this administrative review, as provided by section 751(a)(2)(C) of the Tariff Act of 1930, as amended (the Act): (1) The cash deposit rate for Ercros will be equal to the weighted-average dumping margin established in the final results of this review, except if the rate is *de minimis* within the meaning of 19 CFR 351.106(c)(1), in which case the cash deposit rate will be zero; (2) for other manufacturers and exporters covered in a prior segment of the proceeding, the cash deposit rate will continue to be the company-specific rate published for the most recently completed segment of this proceeding in which that manufacturer or exporter participated; (3) if the exporter is not a firm covered in this review, a prior review, or the original less-than-fair-value (LTFV) investigation, but the manufacturer is, the cash deposit rate will be the rate established for the most recently completed segment of this proceeding for the manufacturer of subject merchandise; and (4) the cash deposit rate for all other manufacturers or exporters will continue to be 24.83 percent, the all-others rate established in the LTFV investigation.[2] These deposit requirements, when imposed, shall remain in effect until further notice.

Notification to Importers

This notice also serves as a final reminder to importers of their responsibility under 19 CFR 351.402(f)(2) to file a certificate regarding the reimbursement of antidumping duties prior to liquidation of the relevant entries during this review period. Failure to comply with this requirement could result in Commerce's presumption that reimbursement of antidumping duties occurred, which will result in the subsequent assessment of double antidumping duties.

Notification Regarding Administrative Protective Orders

This notice is the only reminder to parties subject to the administrative protective order (APO) of their responsibility concerning the return or destruction of proprietary information disclosed under the APO in accordance with 19 CFR 351.305(a)(3), which continues to govern business proprietary information in this segment of the proceeding. Timely written notification of the return or destruction of APO materials, or conversion to judicial protective order, is hereby requested. Failure to comply with the regulations and the terms of an APO is a sanctionable violation.

We are issuing and publishing these final results and this notice in accordance with sections 751(a)(1) and 777(i)(1) of the Act and 19 CFR 351.213(h).

Dated: November 25, 2019.

Jeffrey I. Kessler,

Assistant Secretary for Enforcement and Compliance.

[FR Doc. 2019–26142 Filed 12–2–19; 8:45 am]

BILLING CODE 3510–DS–P

[2] *See Chlorinated Isocyanurates from Spain: Notice of Final Determination of Sales at Less Than Fair Value,* 70 FR 24506 (May 10, 2005).

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648–XR032]

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Marine Site Characterization Surveys Off of Delaware and Maryland

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

ACTION: Notice; issuance of an incidental harassment authorization.

SUMMARY: ''In accordance with the regulations implementing the Marine Mammal Protection Act (MMPA) as amended, notification is hereby given that NMFS has issued an incidental harassment authorization (IHA) to Skipjack Offshore Energy, LLC (Skipjack) to incidentally harass, by Level B harassment only, marine mammals during marine site characterization surveys offshore of Delaware in the area of the Commercial Lease of Submerged Lands for Renewable Energy Development on the Outer Continental Shelf (OCS–A 0519) and along potential submarine cable routes to a landfall location in Delaware or Maryland.

DATES: This authorization is valid for one year from the date of issuance.

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

SUPPLEMENTARY INFORMATION:

Background

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

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

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

Summary of Request

On July 31, 2019, NMFS received a request from Skipjack for an IHA to take marine mammals incidental to marine site characterization surveys offshore of Delaware in the area of the Commercial Lease of Submerged Lands for Renewable Energy Development on the Outer Continental Shelf (OCS–A 0519) and along potential submarine cable routes to a landfall location in Delaware or Maryland. A revised application was received on August 15, 2019. NMFS deemed that request to be adequate and complete. Skipjack's request is for the take of 17 marine mammal species by Level B harassment that would occur over the course of 200 survey days. Neither Skipjack nor NMFS expects serious injury or mortality to result from this activity and the activity is expected to last no more than one year, therefore, an IHA is appropriate.

Description of the Proposed Activity

Skipjack proposes to conduct marine site characterization surveys, including high-resolution geophysical (HRG) and geotechnical surveys, in the area of OCS–A 0519 (Lease Area) and along potential submarine cable routes to landfall locations in either Delaware or Maryland. The purpose of the surveys is to obtain a baseline assessment of seabed/sub-surface soil conditions in the Lease Area and cable route corridors to support the siting of potential future offshore wind projects. Underwater sound resulting from Skipjack's surveys has the potential to result in incidental take of marine mammals in the form of behavioral harassment (*i.e.,* Level B harassment only).

Skipjack's survey activities are anticipated to be supported by as many as five total vessels, with as many as three vessels operating concurrently. Survey vessels would maintain a speed of approximately 4 knots (kn) while transiting survey lines. A maximum of 200 total survey days are expected to be required to complete the surveys.

Skipjack's geotechnical survey activities are described in detail in the notice of proposed IHA (84 FR 51118; September 27, 2019). As described in that notice, the geotechnical survey activities not expected to result in the take of marine mammals and are therefore not analyzed further in this document. The HRG survey activities proposed by Skipjack are also described in detail in the notice of proposed IHA (84 FR 51118; September 27, 2019). The HRG equipment that may be used by Skipjack are shown in Table 1.

TABLE 1—SUMMARY OF GEOPHYSICAL SURVEY EQUIPMENT PROPOSED FOR USE BY SKIPJACK

Equipment	Source type	Operating frequency (kHz)	Sound level (SL_{rms} dB re 1 µPa m)	Sound level (SL_{pk} dB re 1 µPa m)	Pulse duration (width) (millisecond)	Repetition rate (Hz)	Beamwidth (degrees)
Shallow Sub-bottom Profilers (Chirps)							
Teledyne Benthos Chirp III—TTV 170.	Non-impulsive, mobile, intermittent.	2 to 7	197	—	5 to 60	15	100.
EdgeTech SB 216 (2000DS or 3200 top unit).	Non-impulsive, mobile, intermittent.	2 to 16 2 to 8	195	—	20	6	24.
EdgeTech 424	Non-impulsive, mobile, intermittent.	4 to 24	176	—	3.4	2	71.
EdgeTech 512	Non-impulsive, mobile, intermittent.	0.7 to 12	179	—	9	8	80.
GeoPulse 5430A	Non-impulsive, mobile, intermittent.	2 to 17	196		50	10	55.
Parametric Sub-bottom Profilers							
Innomar SES-2000 Medium 100 SBP.	Non-impulsive, mobile, intermittent.	85 to 115	247	—	0.07 to 2	40–100	1–3.5.
Innomar SES-2000 Standard & Plus.	Non-impulsive, mobile, intermittent.	85 to 115	236	—	0.07 to 2	60	1–3.5.
Innomar SES-2000 Medium 70.	Non-impulsive, mobile, intermittent.	60 to 80	241	—	0.1 to 2.5	40	1–3.5.
Innomar SES-2000 Quattro.	Non-impulsive, mobile, intermittent.	85 to 115	245	—	0.07 to 1	60	1–3.5.
Medium Sub-bottom Profilers (Sparkers & Boomers)							
GeoMarine Geo-Source 800J Sparker.	Impulsive, Mobile	0.05 to 5	203	213	3.4	0.41	Omni.
GeoMarine Geo-Source 600J Sparker.	Impulsive, Mobile	0.2 to 5	201	212	5.0	0.41	Omni.
GeoMarine Geo-Source 400J Sparker.	Impulsive, Mobile	0.2 to 5	195	208	7.2	0.41	Omni.
GeoResource 800J Sparker System.	Impulsive, Mobile	0.05 to 5	203	213	3.4	0.41	Omni.
Applied Acoustics Duraspark 400.	Impulsive, Mobile	0.3 to 1.2	203	211	1.1	0.4	Omni.
Applied Acoustics triple plate S-Boom (700–1000 Joules) [1].	Impulsive, Mobile	0.1 to 5	205	211	0.6	3	80.
Acoustic Corers							
PanGeo (LF Chirp)	Non-impulsive, stationary, intermittent.	2 to 6.5	177.5	—	4.5	0.06	73.

TABLE 1—SUMMARY OF GEOPHYSICAL SURVEY EQUIPMENT PROPOSED FOR USE BY SKIPJACK—Continued

Equipment	Source type	Operating frequency (kHz)	Sound level (SL_{rms} dB re 1 µPa m)	Sound level (SL_{pk} dB re 1 µPa m)	Pulse duration (width) (millisecond)	Repetition rate (Hz)	Beamwidth (degrees)
PanGeo (HF Chirp)	Non-impulsive, stationary, intermittent.	4.5 to 12.5	177.5	—	4.5	0.06	73.
Pangeo Parametric Sonar[5].	Non-impulsive, stationary, intermittent.	90 to 115	239	—	0.25	40	3.5.
Positioning Systems							
Sonardyne Ranger 2—Transponder.	Non-impulsive, mobile, intermittent.	19 to 34	194	—	5	1	Omni.
Sonardyne Ranger 2 USBL HPT 3000/5/7000 Transceiver.	Non-impulsive, mobile, intermittent.	19 to 34	194	—	5	1	Not Reported.
Sonardyne Scout Pro Transponder.	Non-impulsive, mobile, intermittent.	35 to 50	188	—	5	3	Not Reported.
IxSea GAPS Beacon System.	Non-impulsive, mobile, intermittent.	8–16	188	.....	12	1	Omni.
Easytrak Nexus 2 USBL Transceiver.	Non-impulsive, mobile, intermittent.	18 to 32	192	.....	5	2	Omni.
Kongsberg HiPAP 501/502 USBL Tranceiver.	Non-impulsive, mobile, intermittent.	27–30.5	190	.....	2	1	15.
EdgeTech BATS II Transponder.	Non-impulsive, mobile, intermittent.	17 to 30	Not Reported	.....	5	3	Not Reported.
Multi-beam Echosounders and Side Scan Sonar							
Reson SeaBat 7125 Multibeam Echosounder.	Non-impulsive, mobile, intermittent.	200 or 400 ...	220	—	0.03 to 0.3	—	—
RESON 700	Non-impulsive, mobile, intermittent.	200 or 400 ...	162	—	0.33	—	—
R2SONIC	Non-impulsive, mobile, intermittent.	200 or 400 ...	162	—	0.11	—	—
Klein 3900 SSS	Non-impulsive, mobile, intermittent.	>445 kHz	242	—	0.025	—	—
EdgeTech 4000 & 4125 SSS.	Non-impulsive, mobile, intermittent.	410 kHz	225	—	10	—	—
EdgeTech 4200 SSS.	Non-impulsive, mobile, intermittent.	>300 kHz	215	—	0.025	—	—

— = not applicable or reportable; dB re 1 µPa m = decibel reference to 1 micropascal meter; GAPS = Global Acoustic Positioning System; HF = high-frequency; LF = low-frequency; omni = omnidirectional source; SL = source level; SL_{pk} = peak source level (expressed as dB re 1 µPa m); SL_{rms} = root-mean-square source level (expressed as dB re 1 µPa m); SSS = side scan sonar; USBL = ultra-short baseline.

[4] Crocker and Fratantonio (2016) provide S-boom measurements using two different power sources (CSP–D700 and CSP–N). The CSP–D700 power source was used in the 700J measurements but not in the 1000J measurements. The CSP–N source was measured for both 700J and 1000J operations but resulted in a lower source levels; therefore the single maximum source level value was used for both operational levels of the S-boom.

[5] The Pangeo acoustic corer parametric sonar was scanned out of further analysis due to high frequency content, operational beam width of less than eight degrees, and stationary operational position of less than 3.5 m above the seabed (Pangeo, 2018).

Of the potential HRG survey equipment planned for use, NMFS determined the multi-beam echosounders, side-scan sonars, and acoustic corers do not have the potential to result in the harassment of marine mammals because these sources are either outside the functional hearing ranges of marine mammals or do not result in sound that is expected to propagate to distances that would result in harassment. Therefore, these equipment types are not analyzed further in this document. All other HRG equipment types planned for use by Skipjack as shown in Table 1 are expected to have the potential to result in the harassment of marine mammals and are therefore carried forward in the analysis.

As described above, detailed description of Skipjack's planned surveys is provided in the notice of proposed IHA (84 FR 51118; September 27, 2019). Since that time, no changes have been made to the activities. Therefore, a detailed description is not provided here. Please refer to that notice for the detailed description of the specified activity. Mitigation, monitoring, and reporting measures are described in detail later in this document (please see ''Mitigation'' and ''Monitoring and Reporting'').

Comments and Responses

A notice of proposed IHA was published in the **Federal Register** on September 27, 2019 (84 FR 51118). During the 30-day public comment period, NMFS received comment letters from: (1) The Marine Mammal

Commission (Commission); (2) a group of environmental non-governmental organizations (ENGOs) including the Natural Resources Defense Council, Conservation Law Foundation, National Wildlife Federation, Defenders of Wildlife, WDC North America, NY4WHALES, Surfrider Foundation, Mass Audubon, International Marine Mammal Project of the Earth Island Institute, and Wildlife Conservation Society; and (3) a member of the general public. NMFS has posted the comments online at: *www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-other-energy-activities-renewable.* The comment we received from the general public was supportive of issuance of the IHA. A summary of the public comments received from the Commission and the ENGOs and NMFS' responses to those comments are below.

Comment 1: The Commission recommended that NMFS engage in various efforts to ensure consistency in aspects of the MMPA incidental take authorization process associated with this and similar specified activities (*e.g.,* site characterization surveys in service of placement of wind energy facilities), including guidance related to methodological and signal processing standards, guidance and tools regarding sound propagation modeling for use by action proponents that conduct HRG surveys.

Response: NMFS appreciates the Commission's interest in these issues and will evaluate the need for and appropriate development of guidance and tools.

Comment 2: The Commission recommended that NMFS include the relevant inputs (*i.e.,* source level, weighting factor adjustment, source velocity, pulse duration, and repetition rate) used to estimate the Level A harassment zones for all sources proposed for use by the action proponents in **Federal Register** notices.

Response: NMFS strives to provide all information relevant to modeling isopleth distances associated with sound sources used to estimate marine mammal exposures. In this instance there were numerous potential sound sources which NMFS determined are unlikely to have the potential to result in Level A harassment and were not ultimately relevant to marine mammal exposure modeling, therefore we provided the inputs that were potentially relevant to the exposure modeling and that were used for the take estimate.

Comment 3: The Commission recommended that NMFS implement a 50-m Level B harassment zone for Skipjack's proposed survey based on an assumption that in-situ measurements and resulting data collected for sparkers is accurate and should be relied upon for modeling HRG sources. The Commission also recommended that NMFS deem sound sources de minimus in a consistent manner for all proposed IHAs and rulemakings, and that, given the relatively small sizes of Level B harassment zones, NMFS consider whether IHAs are necessary for HRG surveys given proposed shutdown requirements and the added protection afforded by lease-stipulated exclusion zones.

Response: NMFS supports the collection of sound field verification data on HRG sources and will consider using these data in exposure estimates when it is deemed reliable. At this time, NMFS has determined the available data from sound field verification studies on directional HRG sources is not reliable, but we will review sound field verification data collected from omni-directional sources on a case by case basis. However, NMFS has concerns with the reliability of some of the sound field verification data that has been submitted previously for omni-directional sources, therefore we are not willing to make categorical assumptions about sound propagation distances associated with these equipment types based on this previously submitted data. NMFS has developed an interim method for determining the rms sound pressure level (SPL_{rms}) at the 160-dB isopleth HRG survey equipment that incorporates frequency and some directionality to refine estimated ensonified zones (this method is described in greater detail in the Take Estimate section, below). NMFS provided this method to Skipjack and Skipjack used this method to model isopleth distances to the Level B harassment threshold for HRG sources (both directional and omni-directional). NMFS believes this remains a sound and conservative approach until data from sound field verification studies for HRG sources can be relied upon consistently. NMFS will continue to base its analyses of modeling of HRG sound sources on the best available information.

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

Comment 4: The Commission recommended that NMFS include a requirement for Skipjack to provide marine mammal observational datasheets or raw sightings data in its draft and final monitoring report.

Response: NMFS agrees with the Commission's recommendation and has incorporated this requirement in the IHA.

Comment 5: The Commission recommended that NMFS refrain from using the proposed IHA renewal process and that, if NMFS intends to use the renewal process frequently or for authorizations that require a more complex review or for which much new information has been generated, that NMFS provide the Commission and other reviewers 30 days to comment.

Response: As described in the **Federal Register** notice for the proposed IHA and on NMFS' website where information on all MMPA incidental take authorization processes is provided, requests for IHA renewals are appropriate only in limited and well-defined circumstances. NMFS does not anticipate many projects that would meet all the criteria for a renewal. Nonetheless, information about the renewal process and the opportunity to comment on a potential renewal is included in every notice of a proposed IHA because NMFS cannot predetermine who may seek or qualify for a renewal. Under section 101(a)(5)(D), it is up to an applicant to request incidental harassment authorization; NMFS includes information about the potential renewal process in all proposed IHAs because it is at least initially up to the applicant to decide whether they want to seek qualification for a renewal IHA. NMFS has also explained that the possibility of a renewal must be included in the notice of the initial proposed IHA for the agency to consider a renewal request, for the purpose of providing adequate opportunity for public comment on the project during the 30-day comment period on the appropriateness of, and any information pertinent to, a renewal. Where the commenter has likely already reviewed and commented on the initial proposed IHA and a potential renewal for these same activities, activities by the same

IHA holder in the same geographic area, the abbreviated additional comment period is sufficient for consideration of the results of the preliminary monitoring report and new information (if any) from the past months.

NMFS' purpose in providing for renewal is two-fold. First and foremost, the efficiencies in dealing with these simple, low-impact projects (which have already been fully described and analyzed in the initial IHA) frees up limited staff resources to increase focus on more complex and impactful projects and improves our ability to conserve and protect marine mammals by even better evaluating and utilizing new science, evolving technologies, and potential new mitigation measures. In addition, while the agency has always striven for efficiency in regulatory processes, recent directives have called for agencies to put processes in place that reduce regulatory timelines and the regulatory burden on the public. The renewal process reduces the effort needed by both applicants and NMFS staff for simple, relatively low impact projects with little to no uncertainty regarding effects that have already been fully analyzed by the agency and considered by the public—with no reduction in protection to marine mammals.

NMFS has taken a number of steps to ensure the public has adequate notice, time, and information to be able to comment effectively on renewal IHAs. **Federal Register** notices for proposed initial IHAs identify the conditions under which a one-year renewal IHA could be appropriate. This information would have been presented in the *Request for Public Comments* section, which encouraged submission of comments on a potential one-year Renewal in addition to the initial IHA during the initial 30-day comment period. With renewal limited to another year of identical or nearly identical activity in the same location or a subset of the initial activity that was not completed, this information about the renewal process and the project-specific information provided in the **Federal Register** notice provides reviewers with the information needed to provide information and comment on both the initial IHA and a potential renewal for the project. Thus reviewers interested in submitting comments on a proposed renewal during the additional 15-day comment period will have already reviewed the activities, the species and stocks affected, and the mitigation and monitoring measures, which will not change from the IHA issued, and the anticipated effects of those activities on marine mammals and provided their comments and any information pertinent to a possible renewal during the initial 30-day comment period. When we receive a request for a renewal IHA, if the project is appropriate for a renewal we will publish notice of the proposed IHA renewal in the **Federal Register** and provide the additional 15 days for public comment to allow review of the additional documents (preliminary monitoring report, renewal request, and proposed renewal), which should just confirm that the activities have not changed (or only minor changes), commit to continue the same mitigation and monitoring measures, and document that monitoring does not indicate any impacts of a scale or nature not previously analyzed.

In addition, to minimize any burden on reviewers, NMFS will directly contact all commenters on the initial IHA by email, phone, or, if the commenter did not provide email or phone information, by postal service to provide them direct notice about the opportunity to submit any additional comments.

Comment 6: The ENGOs expressed concern that the IHA renewal process discussed in the notice of proposed IHA is inconsistent with the statutory requirements contained in section 101(a)(5)(D) of the MMPA. The ENGOs asserted that IHAs can be valid for not more than one year and both commenters stated that 30 days for comment, including on Renewal IHAs, is required.

Response: NMFS' IHA Renewal process meets all statutory requirements. All IHAs issued, whether an initial IHA or a renewal IHA, are valid for a period of not more than one year, and the public has at least 30 days to comment on all proposed IHAs, with a cumulative total of 45 days for IHA renewals. One commenter characterized the agency's request for comments as seeking comment on the renewal process and the proposed IHA, but the request for comments was not so limited. While there will be additional documents submitted with a renewal request, for a qualifying renewal these will be limited to documentation that NMFS will make available and use to verify that the activities are identical to those in the initial IHA, are nearly identical such that the changes would have either no effect on impacts to marine mammals or decrease those impacts, or are a subset of activities already analyzed and authorized but not completed under the initial IHA. NMFS will also confirm, among other things, that the activities will occur in the same location; involve the same species and stocks; provide for continuation of the same mitigation, monitoring, and reporting requirements; and that no new information has been received that would alter the prior analysis. The renewal request will also contain a preliminary monitoring report, but that is to verify that effects from the activities do not indicate impacts of a scale or nature not previously analyzed. The additional 15-day public comment period provides the public an opportunity to review these few documents, provide any additional pertinent information and comment on whether they think the criteria for a renewal have been met. Between the initial 30-day comment period on these same activities and the additional 15 days, the total comment period for a renewal is 45 days.

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

Comment 7: The ENGOs recommended that a minimum of four PSOs should be required, following a two-on/two-off rotation, each responsible for scanning no more than 180° of the EZ at any given time, and that observation must begin at least 30 minutes prior to the commencement of geophysical survey activity and shall be conducted throughout the time of geophysical survey activity.

Response: NMFS does not agree with the commenters that a minimum of four PSOs should be required, following a two-on/two-off rotation, to meet the MMPA requirement that mitigation must effect the least practicable adverse impact upon the affected species or stocks and their habitat. Previous IHAs issued for HRG surveys have required that a single PSO must be stationed at the highest vantage point and engaged in general 360-degree scanning during daylight hours. A number of marine mammal monitoring reports submitted

to NMFS have demonstrated that project proponents have effectively employed this approach. However, we note that Skipjack is required by BOEM lease stipulations to have two PSOs on duty at all times during surveys that occur during daylight hours. The IHA already requires 30 minutes of pre-clearance observation prior to the commencement of survey activities.

Comment 8: The ENGOs recommended that NMFS consider any initial data from State monitoring efforts, passive acoustic monitoring data, opportunistic marine mammal sightings data, and other data sources, and to take steps now to develop a dataset that reflects marine mammal presence so that it is in hand for future IHA authorizations.

Response: NMFS has used the best available scientific information in this IHA to inform our determinations. We will review any recommended data sources and will continue to use the best available information. We welcome general input on data sources, even outside the comment period for a particular IHA, may be of use in analyzing the potential presence and movement patterns of marine mammals, including North Atlantic right whales, in Mid-Atlantic waters.

Comment 9: The ENGOs recommended that NMFS include more information on the geographic location and timing of surveys and factor this information in the take analysis.

Response: NMFS includes as much information in take analyses and in notices of proposed IHAs on location and seasonality of activities as is available to us, and has done so in this case.

Comment 10: The ENGOs recommended that all vessels operating within the survey area, including support vessels, should maintain a speed of 10 knots or less during the entire survey period including those vessels transiting to/from the survey area.

Response: NMFS has analyzed the potential for ship strike resulting from Skipjack's activity and has determined that the mitigation measures specific to ship strike avoidance are sufficient to avoid the potential for ship strike. These include: A requirement that all vessel operators comply with 10 knot or less speed restrictions in any Seasonal Management Area (SMA) or Dynamic Management Area (DMA); a requirement that all vessel operators reduce vessel speed to 10 knots or less when any large whale, any mother/calf pairs, pods, or large assemblages of non-delphinoid cetaceans are observed within 100-m of an underway vessel; a requirement that all survey vessels maintain a separation distance of 500-m or greater from any sighted North Atlantic right whale; a requirement that, if underway, vessels must steer a course away from any sighted North Atlantic right whale at 10 knots or less until the 500-m minimum separation distance has been established; and a requirement that, if a North Atlantic right whale is sighted in a vessel's path, or within 500-m of an underway vessel, the underway vessel must reduce speed and shift the engine to neutral. We have determined that these ship strike avoidance measures are sufficient to ensure the least practicable adverse impact on species or stocks and their habitat.

Comment 11: The ENGOs recommended that indirect ship strike risk resulting from habitat displacement should be accounted for in NMFS' analysis.

Response: NMFS determined that habitat displacement was not an expected outcome of the specified activity. As discussed in the notice of proposed IHA (84 FR 51118; September 27, 2019) we anticipate marine mammals may temporarily avoid the area of disturbing noise, but this would be a relatively small area even when multiple vessels are operating concurrently. The Level B harassment zone was conservatively estimated to be only 141 m, as described in the Estimated Take section. Additionally, any potential effects are expected to be short-term, given the movement of both whales and project vessels and the small overall area of potential overlap and response. Therefore, habitat displacement is not reasonably likely to occur.

Comment 12: The ENGOs recommended that NMFS impose a seasonal restriction on geophysical surveys in the Lease Area from November 1 to April 30 to reduce potential impacts to North Atlantic right whales.

Response: NMFS appreciates the value of seasonal restrictions under certain circumstances. However, in this case, we have determined seasonal restrictions are not warranted. Impacts to right whales from HRG surveys would be limited to behavioral harassment (*i.e.,* Level B harassment) in the form of temporary avoidance of the area, responses that are considered to be of low severity and with no lasting biological consequences (*e.g.,* Ellison *et al.,* 2012). Based on the best available information, the highest densities of right whales in the survey area would be expected from December through March (Roberts *et al.,* 2018). However, even in those months, densities are relatively low compared to densities in other areas such as New England (Roberts et al., 2018). In baseline studies conducted in wind energy areas in the Mid-Atlantic Outer Continental Shelf from 2012–2014, which included both aerial and vessel-based surveys, only nine right whales were observed, all of them south of Skipjack's survey area (Williams *et al.,* 2015).

In addition, Skipjack has committed to adhering to an agreement with the ENGOs that stipulates certain mitigation measures. This written agreement was finalized in 2013 and includes a seasonal restriction on HRG survey activities during what is referred to as the ''red period'' from November 23 through March 21. Thus, from November 23 through March 21, an effective seasonal closure will be in effect. For HRG surveys that would occur from November 1 through November 22 and from March 22 through April 30 (referred to as the ''yellow period'') the agreement also requires that Skipjack submit a risk assessment report to NMFS and BOEM that analyzes the risk to right whales from planned survey activities during these periods. This risk assessment report includes an assessment of the potential for right whale activity during the planned survey, an acoustic assessment of the specific equipment to be used, and a site specific Marine Mammal Harassment Avoidance Plan. As of the writing of this document, Skipjack has submitted the risk assessment for the period November 1 through November 22, and would submit a risk assessment report for the period March 22 through April 30 at a later date, should surveys during that period be required. NMFS has reviewed the risk assessment report for the period November 1 through November 22, which includes additional mitigation measures to those required in the IHA, including enhanced exclusion zones and pre-clearance times for right whales.

Based on the relatively low densities of right whales in the survey area from November 1 through April 30, the low risk to right whales from HRG surveys, the voluntary seasonal closure from November 23 through March 21 that Skipjack has committed to, and the mitigation measures required in the IHA and the additional mitigation measures Skipjack has committed to in the NGO agreement, NMFS has determined the seasonal closures recommended by the commenters are not warranted.

Comment 13: The ENGOs recommended that geophysical surveys should commence, with ramp up, during daylight hours only to maximize

the probability that marine mammals are detected and confirmed clear of the exclusion zone and that if a right whale is detected in the EZ at night and the survey shuts down, the survey should not resume until daylight hours.

Response: We acknowledge the limitations inherent in detection of marine mammals at night. However, similar to the discussion above regarding time-area closures, restricting the ability of the applicant to ramp-up surveys only during daylight hours would have the potential to result in lengthy shutdowns of the survey equipment, which could result in the applicant failing to collect the data they have determined is necessary, which could result in the need to conduct additional surveys the following year. This would result in significantly increased costs incurred by the applicant. Thus the restriction suggested by the commenters would not be practicable for the applicant to implement. In addition, potential impacts to marine mammals from this survey will be limited to short-term behavioral responses. Restricting surveys in the manner suggested by the commenters may reduce marine mammal exposures by some degree in the short term, but would not result in any significant reduction in either intensity or duration of noise exposure. No injury is expected to result even in the absence of mitigation, given the very small estimated Level A harassment zones. In the event that NMFS imposed the restriction suggested by the commenters, vessels would potentially be on the water for a longer period of time. Therefore, in addition to practicability concerns for the applicant, the restrictions recommended by the commenters could result in greater overall exposure to sound by marine mammals. We also note that Skipjack must have at least one PSO on duty at night per BOEM lease requirements. Thus, the commenters have not demonstrated that such a requirement would result in a net benefit. In consideration of potential effectiveness of the recommended measure and its practicability for the applicant, NMFS has determined that restricting survey start-ups to daylight hours is not warranted in this case.

Comment 14: The ENGOs stated that is incumbent upon the agency to address potential impacts to other endangered and protected whale species, particularly in light of the UMEs declared for right whales, humpback whales and minke whales, as well as the several strategic and/or depleted stocks of small cetaceans that inhabit the region.

Response: NMFS acknowledges the ongoing UMEs for minke whales, north Atlantic right whales, humpback whales and pinnipeds and we discuss the potential impacts of Skipjack's surveys on species for which UMEs have been declared and for which take is authorized in the *Negligible Impact Determination* section. Please refer to that discussion.

Comment 15: The ENGOs recommended that the minimum radii of EZs should be increased to ensure a 500-m EZ for all marine mammals and an extended 1,000 m-EZ for North Atlantic right whales. Additionally, the ENGOs recommended that survey activity should be shut down upon the visual or acoustic detection of a North Atlantic right whale.

Response: Regarding the recommendation for a 1,000 m EZ specifically for North Atlantic right whales, we have determined that the 500-m EZ, as required in the IHA, is sufficiently protective. We note that the 500-m EZ exceeds—by more than three times—the modeled distance to the largest Level B harassment isopleth distance (141 m). Thus, for North Atlantic right whales detected by PSOs, all forms of incidental take would be avoided. For the same reason, we are not requiring shutdown if a right whale is observed beyond 500-m. Similarly, the recommended 500-m EZ for other species is overly conservative given the 141 m modeled isopleth distance to the Level B harassment threshold.

Comment 16: The ENGOs recommended that NMFS require all project vessel operators to report sightings of living North Atlantic right whales and all sightings of dead, injured, or entangled whales, regardless of species.

Response: NMFS agrees with the recommendation to report all right whale sightings to NMFS and has incorporated this requirement in the IHA. The IHA already includes a requirement to report all observations of dead, injured, or entangled whales to NMFS.

Comment 17: The ENGOs recommended that a combination of visual monitoring by PSOs and passive acoustic monitoring (PAM) should be used at all times.

Response: There are several reasons why we do not think the use of PAM is warranted. NMFS agrees that PAM can be an important tool for augmenting detection capabilities in certain circumstances, however, its utility in further reducing impact for Skipjack's HRG survey activities is very limited. First, for this activity, the area expected to be ensonified above the Level B harassment threshold is relatively small (a maximum of 141 m as described in the Estimated Take section). PAM is only capable of detecting animals that are actively vocalizing, while many marine mammal species vocalize infrequently or during certain activities, which means that only a subset of the animals within the range of the PAM would be detected (and potentially have reduced impacts). Additionally, localization and range detection can be challenging under certain scenarios. For example, odontocetes are fast moving and often travel in large or dispersed groups which makes localization difficult. In addition, the ability of PAM to detect baleen whale vocalizations is further limited due to being deployed from the stern of a vessel, which puts the PAM hydrophones in proximity to propeller noise and low frequency engine noise which can mask the low frequency sounds emitted by baleen whales, including right whales.

Given that the effects to marine mammals from the types of surveys authorized in this IHA are expected to be limited to low level behavioral harassment even in the absence of mitigation, the limited additional benefit anticipated by adding this detection method (especially for right whales and other low frequency cetaceans), and the cost and impracticability of implementing a PAM program, we have determined the current requirements for visual monitoring are sufficient to ensure the least practicable adverse impact on the affected species or stocks and their habitat.

Comment 18: The ENGOs commented that the operation of up to three survey vessels at any one time across a relatively limited geographic area presents a significant potential for cumulative disturbance during the North Atlantic right whale's primary migratory period and that NMFS should analyze the cumulative impacts from Skipjack's survey activities on North Atlantic right whales and other protected species.

Response: The MMPA grants exceptions to its broad take prohibition for a ''specified activity.'' 16 U.S.C. 1371(a)(5)(A)(i). Cumulative impacts (also referred to as cumulative effects) is a term that appears in the context of NEPA and the ESA, but it is defined differently in those contexts. Neither the MMPA nor NMFS' codified implementing regulations address consideration of other unrelated activities and their impacts on populations. However, the preamble for NMFS' implementing regulations (54 FR 40338; September 29, 1989) states in

response to comments that the impacts from other past and ongoing anthropogenic activities are to be incorporated into the negligible impact analysis via their impacts on the environmental baseline. Accordingly, NMFS here has factored into its negligible impact analyses the impacts of other past and ongoing anthropogenic activities via their impacts on the baseline (*e.g.,* as reflected in the density/distribution and status of the species, population size and growth rate, and other relevant stressors (such as incidental mortality in commercial fisheries)).

Comment 19: The ENGOs recommended that NMFS fund analyses of recently collected sighting and acoustic data for all data-holders and continue to fund and expand surveys and studies to improve our understanding of distribution and habitat use of marine mammals.

Response: We agree with the ENGOs that analyses of recently collected sighting and acoustic data, as well as continued marine mammal surveys, are warranted. We welcome the opportunity to participate in fora where implications of such data for potential mitigation measures would be discussed; however, we do not have broad statutory authority or the ability to require that all ''data-holders'' fund such analyses and surveys. Additionally, NMFS will fund pertinent surveys based on agency priorities and budgetary considerations.

Changes From the Proposed IHA to Final IHA

As described above, the following additions to reporting requirements have been incorporated in the IHA based on comments received during the public comment period:

- Vessel operators must report sightings of North Atlantic right whales to NMFS; and
- Marine mammal observational datasheets or raw sightings data must be provided in the draft and final monitoring report.

Description of Marine Mammals in the Area of Specified Activity

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

Table 2 summarizes information related to the population or stock, including regulatory status under the MMPA and ESA and potential biological removal (PBR), where known. For taxonomy, we follow Committee on Taxonomy (2018). PBR is defined by the MMPA as the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population (as described in NMFS' SARs). While no mortality is anticipated or authorized here, PBR is included here as a gross indicator of the status of the species and other threats.

Marine mammal abundance estimates presented in this document represent the total number of individuals that make up a given stock or the total number estimated within a particular study or survey area. NMFS' stock abundance estimates for most species represent the total estimate of individuals within the geographic area, if known, that comprises that stock. For some species, this geographic area may extend beyond U.S. waters. All managed stocks in this region are assessed in NMFS' U.S. Atlantic SARs. All values presented in Table 2 are the most recent available at the time of publication and are available in the 2018 Atlantic SARs (Hayes *et al.,* 2019), available online at*: www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessment-reports-region.*

TABLE 2—MARINE MAMMALS KNOWN TO OCCUR IN THE SURVEY AREA THAT MAY BE AFFECTED BY SKIPJACK'S PROPOSED ACTIVITY

Common name (scientific name)	Stock	MMPA and ESA status; strategic (Y/N) [1]	Stock abundance (CV, N_{min}, most recent abundance survey) [2]	Predicted abundance (CV) [3]	PBR [4]	Annual M/SI [4]	Expected occurrence in survey area
Toothed Whales (Odontoceti)							
Sperm whale (*Physeter macrocephalus*).	North Atlantic	E; Y	2,288 (0.28; 1,815; n/a).	5,353 (0.12)	3.6	0.8	Rare.
Killer whale (*Orcinus orca*)	W North Atlantic	—; N	Unknown (n/a; n/a; n/a).	11 (0.82)	Undet.	0	Rare.
Long-finned pilot whale (*Globicephala melas*).	W North Atlantic	—; N	5,636 (0.63; 3,464; n/a).	[5] 18,977 (0.11)	35	27	Uncommon.
Short-finned pilot whale (*Globicephala macrorhynchus*).	W North Atlantic	—; N	28,924 (0.24; 23,637; n/a).	[5] 18,977 (0.11)	236	168	Rare.
Atlantic white-sided dolphin (*Lagenorhynchus acutus*).	W North Atlantic	—; N	48,819 (0.61; 30,403; n/a).	37,180 (0.07)	304	30	Common.
Atlantic spotted dolphin (*Stenella frontalis*).	W North Atlantic	—; N	44,715 (0.43; 31,610;.	55,436 (0.32)	316	0	Common.
Bottlenose dolphin (*Tursiops truncatus*).	W North Atlantic Coastal Migratory.	—; N	6,639 (0.41; 4,759; 2015).	[5] 97,476 (0.06)	48	unknown	Common.
Common dolphin [6] (*Delphinus delphis*).	W North Atlantic	—; N	173,486 (0.55; 55,690; 2011).	86,098 (0.12)	557	406	Common.
Risso's dolphin (*Grampus griseus*).	W North Atlantic	—; N	18,250 (0.46; 12,619; 2011).	7,732 (0.09)	126	49.9	Rare.
Harbor porpoise (*Phocoena phocoena*).	Gulf of Maine/Bay of Fundy.	—; N	79,833 (0.32; 61,415; 2011).	*45,089 (0.12)	706	255	Common.

TABLE 2—MARINE MAMMALS KNOWN TO OCCUR IN THE SURVEY AREA THAT MAY BE AFFECTED BY SKIPJACK'S PROPOSED ACTIVITY—Continued

Common name (scientific name)	Stock	MMPA and ESA status; strategic (Y/N) [1]	Stock abundance (CV, N_{min}, most recent abundance survey) [2]	Predicted abundance (CV) [3]	PBR [4]	Annual M/SI [4]	Expected occurrence in survey area
Baleen Whales (Mysticeti)							
North Atlantic right whale (*Eubalaena glacialis*).	W North Atlantic	E; Y	451 (0; 455; n/a)	[7] 411 (n/a)	0.9	56	Year round in continental shelf and slope waters, occur seasonally.
Humpback whale [8] (*Megaptera novaeangliae*).	Gulf of Maine	—; N	896 (0.42; 239; n/a)	*1,637 (0.07)	14.6	9.8	Common year round.
Fin whale [6] (*Balaenoptera physalus*).	W North Atlantic	E; Y	3,522 (0.27; 1,234; n/a).	4,633 (0.08)	2.5	2.5	Year round in continental shelf and slope waters, occur seasonally.
Sei whale (*Balaenoptera borealis*).	Nova Scotia	E; Y	357 (0.52; 236; n/a)	*717 (0.30)	0.5	0.6	Year round in continental shelf and slope waters, occur seasonally.
Minke whale [6] (*Balaenoptera acutorostrata*).	Canadian East Coast	—; N	20,741 (0.3; 1,425; n/a).	*2,112 (0.05)	14	7.5	Year round in continental shelf and slope waters, occur seasonally.
Earless Seals (Phocidae)							
Gray seal [8] (*Halichoerus grypus*).	W North Atlantic	—; N	27,131 (0.10; 25,908; n/a).	505,000 (n/a)	1,389	5,688	Uncommon.
Harbor seal (*Phoca vitulina*).	W North Atlantic	—; N	75,834 (0.15; 66,884; 2012).	75,834 (0.15)	2,006	345	Uncommon.

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

[2] Stock abundance as reported in NMFS marine mammal stock assessment reports (SAR) except where otherwise noted. SARs available online at: *www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments.* CV is coefficient of variation; N_{min} is the minimum estimate of stock abundance. In some cases, CV is not applicable. For certain stocks, abundance estimates are actual counts of animals and there is no associated CV. The most recent abundance survey that is reflected in the abundance estimate is presented; there may be more recent surveys that have not yet been incorporated into the estimate. All values presented here are from the 2018 Atlantic SARs.

[3] This information represents species- or guild-specific abundance predicted by recent habitat-based cetacean density models (Roberts *et al.,* 2016, 2017, 2018) (with the exception of North Atlantic right whales and pinnipeds—see footnotes 7 and 9 below). These models provide the best available scientific information regarding predicted density patterns of cetaceans in the U.S. Atlantic Ocean, and we provide the corresponding abundance predictions as a point of reference. Total abundance estimates were produced by computing the mean density of all pixels in the modeled area and multiplying by its area. For those species marked with an asterisk (*), the available information supported development of either two or four seasonal models; each model has an associated abundance prediction. Here, we report the maximum predicted abundance.

[4] Potential biological removal, defined by the MMPA as the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population size (OSP). Annual M/SI, found in NMFS' SARs, represent annual levels of human-caused mortality plus serious injury from all sources combined (*e.g.,* commercial fisheries, subsistence hunting, ship strike). Annual M/SI values often cannot be determined precisely and is in some cases presented as a minimum value. All M/SI values are as presented in the 2018 SARs.

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

[6] Abundance as reported in the 2007 Canadian Trans-North Atlantic Sighting Survey (TNASS), which provided full coverage of the Atlantic Canadian coast (Lawson and Gosselin, 2009). Abundance estimates from TNASS were corrected for perception and availability bias, when possible. In general, where the TNASS survey effort provided superior coverage of a stock's range (as compared with NOAA shipboard survey effort), the resulting abundance estimate is considered more accurate than the current NMFS abundance estimate (derived from survey effort with inferior coverage of the stock range). NMFS SAR reports the stock abundance estimate for the common dolphin as 70,184; NMFS SAR reports the stock abundance estimate for the fin whale as 1,618; NMFS SAR reports the stock abundance estimate for the minke whale as 2,591.

[7] For the North Atlantic right whale the best available abundance estimate is derived from the 2018 North Atlantic Right Whale Consortium 2018 Annual Report Card (Pettis *et al.,* 2018).

[8] 2018 U.S. Atlantic draft SAR for the Gulf of Maine feeding population lists a current abundance estimate of 896 individuals. However, we note that the estimate is defined on the basis of feeding location alone (*i.e.,* Gulf of Maine) and is therefore likely an underestimate.

[9] The NMFS stock abundance estimate applies to U.S. population only, however the actual stock abundance is approximately 505,000.

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

A detailed description of the species likely to be affected by Skipjack's surveys, including brief introductions to the species and relevant stocks as well as available information regarding population trends and threats, and information regarding local occurrence, were provided in the notice of proposed IHA (84 FR 51118; September 27, 2019); since that time, we are not aware of any changes in the status of these species and stocks; therefore, detailed descriptions are not provided here. Please refer to that notice for these descriptions. Please also refer to NMFS' website (*www.fisheries.noaa.gov/find-species*) for generalized species accounts.

Potential Effects of Specified Activities on Marine Mammals and Their Habitat

The effects of underwater noise from Skipjack's survey activities have the potential to result in behavioral harassment of marine mammals in the vicinity of the survey area. The notice of proposed IHA (84 FR 51118; September 27, 2019) included a discussion of the effects of anthropogenic noise on marine mammals and the potential effects of underwater noise from Skipjack's survey activities on marine mammals and their habitat. That information and

analysis is incorporated by reference into this final IHA determination and is not repeated here; please refer to the notice of proposed IHA (84 FR 51118; September 27, 2019).

Estimated Take

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

Level B 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 are by Level B harassment only. Based on the nature of the activity and the anticipated effectiveness of the mitigation measures (*i.e.,* exclusion zones and shutdown measures), discussed in detail below in Mitigation section, Level A harassment is neither anticipated nor authorized.

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

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

Acoustic Thresholds

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

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

Level A harassment—NMFS' Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 2.0) (Technical Guidance, 2018) identifies dual criteria to assess auditory injury (Level A harassment) to five different marine mammal groups (based on hearing sensitivity) as a result of exposure to noise from two different types of sources (impulsive or non-impulsive). The components of Skipjack's planned activity that may result in the take of marine mammals include the use of impulsive sources.

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

TABLE 3—THRESHOLDS IDENTIFYING THE ONSET OF PERMANENT THRESHOLD SHIFT

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

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

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

Ensonified Area

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

The survey would entail the use of HRG equipment. The distance to the isopleth corresponding to the threshold for Level B harassment was calculated for all HRG equipment with the potential to result in harassment of marine mammals. NMFS has developed an interim methodology for determining the rms sound pressure level (SPL_{rms}) at the 160-dB isopleth for the purposes of estimating take by Level B harassment resulting from exposure to HRG survey equipment. This methodology incorporates frequency and some directionality to refine estimated ensonified zones and is described below:

If only peak source sound pressure level (SPL_{pk}) is given, the SPL_{rms} can be roughly approximated by

$$(1) \qquad SPL_{rms} = SPL_{pk} + 10\log_{10}\tau$$

where τ is the pulse duration in seconds. If the pulse duration varies, the longest duration should be used, unless there is certainty regarding the portion of time a shorter duration will be used, in which case the result can be calculated/parsed appropriately.

In order to account for the greater absorption of higher frequency sources, we apply 20 log(r) with an absorption term α·r/1000 to calculate transmission loss (*TL*), as described in Eq.s (2) and (3) below.

$$(2) \qquad TL = 20\log_{10}(r) + \alpha \cdot r/1000 \text{ (dB)}$$

where *r* is the distance in meters, and α is absorption coefficient in dB/km.

While the calculation of absorption coefficient varies with frequency, temperature, salinity, and pH, the largest factor driving the absorption coefficient is frequency. A simple formula to approximate the absorption coefficient (neglecting temperature, salinity, and pH) is provided by Richardson *et al.* (1995):

$$(3) \qquad \alpha \approx 0.036 f^{1.5} \text{ (dB/km)}$$

where *f* is frequency in kHz. When a range of frequencies, is being used, the lower bound of the range should be used for this calculation, unless there is certainty regarding the portion of time a higher frequency will be used, in which case the result can be calculated/parsed appropriately.

Further, if the beamwidth is less than 180° and the angle of beam axis in respect to sea surface is known, the horizontal impact distance *R* should be calculated using

$$(4) \qquad R = r\cos\left(\varphi - \frac{\theta}{2}\right) \text{ (m)}$$

where *SL* is the SPL_{rms} at the source (1 m), θ is the beamwidth (in radian), and φ is the angle of beam axis in respect to sea surface (in radian)

Finally, if the beam is pointed at a normal downward direction, Eq. (4) can be simplified as

$$(5) \qquad R = r\cos\left(\frac{\pi}{2} - \frac{\theta}{2}\right) = r\sin\frac{\theta}{2} \text{ (m)}$$

The interim methodology described above was used to estimate isopleth distances to the Level B harassment threshold for the proposed HRG survey. NMFS considers the data provided by Crocker and Fratantonio (2016) to represent the best available information on source levels associated with HRG equipment and therefore recommends that source levels provided by Crocker and Fratantonio (2016) be incorporated in the method described above to estimate isopleth distances to the Level B harassment threshold. In cases when the source level for a specific type of HRG equipment is not provided in Crocker and Fratantonio (2016), NMFS recommends that either the source levels provided by the manufacturer be used, or, in instances where source levels provided by the manufacturer are unavailable or unreliable, a proxy from Crocker and Fratantonio (2016) be used instead. Table 1 shows the HRG equipment types that may be used during the proposed surveys and the sound levels associated with those HRG equipment types. Table 4 in the IHA application shows the literature sources for the sound source levels that are shown in Table 1 and that were incorporated into the modeling of isopleth distances to the Level B harassment threshold.

Results of modeling using the methodology described above indicated that, of the HRG survey equipment planned for use by Skipjack that has the potential to result in harassment of marine mammals, sound produced by the AA Dura-Spark 400 sparker and the GeoSource 800 J sparker would propagate furthest to the Level B harassment threshold (Table 4); therefore, for the purposes of the exposure analysis, it was assumed the AA Dura-Spark or the GeoSource 800 J would be active during the entirety of

the survey. Thus the distance to the isopleth corresponding to the threshold for Level B harassment for the AA Dura-Spark 400 and the GeoSource 800 J (estimated at 141 m; Table 4) was used as the basis of the take calculation for all marine mammals. Note that this is conservative as Skipjack has stated that for approximately 120 of the 200 total survey days, neither the AA Dura-Spark nor the GeoSource 800 J would be operated, and the sources with smaller associated isopleth distances to the Level B harassment threshold would be used (Table 4).

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

Sound source	Radial distance to Level A harassment threshold (m) *				Radial distance to Level B harassment threshold (m)
	Low frequency cetaceans (peak SPL/ SEL_{cum})	Mid frequency cetaceans (peak SPL/ SEL_{cum})	High frequency cetaceans (peak SPL/ SEL_{cum})	Phocid pinnipeds (underwater) (peak SPL/ SEL_{cum})	All marine mammals
Shallow Sub-bottom Profilers					
TB Chirp III	-/<1	0	-/<1	-/<1	48
ET 216 Chirp	-/<1	-/0	-/<1	-/0	9
ET 424 Chirp	-/0	-/0	-/0	-/0	4
ET 512i Chirp	-/0	-/0	-/0	-/0	6
GeoPulse 5430	-/<1	-/0	-/<1	-/0	21
Parametric Sub-bottom Profilers					
Innomar Parametric SBPs	-/<1	-/<1	-/1.2	-/<1	1
Medium Sub-bottom Profilers					
AA Triple plate S-Boom (700/1000J)	-/<1	-/0	2.8/0	-/0	34
AA Dura-Spark 400	-/<1	-/0	2.8/0	-/0	141
GeoSource 400 J Sparker	-/<1	-/0	2.0/0	-/0	56
GeoSource 600 J Sparker	-/<1	-/0	3.2/<1	-/<1	112
GeoSource 800 J Sparker	-/<1	-/0	3.5/<1	-/<1	141
Acoustic Corers					
Pangeo Acoustic Corer (LF Chirp)	-/<1	-/0	-/<1	-/0	4
Pangeo Acoustic Corer (HF Chirp)	-/<1	-/0	-/<1	-/0	4
Acoustic Positioning					
USBL and GAPS (all models)	-/0	-/0	-/<1	-/0	50

* Distances to Level A harassment isopleths were calculated to determine the potential for Level A harassment to occur. Skipjack has not requested, and NMFS does not propose to authorize, the take by Level A harassment of any marine mammals.

- = not applicable; AA = Applied Acoustics; CF = Crocker and Fratantonio (2016); ET = EdgeTech; GAPS = Global Acoustic Positioning System; HF = high-frequency; J = joules; LF = low-frequency; m = meter; MF = mid-frequency; PW = Phocids in water; SBP = Sub-bottom profilers; SEL_{cum} = cumulative sound exposure level; SL = source level; SPL_{pk} = zero to peak sound pressure level in decibel referenced to 1 micropascal (dB re 1 µPa); TB = teledyne benthos; USBL = ultra-short baseline.

Predicted distances to Level A harassment isopleths, which vary based on marine mammal functional hearing groups (Table 4), were also calculated. The updated acoustic thresholds for impulsive sounds (such as HRG survey equipment) contained in the Technical Guidance (NMFS, 2018) were presented as dual metric acoustic thresholds using both cumulative sound exposure level (SEL_{cum}) and peak sound pressure level metrics. As dual metrics, NMFS considers onset of PTS (Level A harassment) to have occurred when either one of the two metrics is exceeded (*i.e.,* the metric resulting in the largest isopleth). The SEL_{cum} metric considers both level and duration of exposure, as well as auditory weighting functions by marine mammal hearing group.

When the NMFS Technical Guidance (2016) was published, in recognition of the fact that ensonified area/volume could be more technically challenging to predict because of the duration component in the new thresholds, we developed a User Spreadsheet that includes tools to help predict a simple isopleth that can be used in conjunction with marine mammal density or occurrence to help predict takes. We note that because of some of the assumptions included in the methods used for these tools, we anticipate that isopleths produced typically overestimate Level A harassment. However, these tools offer the best way to predict appropriate isopleths when more sophisticated 3D modeling methods are not available, and NMFS continues to develop ways to quantitatively refine these tools, and will qualitatively address the output where appropriate. For mobile sources (such as HRG surveys), the User Spreadsheet predicts the closest distance at which a stationary animal would incur PTS if the sound source traveled by the animal in a straight line at a constant speed.

Skipjack used the NMFS optional User Spreadsheet to calculate distances to Level A harassment isopleths based on SEL and used the spherical spreading loss model to calculate distances to Level A harassment

isopleths based on peak SPL. Modeling of distances to isopleths corresponding to Level A harassment was performed for all types of HRG equipment proposed for use with the potential to result in harassment of marine mammals. Isopleth distances to Level A harassment thresholds for all types of HRG equipment and all marine mammal functional hearing groups are shown in Table 4. To be conservative, the largest isopleth distances for each functional hearing group were used to model potential exposures above the Level A harassment threshold for all species within that functional hearing group. Inputs to the NMFS optional User Spreadsheet for the GeoSource 800 J Sparker, which resulted in the greatest potential isopleth distance to the Level A harassment threshold for any of the functional hearing groups, are shown in Table 5.

TABLE 5—INPUTS TO THE NMFS OPTIONAL USER SPREADSHEET FOR GEOSOURCE 800 J SPARKER

Source Level (RMS SPL) ..	203 dB re 1μPa.
Source Level (peak)	213 dB re 1μPa.
Weighting Factor Adjustment (kHz).	0.05.
Source Velocity (meters/second).	2.06.
Pulse Duration (seconds) ..	0.0034.
1/Repetition rate (seconds)	2.43.
Duty Cycle	0.00.

Due to the small estimated distances to Level A harassment thresholds for all marine mammal functional hearing groups, based on both SEL_{cum} and peak SPL (Table 4), and in consideration of the mitigation measures (see the *Mitigation* section for more detail), NMFS has determined that the likelihood of take of marine mammals in the form of Level A harassment occurring as a result of the survey is so low as to be discountable, and we therefore do not authorize the take by Level A harassment of any marine mammals.

Marine Mammal Occurrence

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

The habitat-based density models produced by the Duke University Marine Geospatial Ecology Laboratory (Roberts *et al.,* 2016, 2017, 2018) represent the best available information regarding marine mammal densities in the survey area. The density data presented by Roberts *et al.* (2016, 2017, 2018) incorporates aerial and shipboard line-transect survey data from NMFS and other organizations and incorporates data from 8 physiographic and 16 dynamic oceanographic and biological covariates, and controls for the influence of sea state, group size, availability bias, and perception bias on the probability of making a sighting. These density models were originally developed for all cetacean taxa in the U.S. Atlantic (Roberts *et al.,* 2016). In subsequent years, certain models have been updated on the basis of additional data as well as certain methodological improvements. Although these updated models (and a newly developed seal density model) are not currently publicly available, our evaluation of the changes leads to a conclusion that these represent the best scientific evidence available. More information, including the model results and supplementary information for each model, is available online at *seamap.env.duke.edu/models/Duke-EC-GOM-2015/*. Marine mammal density estimates in the project area (animals/km^2) were obtained using these model results (Roberts *et al.,* 2016, 2017, 2018). The updated models incorporate additional sighting data, including sightings from the NOAA Atlantic Marine Assessment Program for Protected Species (AMAPPS) surveys from 2010–2014 (NEFSC & SEFSC, 2011, 2012, 2014a, 2014b, 2015, 2016).

For purposes of the exposure analysis, density data from Roberts *et al.* (2016, 2017, 2018) were mapped using a geographic information system (GIS). The density coverages that included any portion of the survey area were selected for all survey months (see Figure 4 in the IHA application for an example of density blocks used to determine monthly marine mammal densities within the project area). Monthly density data for each species were then averaged over the year to come up with a mean annual density value for each species. Estimated monthly and average annual density (animals per km^2) of all marine mammal species that may be taken by the survey are shown in Table 8 of the IHA application. The mean annual density values used to estimate take numbers are also shown in Table 6 below.

Take Calculation and Estimation

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

In order to estimate the number of marine mammals predicted to be exposed to sound levels that would result in harassment, radial distances to predicted isopleths corresponding to harassment thresholds are calculated, as described above. Those distances are then used to calculate the area(s) around the HRG survey equipment predicted to be ensonified to sound levels that exceed harassment thresholds. The area estimated to be ensonified to relevant thresholds in a single day is then calculated, based on areas predicted to be ensonified around the HRG survey equipment and the estimated trackline distance traveled per day by the survey vessel. Skipjack estimates that planned surveys will achieve a maximum daily track line distance of 110 km per day during planned HRG surveys. This distance accounts for the vessel traveling at roughly 4 knots and accounts for non-active survey periods. Based on the maximum estimated distance to the Level B harassment threshold of 141 m (Table 4) and the maximum estimated daily track line distance of 110 km, an area of 31.1 km^2 would be ensonified to the Level B harassment threshold per day during Skipjack's planned HRG surveys. As described above, this is a conservative estimate as it assumes the HRG sources that result in the greatest isopleth distances to the Level B harassment threshold would be operated at all times during the 200 day survey.

The number of marine mammals expected to be incidentally taken per day is then calculated by estimating the number of each species predicted to occur within the daily ensonified area (animals/km^2), incorporating the estimated marine mammal densities as described above. Estimated numbers of each species taken per day are then multiplied by the total number of survey days (*i.e.,* 200). The product is then rounded, to generate an estimate of the total number of instances of harassment expected for each species over the duration of the survey. A summary of this method is illustrated in the following formula:

Estimated Take = D × ZOI × # of days

Where:

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

Using this method to calculate take, Skipjack estimated a total of 2 takes by Level A harassment of 1 species (harbor porpoise) would occur, in the absence of mitigation (see Table 9 in the IHA application for the estimated number of Level A takes for all potential HRG equipment types). However, as described above, due to the very small estimated distances to Level A harassment thresholds (Table 4), and in consideration of the mitigation measures, the likelihood of the survey resulting in take in the form of Level A harassment is considered so low as to be discountable; therefore, we do not

propose to authorize take of any marine mammals by Level A harassment. Authorized take numbers are shown in Table 6.

TABLE 6—TOTAL NUMBERS OF POTENTIAL INCIDENTAL TAKE OF MARINE MAMMALS AUTHORIZED AND AUTHORIZED TAKES AS A PERCENTAGE OF POPULATION

Species	Density (animals/100 km^2)	Authorized takes by Level A harassment	Estimated takes by Level B harassment	Authorized takes by Level B harassment	Total takes authorized	Total authorized takes as a percentage of population [1]
Fin whale	0.00124	0	8	8	8	0.2
Sei whale [2]	0.00001	0	0	1	1	0.1
Minke whale	0.00034	0	2	2	2	0.1
Humpback whale	0.00053	0	3	3	3	0.2
North Atlantic right whale	0.00043	0	3	3	3	0.7
Sperm Whale [2]	0.00004	0	0	3	3	0.1
Atlantic white-sided dolphin [2]	0.00229	0	14	40	40	0.1
Atlantic spotted dolphin [2]	0.00124	0	8	100	100	0.2
Bottlenose dolphin (W. N. Atlantic Coastal Migratory)	0.2355	0	1,465	1,465	1,465	22.1
Killer whale [2]	0.00001	0	0	3	3	27.3
Short-finned pilot whale [2]	0.00031	0	2	20	20	0.1
Long-finned pilot whale [2]	0.00031	0	2	20	20	0.1
Risso's dolphin [2]	0	0	0	30	30	0.4
Common dolphin	0.01328	0	83	83	83	0.1
Harbor porpoise	0.01277	0	79	79	79	0.2
Gray seal	0.00072	0	4	4	4	0.0
Harbor seal	0.00072	0	4	4	4	0.0

[1] Calculations of percentage of stock taken are based on the best available abundance estimate as shown in Table 2. In most cases the best available abundance estimate is provided by Roberts *et al.* (2016, 2017, 2018), when available, to maintain consistency with density estimates derived from Roberts *et al.* (2016, 2017, 2018). For North Atlantic right whales the best available abundance estimate is derived from the 2018 North Atlantic Right Whale Consortium 2018 Annual Report Card (Pettis *et al.,* 2018).

[2] The number of authorized takes (Level B harassment only) for these species has been increased from the estimated take number to mean group size. Source for group size estimates are as follows: Sei whale: Kenney and Vigness-Raposa (2010); sperm whale: Barkaszi and Kelly (2019); killer whale: de Bruyn *et al.* (2013); Risso's dolphin: Kenney and Vigness-Raposa (2010); long-finned and short-finned pilot whale: Olson (2018); Atlantic spotted dolphin: Herzing and Perrin (2018); Atlantic white-sided dolphin: Cipriano (2018).

Skipjack requested take authorization for three marine mammal species for which no takes were calculated based on the modeling approach described above: Killer whale, sei whale and Risso's dolphin. Though the modeling resulted in estimates of less than 1 take for these species, Skipjack determined that take of these species is possible due to low densities in some density blocks and general variability in the movements of these species. NMFS believes this is reasonable and we therefore authorize take of these species.

As described above, Roberts *et al.* (2016, 2017, 2018) produced density models to genus level for *Globicephala* spp. and did not differentiate between long-finned and shortfinned pilot whales. Similarly, Roberts *et al.* (2018) produced density models for all seals and did not differentiate by seal species. The take calculation methodology as described above resulted in an estimate of 2 pilot whale takes and 4 seal takes. Based on this estimate, Skipjack requested 2 takes each of short-finned and long-finned pilot whales, and 4 takes each of harbor and gray seals, based on an assumption that the modeled takes could occur to either of the respective species. We think this is a reasonable approach and therefore authorize the take of 4 harbor seals, 4 gray seals, 2 short-finned pilot whales and 2 long-finned pilot whales.

Using the take methodology approach described above, the take estimates for the sei whale, sperm whale, killer whale, Risso's dolphin, Atlantic white-sided dolphin, spotted dolphin, long-finned and short-finned pilot whale were less than the average group sizes estimated for these species (Table 6). However, information on the social structures of these species indicates these species are likely to be encountered in groups. Therefore it is reasonable to conservatively assume that one group of each of these species will be taken during the survey. We therefore authorize the take of the average group size for these species to account for the possibility that the survey encounters a group of any of these species or stocks (Table 6).

Mitigation

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

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

(1) The manner in which, and the degree to which, the successful implementation of the measure(s) is expected to reduce impacts to marine mammals, marine mammal species or stocks, and their habitat. This considers the nature of the potential adverse impact being mitigated (likelihood,

scope, range). It further considers the likelihood that the measure will be effective if implemented (probability of accomplishing the mitigating result if implemented as planned), the likelihood of effective implementation (probability implemented as planned), and;

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

Mitigation Measures

The following mitigation measures must be implemented during Skipjack's site characterization surveys.

Marine Mammal Exclusion Zones, Buffer Zone and Monitoring Zone

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

- A 500-m EZ for North Atlantic right whales;
- A 200 m EZ for all other ESA-listed marine mammals (*i.e.,* fin, sei and sperm whales), and
- A 100-m EZ for all other marine mammals.

If a marine mammal is detected approaching or entering the EZs during the survey, the vessel operator would adhere to the shutdown procedures described below. In addition to the EZs described above, PSOs must visually monitor a 200-m Buffer Zone. During use of acoustic sources with the potential to result in marine mammal harassment (*i.e.,* anytime the acoustic source is active, including ramp-up), occurrences of marine mammals within the Buffer Zone (but outside the EZs) must be communicated to the vessel operator to prepare for potential shutdown of the acoustic source. The Buffer Zone is not applicable when the EZ is greater than 100 m. PSOs are required to observe a 500-m Monitoring Zone and record the presence of all marine mammals within this zone. In addition, any marine mammals observed within 141 m of the HRG equipment must be documented by PSOs as taken by Level B harassment. The zones described above must be based upon the radial distance from the active equipment (rather than being based on distance from the vessel itself).

Visual Monitoring

A minimum of one NMFS-approved PSO must be on duty and conducting visual observations at all times during daylight hours (*i.e.,* from 30 minutes prior to sunrise through 30 minutes following sunset) and 30 minutes prior to and during nighttime ramp-ups of HRG equipment. Visual monitoring must begin no less than 30 minutes prior to ramp-up of HRG equipment and must continue until 30 minutes after use of the acoustic source ceases or until 30 minutes past sunset. PSOs must establish and monitor the applicable EZs, Buffer Zone and Monitoring Zone as described above. Visual PSOs must coordinate to ensure 360° visual coverage around the vessel from the most appropriate observation posts, and must conduct visual observations using binoculars and the naked eye while free from distractions and in a consistent, systematic, and diligent manner. PSOs must estimate distances to marine mammals located in proximity to the vessel and/or relevant using range finders. It is the responsibility of the Lead PSO on duty to communicate the presence of marine mammals as well as to communicate and enforce the action(s) that are necessary to ensure mitigation and monitoring requirements are implemented as appropriate. Position data must be recorded using hand-held or vessel global positioning system (GPS) units for each confirmed marine mammal sighting.

Pre-Clearance of the Exclusion Zones

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

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

Ramp-Up of Survey Equipment

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

Shutdown Procedures

If an HRG source is active and a marine mammal is observed within or entering a relevant EZ (as described above) an immediate shutdown of the HRG survey equipment is required. When shutdown is called for by a PSO, the acoustic source must be immediately deactivated and any dispute resolved only following deactivation. Any PSO on duty will have the authority to delay the start of survey operations or to call for shutdown of the acoustic source if a marine mammal is detected within the applicable EZ. The vessel operator must establish and maintain clear lines of communication directly between PSOs on duty and crew controlling the HRG source(s) to ensure that shutdown commands are conveyed swiftly while

allowing PSOs to maintain watch. Subsequent restart of the HRG equipment must only occur after the marine mammal has either been observed exiting the relevant EZ, or, until an additional time period has elapsed with no further sighting of the animal within the relevant EZ (*i.e.,* 15 minutes for small odontocetes and seals, and 30 minutes for large whales).

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

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

If a species for which authorization has not been granted, or, a species for which authorization has been granted but the authorized number of takes have been met, approaches or is observed within the area encompassing the Level B harassment isopleth (141 m), shutdown must occur.

Vessel Strike Avoidance

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

- All vessel operators and crew will maintain vigilant watch for cetaceans and pinnipeds, and slow down or stop their vessel to avoid striking these protected species;
- All vessel operators will comply with 10 knot (18.5 km/hr) or less speed restrictions in any SMA and DMA per NOAA guidance;
- All vessel operators will reduce vessel speed to 10 knots (18.5 km/hr) or less when any large whale, any mother/calf pairs, large assemblages of non-delphinoid cetaceans are observed near (within 100 m (330 ft)) an underway vessel;
- All survey vessels will maintain a separation distance of 500 m (1640 ft) or greater from any sighted North Atlantic right whale;
- If underway, vessels must steer a course away from any sighted North Atlantic right whale at 10 knots (18.5 km/hr) or less until the 500 m (1640 ft) minimum separation distance has been established. If a North Atlantic right whale is sighted in a vessel's path, or within 100 m (330 ft) to an underway vessel, the underway vessel must reduce speed and shift the engine to neutral. Engines will not be engaged until the North Atlantic right whale has moved outside of the vessel's path and beyond 100 m. If stationary, the vessel must not engage engines until the North Atlantic right whale has moved beyond 100 m;
- All vessels will maintain a separation distance of 100 m (330 ft) or greater from any sighted non-delphinoid cetacean. If sighted, the vessel underway must reduce speed and shift the engine to neutral, and must not engage the engines until the non-delphinoid cetacean has moved outside of the vessel's path and beyond 100 m. If a survey vessel is stationary, the vessel will not engage engines until the non-delphinoid cetacean has moved out of the vessel's path and beyond 100 m;
- All vessels will maintain a separation distance of 50 m (164 ft) or greater from any sighted delphinoid cetacean. Any vessel underway remain parallel to a sighted delphinoid cetacean's course whenever possible, and avoid excessive speed or abrupt changes in direction. Any vessel underway reduces vessel speed to 10 knots (18.5 km/hr) or less when pods (including mother/calf pairs) or large assemblages of delphinoid cetaceans are observed. Vessels may not adjust course and speed until the delphinoid cetaceans have moved beyond 50 m and/or the abeam of the underway vessel;
- All vessels will maintain a separation distance of 50 m (164 ft) or greater from any sighted pinniped; and
- All vessels underway will not divert or alter course in order to approach any whale, delphinoid cetacean, or pinniped. Any vessel underway will avoid excessive speed or abrupt changes in direction to avoid injury to the sighted cetacean or pinniped.

Skipjack must ensure that vessel operators and crew maintain a vigilant watch for marine mammals by slowing down or stopping the vessel to avoid striking marine mammals. Project-specific training will be conducted for all vessel crew prior to the start of survey activities. Confirmation of the training and understanding of the requirements will be documented on a training course log sheet. Signing the log sheet will certify that the crew members understand and will comply with the necessary requirements throughout the survey activities.

Seasonal Operating Requirements

A section of the planned survey area partially overlaps with a portion of a North Atlantic right whale SMA off the mouth of Delaware Bay. This SMA is active from November 1 through April 30 of each year. Any survey vessels that are >65 ft in length is required to adhere to the mandatory vessel speed restrictions (<10 kn) when operating within the SMA during times when the SMA is active. In addition, between watch shifts, members of the monitoring team must consult NMFS' North Atlantic right whale reporting systems for the presence of North Atlantic right whales throughout survey operations. Members of the monitoring team must also monitor the NMFS North Atlantic right whale reporting systems for the establishment of Dynamic Management Areas (DMA). If NMFS should establish a DMA in the survey area while surveys are underway, Skipjack must contact NMFS within 24 hours of the establishment of the DMA to determine whether alteration of survey activities was warranted to avoid right whales to the extent possible.

The mitigation measures are designed to avoid the already low potential for injury in addition to some instances of Level B harassment, and to minimize the potential for vessel strikes. Further, we believe the mitigation measures are practicable for the applicant to implement. Skipjack has proposed additional mitigation measures in addition to the measures described above; for information on the measures proposed by Skipjack, see Section 11 of the IHA application.

There are no known marine mammal rookeries or mating or calving grounds in the survey area that would otherwise potentially warrant increased mitigation measures for marine mammals or their habitat (or both). The survey would occur in an area that has been identified as a biologically important area for migration for North Atlantic right whales. However, given the small spatial extent of the survey area relative to the substantially larger spatial extent of the right whale migratory area, the survey is not expected to appreciably reduce migratory habitat nor to negatively impact the migration of North Atlantic right whales, thus mitigation to address the planned survey's occurrence in North Atlantic right whale migratory habitat is not warranted.

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

Monitoring and Reporting

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

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

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

Monitoring Measures

As described above, visual monitoring must be performed by qualified and NMFS-approved PSOs. Skipjack 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 mammals and mitigation requirements (including brief alerts regarding maritime hazards), and must have successfully completed an approved PSO training course appropriate for their designated task. Skipjack must provide resumes of all proposed PSOs (including alternates) to NMFS for review and approval at least 45 days prior to the start of survey operations.

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

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

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

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

Reporting Measures

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

monitoring. Any recommendations made by NMFS must be addressed in the final report prior to acceptance by NMFS. PSO datasheets or raw sightings data must also be provided with the draft and final monitoring report.

In addition to the final technical report, Skipjack must provide the reporting described below as necessary during survey activities. If a North Atlantic right whale is observed at any time during surveys or during vessel transit, Skipjack must report sighting information to the NMFS North Atlantic Right Whale Sighting Advisory System. North Atlantic right whale sightings in any location may also be reported to the U.S. Coast Guard via channel 16.

In the unanticipated event that Skipjack's survey activities lead to an injury (Level A harassment) or mortality (*e.g.,* ship-strike, gear interaction, and/or entanglement) of a marine mammal, Skipjack must immediately cease the specified activities and report the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources and the NMFS New England/Mid-Atlantic Stranding Coordinator. The report must include the following information:

- Time, date, and location (latitude/longitude) of the incident;
- Name and type of vessel involved;
- Vessel's speed during and leading up to the incident;
- Description of the incident;
- Status of all sound source use in the 24 hours preceding the incident;
- Water depth;
- Environmental conditions (*e.g.,* wind speed and direction, Beaufort sea state, cloud cover, and visibility);
- Description of all marine mammal observations in the 24 hours preceding the incident;
- Species identification or description of the animal(s) involved;
- Fate of the animal(s); and
- Photographs or video footage of the animal(s) (if equipment is available).

Activities would not resume until NMFS is able to review the circumstances of the event. NMFS would work with Skipjack to minimize reoccurrence of such an event in the future. Skipjack would not resume activities until notified by NMFS.

In the event that Skipjack discovers an injured or dead marine mammal and determines that the cause of the injury or death is unknown and the death is relatively recent (*i.e.,* in less than a moderate state of decomposition), Skipjack would immediately report the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources and the NMFS New England/Mid-Atlantic Stranding Coordinator. The report would include the same information identified in the paragraph above. Activities would be able to continue while NMFS reviews the circumstances of the incident. NMFS would work with Skipjack to determine if modifications in the activities are appropriate.

In the event that Skipjack discovers an injured or dead marine mammal and determines that the injury or death is not associated with or related to the activities authorized in the IHA (*e.g.,* previously wounded animal, carcass with moderate to advanced decomposition, or scavenger damage), Skipjack would report the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources, and the NMFS New England/Mid-Atlantic Regional Stranding Coordinator, within 24 hours of the discovery. Skipjack would provide photographs or video footage (if available) or other documentation of the stranded animal sighting to NMFS. Skipjack may continue its operations in such a case.

Negligible Impact Analysis and Determination

NMFS has defined negligible impact as an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival (50 CFR 216.103). A negligible impact finding is based on the lack of likely adverse effects on annual rates of recruitment or survival (*i.e.,* population-level effects). An estimate of the number of takes alone is not enough information on which to base an impact determination. In addition to considering estimates of the number of marine mammals that might be ''taken'' through harassment, NMFS considers other factors, such as the likely nature of any responses (*e.g.,* intensity, duration), the context of any responses (*e.g.,* critical reproductive time or location, migration), as well as effects on habitat, and the likely effectiveness of the mitigation. We also assess the number, intensity, and context of estimated takes by evaluating this information relative to population status. Consistent with the 1989 preamble for NMFS's implementing regulations (54 FR 40338; September 29, 1989), the impacts from other past and ongoing anthropogenic activities are incorporated into this analysis via their impacts on the environmental baseline (*e.g.,* as reflected in the regulatory status of the species, population size and growth rate where known, ongoing sources of human-caused mortality, or ambient noise levels).

To avoid repetition, our analysis applies to all the species listed in Table 2, given that NMFS expects the anticipated effects of the planned survey to be similar in nature.

NMFS does not anticipate that serious injury or mortality would occur as a result of Skipjack's survey, even in the absence of mitigation. Thus the authorization does not authorize any serious injury or mortality. As discussed in the *Potential Effects* section, non-auditory physical effects and vessel strike are not expected to occur. Additionally and as discussed previously, given the nature of activity and sounds sources used and especially in consideration of the required mitigation, Level A harassment is neither anticipated nor authorized. We expect that all potential takes would be in the form of short-term Level B behavioral harassment in the form of temporary avoidance of the area, reactions that are considered to be of low severity and with no lasting biological consequences (*e.g.,* Southall *et al.,* 2007).

Effects on individuals that are taken by Level B harassment, on the basis of reports in the literature as well as monitoring from other similar activities, will likely be limited to reactions such as increased swimming speeds, increased surfacing time, or decreased foraging (if such activity were occurring) (*e.g.,* Thorson and Reyff, 2006; HDR, Inc., 2012; Lerma, 2014). Most likely, individuals will simply move away from the sound source and temporarily avoid the area where the survey is occurring. We expect that any avoidance of the survey area by marine mammals would be temporary in nature and that any marine mammals that avoid the survey area during the survey activities would not be permanently displaced. Even repeated Level B harassment of some small subset of an overall stock is unlikely to result in any significant realized decrease in viability for the affected individuals, and thus would not result in any adverse impact to the stock as a whole.

In addition to being temporary and short in overall duration, the acoustic footprint of the survey is small relative to the overall distribution of the animals in the area and their use of the area. Feeding behavior is not likely to be significantly impacted. Prey species are mobile and are broadly distributed throughout the project 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 survey area and there are no feeding areas known to be biologically important to marine mammals within the survey area. There is no designated critical habitat for any ESA-listed marine mammals in the survey area. The survey area overlaps a portion of a biologically important migratory area for North Atlantic right whales (effective March–April and November–December) that extends from Massachusetts to Florida (LaBrecque, *et al.,* 2015). Off the coasts of Delaware and Maryland, this biologically important migratory area extends from the coast to beyond the shelf break. Due to the fact that that the survey is temporary and the spatial extent of sound produced by the survey would be very small relative to the spatial extent of the available migratory habitat in the area, right whale migration is not expected to be impacted by the survey.

Potential impacts to marine mammal habitat were discussed previously in this document (see *Potential Effects of the Specified Activity on Marine Mammals and their Habitat*). Marine mammal habitat may be impacted by elevated sound levels, but these impacts would be temporary. Repeated exposures of individuals to relatively low levels of sound outside of preferred habitat areas are unlikely to significantly disrupt critical behaviors. We expect that animals disturbed by sound associated with the planned survey would simply avoid the area during the survey in favor of other, similar habitats.

As described above, North Atlantic right, humpback, and minke whales, and gray and harbor seals are experiencing ongoing UMEs. For North Atlantic right whales, as described above, no injury as a result of the proposed survey is expected or authorized, and Level B harassment takes of right whales are expected to be in the form of avoidance of the immediate area of the proposed survey. In addition, the number of takes authorized above the Level B harassment threshold are minimal (*i.e.,* 3). As no injury or mortality is expected or authorized, and Level B harassment of North Atlantic right whales will be reduced to the level of least practicable adverse impact through use of mitigation measures, the authorized takes of right whales would not exacerbate or compound the ongoing UME in any way.

Similarly, no injury or mortality is expected or authorized for any of the other species with UMEs, Level B harassment will be reduced to the level of least practicable adverse impact through use of mitigation measures, and the authorized takes would not exacerbate or compound the ongoing UMEs. For minke whales, although the ongoing UME is under investigation (as occurs for all UMEs), this event does not provide cause for concern regarding population level impacts, as the likely population abundance is greater than 20,000 whales. Even though the PBR value is based on an abundance for U.S. waters that is negatively biased and a small fraction of the true population abundance, annual M/SI does not exceed the calculated PBR value for minke whales. With regard to humpback whales, the UME does not yet provide cause for concern regarding population-level impacts. Despite the UME, the relevant population of humpback whales (the West Indies breeding population, or distinct population segment (DPS)) remains healthy. The West Indies DPS, which consists of the whales whose breeding range includes the Atlantic margin of the Antilles from Cuba to northern Venezuela, and whose feeding range primarily includes the Gulf of Maine, eastern Canada, and western Greenland, was delisted. The status review identified harmful algal blooms, vessel collisions, and fishing gear entanglements as relevant threats for this DPS, but noted that all other threats are considered likely to have no or minor impact on population size or the growth rate of this DPS (Bettridge *et al.,* 2015). As described in Bettridge *et al.* (2015), the West Indies DPS has a substantial population size (*i.e.,* approximately 10,000; Stevick *et al.,* 2003; Smith *et al.,* 1999; Bettridge *et al.,* 2015), and appears to be experiencing consistent growth. With regard to gray and harbor seals, although the ongoing UME is under investigation, the UME does not yet provide cause for concern regarding population-level impacts to any of these stocks. For harbor seals, the population abundance is over 75,000 and annual M/SI (345) is well below PBR (2,006) (Hayes *et al.,* 2018). For gray seals, the population abundance in the United States is over 27,000, with an estimated abundance including seals in Canada of approximately 505,000, and abundance is likely increasing in the U.S. Atlantic EEZ as well as in Canada (Hayes *et al.,* 2018).

The mitigation measures are expected to reduce the number and/or severity of takes by giving animals the opportunity to move away from the sound source before HRG survey equipment reaches full energy and by establishing zones that will prevent animals from being exposed to higher sound levels that may otherwise result in injury or more severe behavioral responses. No Level A harassment, which involves the potential for injury, has been authorized. Additional vessel strike avoidance requirements will further mitigate potential impacts to marine mammals during vessel transit to and within the survey area.

NMFS concludes that exposures to marine mammal species and stocks due to Skipjack's survey would result in only short-term (temporary and short in duration) effects to individuals exposed. Marine mammals may temporarily avoid the immediate area, but are not expected to permanently abandon the area. Major shifts in habitat use, distribution, or foraging success are not expected. NMFS does not anticipate the authorized takes to impact annual rates of recruitment or survival.

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

- No mortality, serious injury, or Level A harassment is anticipated or authorized;
- The anticipated impacts of the activity on marine mammals would primarily be in the form of temporary behavioral changes due to avoidance of the area around the survey vessel;
- The availability of alternate areas of similar habitat value (for foraging, etc.) for marine mammals that may temporarily vacate the survey area during the survey to avoid exposure to sounds from the activity;
- The survey area does not contain known areas of significance for mating or calving;
- Effects on species that serve as prey species for marine mammals from the survey would be minor and temporary and would not be expected to reduce the availability of prey or to affect marine mammal feeding;
- The mitigation measures, including visual and acoustic monitoring, exclusion zones, and shutdown measures, are expected to minimize potential impacts to marine mammals.

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

The numbers of marine mammals that we authorize to be taken, for all species and stocks, would be considered small relative to the relevant stocks or populations (less than 28 percent for two of seventeen species and stocks, and less than 1 percent for all remaining species and stocks). See Table 6. Based on the analysis contained herein of the activity (including the mitigation and monitoring measures) and the anticipated take of marine mammals, NMFS finds that small numbers of marine mammals will be taken relative to the population size of the affected species or stocks.

Unmitigable Adverse Impact Analysis and Determination

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

National Environmental Policy Act

To comply with the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. 4321 *et seq.*) and NOAA Administrative Order (NAO) 216–6A, NMFS must evaluate our proposed action (*i.e.,* the promulgation of regulations and subsequent issuance of incidental take authorization) and alternatives with respect to potential impacts on the human environment.

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

Endangered Species Act

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

The NMFS Office of Protected Resources Permits and Conservation Division is authorizing the incidental take of four species of marine mammals which are listed under the ESA: The North Atlantic right, fin, sei and sperm whale. We requested initiation of consultation under Section 7 of the ESA with NMFS GARFO on September 30, 2019, for the issuance of this IHA. In November, 2019, NMFS GARFO determined our issuance of the IHA to Skipjack was not likely to adversely affect the North Atlantic right, fin, sei and sperm whale or the critical habitat of any ESA-listed species or result in the take of any marine mammals in violation of the ESA.

Authorization

NMFS has issued an IHA to Skipjack for conducting marine site characterization surveys offshore of Delaware and Maryland, from the date of issuance for a period of one year, provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated.

Dated: November 26, 2019.

Angela Somma,

Chief, Endangered Species Conservation Division, Office of Protected Resources, National Marine Fisheries Service.

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648–XR070]

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Geophysical Survey in the Atlantic Ocean

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

ACTION: Notice; proposed revised incidental harassment authorization (IHA); request for comments.

SUMMARY: On November 30, 2018, NMFS issued an IHA to ION GeoVentures, pursuant to the Marine Mammal Protection Act (MMPA). NMFS has received a request, co-signed by officers from ION GeoVentures (ION) and GX Technology Corporation (GXT), to administratively change the name of the holder of the subject IHA from ION to GXT. No other changes are proposed. NMFS is inviting comments on the proposed change.

DATES: Comments and information must be received no later than January 2, 2020.

ADDRESSES: Comments should be addressed to Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service. Physical comments should be sent to 1315 East-West Highway, Silver Spring, MD 20910 and electronic comments should be sent to *ITP.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 received electronically, including all attachments, must not exceed a 25-megabyte file size. Attachments to electronic comments will be accepted in Microsoft Word or Excel or Adobe PDF file formats only. All comments received are a part of the public record and will generally be posted online at *www.fisheries.noaa.gov/action/incidental-take-authorization-oil-and-gas-industry-geophysical-survey-*