattern, scars, or markings, shape and size of dorsal fin, shape of head, and blow characteristics);
p. Detailed behavior observations (*e.g.,* number of blows/breaths, number of surfaces, breaching, spyhopping, diving, feeding, traveling; as explicit and detailed as possible; note any observed changes in behavior before and after point of closest approach);
q. Mitigation actions; description of any actions implemented in response to the sighting (*e.g.,* delays, shutdowns, ramp-up, speed or course alteration, etc.) and time and location of the action;
r. Equipment operating during sighting;
s. Animal's closest point of approach and/or closest distance from the center point of the acoustic source; and
t. Description of any actions implemented in response to the sighting (*e.g.,* delays, shutdown, ramp-up) and time and location of the action.

If a North Atlantic right whale is observed at any time by PSOs or personnel on the project vessel, during surveys or during vessel transit, TerraSond must report the sighting information to the NMFS North Atlantic Right Whale Sighting Advisory System (866–755–6622) within 2 hours of occurrence, when practicable, or no later than 24 hours after occurrence. North Atlantic right whale sightings in any location may also be reported to the U.S. Coast Guard via channel 16 and through the WhaleAlert app (*www.whalealert.org*).

In the event that personnel involved in the survey activities discover an injured or dead marine mammal, the incident must be reported to NMFS as soon as feasible by phone (866–755–6622) and by email (*nmfs.gar.stranding@noaa.gov* and *PR.ITP.MonitoringReports@noaa.gov*). The report must include the following information:
1. Time, date, and location (latitude/longitude) of the first discovery (and updated location information if known and applicable);
2. Species identification (if known) or description of the animal(s) involved;
3. Condition of the animal(s) (including carcass condition if the animal is dead);
4. Observed behaviors of the animal(s), if alive;
5. If available, photographs or video footage of the animal(s); and
6. 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, TerraSond must report the incident to NMFS by phone (866–755–6622) and by email (*nmfs.gar.stranding@noaa.gov* and *PR.ITP.MonitoringReports@noaa.gov*) as soon as feasible. The report must include the following information:
1. Time, date, and location (latitude/longitude) of the incident;
2. Species identification (if known) or description of the animal(s) involved;
3. Vessel's speed during and leading up to the incident;
4. Vessel's course/heading and what operations were being conducted (if applicable);
5. Status of all sound sources in use;
6. 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;
7. Environmental conditions (*e.g.,* wind speed and direction, Beaufort sea state, cloud cover, visibility) immediately preceding the strike;
8. Estimated size and length of animal that was struck;
9. Description of the behavior of the marine mammal immediately preceding and/or following the strike;
10. If available, description of the presence and behavior of any other marine mammals immediately preceding the strike;
11. 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
12. 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 impacts or responses (*e.g.,* intensity, duration), the context of any impacts or responses (*e.g.,* critical reproductive time or location, foraging impacts affecting energetics), 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' 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 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, the majority of our analysis applies to all the species listed in Table 2, given that the anticipated effects of this project on different marine mammal stocks are expected to be relatively similar in nature. Where there are meaningful differences between species or stocks, or groups of species, in anticipated individual responses to activities, impact of expected take on the population due to differences in population status, or impacts on habitat, they are included as a separate sub-sections. Specifically, we provide additional discussion related to North Atlantic right whale and to other species currently experiencing UMEs.

NMFS does not anticipate that serious injury or mortality would occur as a result of HRG surveys, even in the absence of mitigation, and no serious injury or mortality is proposed to be authorized. As discussed in the Potential Effects of Specified Activities on Marine Mammals and their Habitat section, non-auditory physical effects and vessel strike are not expected to occur. NMFS expects that all potential takes would be in the form of short-term Level B behavioral harassment, *e.g.,* temporary avoidance of the area or decreased foraging (if such activity was occurring), reactions that are considered to be of low severity and with no lasting biological consequences (*e.g.,* Southall *et al.,* 2007, Ellison *et al.,* 2012). As described above, Level A harassment is not expected to occur given the nature of the operations, the estimated size of the Level A harassment zones, and the required shutdown zones for certain activities.

In addition to being temporary, the maximum expected harassment zone around a survey vessel is 141 m. Therefore, the ensonified area surrounding each vessel is relatively small compared to the overall distribution of the animals in the area and their use of the habitat. Feeding behavior is not likely to be significantly impacted as prey species are mobile and are broadly distributed throughout the survey area; 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 temporary nature of the disturbance and 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.

There are no rookeries, mating or calving grounds known to be biologically important to marine mammals within the proposed survey area and there are no feeding areas known to be biologically important to marine mammals within the proposed survey area. There is no designated critical habitat for any ESA-listed marine mammals in the proposed survey area.

North Atlantic Right Whales

The status of the North Atlantic right whale population is of heightened concern and, therefore, merits additional analysis. As noted previously, elevated North Atlantic right whale mortalities began in 2017 and there is an active UME. Overall, preliminary findings support human interactions, specifically vessel strikes and entanglements, as the cause of death for the majority of right whales. The proposed survey area overlaps a migratory corridor BIA for North Atlantic right whales that extends from Massachusetts to Florida and from the coast to beyond the shelf break. Due to the fact that the proposed survey activities are temporary and the spatial extent of sound produced by the survey would be small relative to the spatial extent of the available migratory habitat in the BIA, right whale migration is not expected to be impacted by the proposed survey. Given the relatively small size of the ensonified area, it is unlikely that prey availability would be adversely affected by HRG survey operations. Required vessel strike avoidance measures will also decrease risk of ship strike during migration; no ship strike is expected to occur during TerraSond's proposed activities. Additionally, only very limited take by Level B harassment of North Atlantic right whales has been requested and is being proposed for authorization by NMFS as HRG survey operations are required to maintain and implement a 500 m shutdown zone. The 500 m shutdown zone for right whales is conservative, considering the Level B harassment isopleth for the acoustic source (*i.e.,* sparker) is estimated to be 141 m, and thereby minimizes the potential for behavioral harassment of this species. As noted previously, Level A harassment is not expected due to the small estimated zones in conjunction with the aforementioned shutdown requirements. NMFS does not anticipate North Atlantic right whales takes that would result from TerraSond's proposed activities would impact annual rates of recruitment or survival. Thus, any takes that occur would not result in population level impacts.

Other Marine Mammal Species With Active UMEs

As noted previously, there are several active UMEs occurring in the vicinity of TerraSond's proposed survey areas. Elevated humpback whale mortalities have occurred along the Atlantic coast from Maine through Florida since 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 DPS) remains stable at approximately 12,000 individuals.

Beginning in 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 numbers of harbor seal and gray seal mortalities were first observed between 2018–2020 and, as part of a separate UME, again in 2022. These 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 (2018–2020) and avian influenza (2022), although additional testing to identify other factors that may be involved in the UMEs is underway. The UMEs do not provide cause for concern regarding population-level impacts to any of these stocks. For harbor seals, the population abundance is over 60,000 and annual M/SI (339) is well below PBR (1,729) (Hayes *et al.,* 2021). The population abundance for gray seals in the United States is over 27,000, with an estimated abundance, including seals in Canada, of approximately 450,000. In addition, the abundance of gray seals is likely increasing in the U.S. Atlantic as well as in Canada (Hayes *et al.,* 2021).

The required mitigation measures are expected to reduce the number and/or severity of proposed takes for all species listed in Table 2, including those with active UMEs, to the level of least practicable adverse impact. In particular, they would provide animals the opportunity to move away from the sound source before HRG survey equipment reaches full energy, thus preventing them from being exposed to more severe Level B harassment. No Level A harassment is anticipated, even in the absence of mitigation measures, or proposed for authorization.

NMFS expects that takes would be in the form of short-term Level B behavioral harassment by way of brief startling reactions and/or temporary vacating of the area, or decreased foraging (if such activity was occurring)—reactions that (at the scale and intensity anticipated here) are considered to be of low severity, with no lasting biological consequences. Since both the sources and marine mammals are mobile, animals would only be exposed briefly to a small ensonified area that might result in take. Required mitigation measures, such as shutdown zones and ramp up, would further reduce exposure to sound that could result in more severe behavioral harassment.

In summary and as described above, the following factors primarily support our preliminary 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 proposed for authorization;
- No Level A harassment (PTS) is anticipated, even in the absence of mitigation measures, or proposed for authorization;
- Foraging success is not likely to be significantly impacted as effects on species that serve as prey species for marine mammals from the survey are expected to be minimal;
- The availability of alternate areas of similar habitat value for marine mammals to temporarily vacate the ensonified areas during the planned survey to avoid exposure to sounds from the activity;
- Take is anticipated to be primarily Level B behavioral harassment consisting of brief startling reactions and/or temporary avoidance of the ensonified area;
- While the survey area is within areas noted as a migratory BIA for North Atlantic right whales, avoidance of the survey area due to the activities is not anticipated and would not likely affect migration. In addition, mitigation measures require shutdown at 500 m (almost four times the size of the Level B harassment isopleth of 141 m) to minimize the effects of any Level B harassment take of the species; and
- The proposed mitigation measures, including visual monitoring and shutdowns, are expected to minimize potential impacts to other 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 proposed monitoring and mitigation measures, NMFS preliminarily finds that the total marine mammal take from the proposed activity will have a negligible impact on all affected marine mammal species or stocks.

Small Numbers

As noted previously, 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. When the predicted number of individuals to be taken is fewer than one-third of the species or stock abundance, the take is considered to be of small numbers. Additionally, other qualitative factors may be considered in the analysis, such as the temporal or spatial scale of the activities.

The amount of take NMFS proposes to authorize is below one-third of the estimated stock abundance for all species (total take is less than 7.5 percent of the abundance of the affected stocks for all species, see Table 4). The figures presented in Table 4 are considered conservative estimates for purposes of the small numbers determination as they assume all takes represent different individual animals, which is unlikely to be the case.

Based on the analysis contained herein of the proposed activity (including the proposed mitigation and monitoring measures) and the anticipated take of marine mammals, NMFS preliminarily finds that small numbers of marine mammals would 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.

Endangered Species Act

Section 7(a)(2) of the Endangered Species Act of 1973 (ESA; 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 whenever we propose to authorize take for endangered or threatened species.

NMFS Office of Protected Resources is proposing to authorize the incidental take of four species of marine mammals which are listed under the ESA, including the North Atlantic right, fin, sei, and sperm whale, and has determined that these activities fall within the scope of activities analyzed in GARFO's programmatic consultation regarding geophysical surveys along the U.S. Atlantic coast in the three Atlantic Renewable Energy Regions (completed June 29, 2021; revised September 2021).

Proposed Authorization

As a result of these preliminary determinations, NMFS proposes to issue an IHA to TerraSond for conducting site characterization survey activity in the described Central Atlantic and New York Bight survey areas, provided the previously mentioned mitigation, monitoring, and reporting requirements

are incorporated. A draft of the proposed IHA can be found at: *www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-other-energy-activities-renewable.*

Request for Public Comments

We request comment on our analyses, the proposed authorization, and any other aspect of this notice of proposed IHA. We also request comment on the potential renewal of this proposed IHA as described in the paragraph below. Please include with your comments any supporting data or literature citations to help inform decisions on the request for this IHA or a subsequent renewal IHA.

On a case-by-case basis, NMFS may issue a one-time, 1 year renewal IHA following notice to the public providing an additional 15 days for public comments when (1) up to another year of identical or nearly identical activities as described in the Description of Proposed Activities section of this notice is planned or (2) the activities as described in the Description of Proposed Activities section of this notice would not be completed by the time the IHA expires and a renewal would allow for completion of the activities beyond that described in the *Dates and Duration* section of this notice, provided all of the following conditions are met:

- A request for renewal is received no later than 60 days prior to the needed renewal IHA effective date (recognizing that the renewal IHA expiration date cannot extend beyond one year from expiration of the initial IHA).
- The request for renewal must include the following:

(1) An explanation that the activities to be conducted under the requested renewal IHA are identical to the activities analyzed under the initial IHA, are a subset of the activities, or include changes so minor (*e.g.,* reduction in pile size) that the changes do not affect the previous analyses, mitigation and monitoring requirements, or take estimates (with the exception of reducing the type or amount of take).

(2) A preliminary monitoring report showing the results of the required monitoring to date and an explanation showing that the monitoring results do not indicate impacts of a scale or nature not previously analyzed or authorized.

Upon review of the request for renewal, the status of the affected species or stocks, and any other pertinent information, NMFS determines that there are no more than minor changes in the activities, the mitigation and monitoring measures will remain the same and appropriate, and the findings in the initial IHA remain valid.

Dated: October 31, 2022.

Catherine G. Marzin,

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

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DEPARTMENT OF COMMERCE

National Telecommunications and Information Administration

Agency Information Collection Activities; Submission to the Office of Management and Budget (OMB) for Review and Approval; Comment Request; Middle Mile Grant Program

AGENCY: National Telecommunications and Information Administration (NTIA), Commerce.

ACTION: Notice of information collection, request for comment.

SUMMARY: The Department of Commerce, following the Paperwork Reduction Act of 1995 (PRA), invites the public and other Federal agencies to comment on proposed and continuing information collections, which helps us assess the impact of our information collection requirements and minimize the public's reporting burden. This Notice of Information Collection is for the Middle Mile Grant Program Bi-Annual Performance Reporting and Final Report. The purpose of this notice is to allow for 60 days of public comment preceding the submission of the collection to OMB.

DATES: To ensure consideration, comments regarding this proposed information collection must be received on or before January 3, 2023.

ADDRESSES: Interested persons are invited to submit written comments by mail to Arica Cox, Telecommunications Policy Analyst, Grants Management, Administration, and Compliance, Office of internet Connectivity and Growth, National Telecommunication and Information Administration, U.S. Department of Commerce, 1401 Constitution Avenue NW, Room 4626, Washington, DC 20230, or by email to *broadbandusa@ntia.gov.* Please reference Middle Mile Grant Program Data Collection in the subject line of your comments. Do not submit Confidential Business Information or otherwise sensitive or protected information.

FOR FURTHER INFORMATION CONTACT: Requests for additional information or specific questions related to collection activities should be directed Arica Cox, Telecommunications Policy Analyst, Grants Management, Administration, and Compliance, Office of internet Connectivity and Growth, National Telecommunication and Information Administration, U.S. Department of Commerce, 1401 Constitution Avenue NW, Room 4626, Washington, DC 20230, or email at *acox@ntia.gov; broadbandusa@ntia.gov;* or via telephone at (202) 209–3011.

SUPPLEMENTARY INFORMATION:

I. Abstract

The Enabling Middle Mile Grant Program, authorized by Section 60401 of the Infrastructure Investment and Jobs Act of 2021, Public Law 117–58, 135 Stat. 429 (November 15, 2021) (Infrastructure Act or Act), provides funding for the construction, improvement, or acquisition of middle mile infrastructure. The Middle Mile Grant Program will make up to $980,000,000 available for federal assistance to the following eligible entities: a State, political subdivision of a State, Tribal government, technology company, electric utility, utility cooperative, public utility district, telecommunications company, telecommunications cooperative, nonprofit foundation, nonprofit corporation, nonprofit institution, nonprofit association, regional planning council, Native entity, economic development authority, or any partnership of two (2) or more of these entities. The purpose of the grant program is to expand and extend middle mile infrastructure to reduce the cost of connecting areas that are unserved or underserved to the internet backbone.

On May 13, 2022, NTIA published the program's Notice of Funding Opportunity (NOFO) on *internetforAll.gov* to describe the requirements under which it will award grants for the Middle Mile Grant Program.[1] The NOFO requires award recipients to submit bi-annual performance reports, financial reports, and a final report as a part of the grant close-out process. Award recipients must follow the reporting requirements described in Section A.01, Reporting Requirement, of the Department of Commerce Financial Assistance Standard Terms and Conditions (dated November 12, 2020). Additionally, in accordance with 2 CFR part 170, all

[1] *See* Enabling Middle Mile Broadband Infrastructure Program Notice of Funding Opportunity (NOFO) (May 13, 2022), *https://www.internetforall.gov/program/enabling-middle-mile-broadband-infrastructure-program.*