NESDIS/CRSRA, 1335 East-West Highway, G–101, Silver Spring, Maryland 20910; (301) 713–7077 or *samira.patel@noaa.gov.*

Additional Information and Public Comments

Any member of the public who plans to attend the open meeting should RSVP to Samira Patel at (301) 713–7077, or *samira.patel@noaa.gov* by October 15, 2018. Any member of the public wishing further information concerning the meeting or who wishes to submit oral or written comments should contact Tahara Dawkins, Designated Federal Officer for ACCRES, NOAA/NESDIS/CRSRA, 1335 East-West Highway, G–101, Silver Spring, Maryland 20910; (301) 713–3385 or *tahara.dawkins@noaa.gov.* Copies of the draft meeting agenda will be posted on the Commercial Remote Sensing Regulatory Affairs Office at *https://www.nesdis.noaa.gov/CRSRA/accresMeetings.html.*

ACCRES expects that public statements presented at its meetings will not be repetitive of previously-submitted oral or written statements. In general, each individual or group making an oral presentation may be limited to a total time of five minutes. Written comments sent to NOAA/NESDIS/CRSRA on or before October 10, 2018 will be provided to Committee members in advance of the meeting. Comments received too close to the meeting date will normally be provided to Committee members at the meeting.

Stephen M. Volz,

Assistant Administrator for Satellite and Information Services.

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648–XG030

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to U.S. Navy's Office of Naval Research Arctic Research Activities

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 the U.S. Navy's Office of Naval Research (ONR) to incidentally harass, by Level B harassment only, marine mammals during research activities associated with the Arctic Research Activities project in the Beaufort and Chukchi Seas. The Navy's activities are considered military readiness activities pursuant to the MMPA, as amended by the National Defense Authorization Act for Fiscal Year 2004 (NDAA).

DATES: This Authorization is effective from September 20, 2018, through September 19, 2019.

FOR FURTHER INFORMATION CONTACT: Amy Fowler, Office of Protected Resources, NMFS, (301) 427–8401. Electronic copies of the application and supporting documents, as well as a list of the references cited in this document, may be obtained online at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-military-readiness-activities.* 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 monitoring and reporting of such takings.

The NDAA (Pub. L. 108–136) removed the ''small numbers'' and ''specified geographical region'' limitations indicated above and amended the definition of ''harassment'' as it applies to a ''military readiness activity.'' The activity for which incidental take of marine mammals has been authorized qualifies as a military readiness activity. The Navy's action constitutes a military readiness activity because these scientific research activities directly support the adequate and realistic testing of military equipment, vehicles, weapons, and sensors for proper operation and suitability for combat use by providing critical data on the changing natural and physical environment in which such materiel will be assessed and deployed. This scientific research also directly supports fleet training and operations by providing up to date information and data on the natural and physical environment essential to training and operations. The definitions of all applicable MMPA statutory terms cited above are included in the relevant sections below.

Summary of Request

On April 6, 2018, NMFS received a request from ONR for an IHA to take marine mammals incidental to Arctic Research Activities in the Beaufort and Chukchi Seas. ONR's application was determined adequate and complete on August 7, 2018. ONR's request is for take of beluga whales (*Delphinapterus leucas*), bearded seals (*Erignathus barbatus*), and ringed seals (*Pusa hispida hispida*) by Level B harassment only. Neither ONR nor NMFS expects serious injury or mortality to result from this activity and, therefore, an IHA is appropriate.

This IHA covers one year of a larger project for which ONR intends to request take authorization for subsequent facets of the project. This IHA is valid from September 20, 2018, through September 19, 2019. The larger three-year project involves several scientific objectives which support the Arctic and Global Prediction Program, as well as the Ocean Acoustics Program and the Naval Research Laboratory, for which ONR is the parent command.

Description of Activity

Overview

ONR's Arctic Research Activities involve scientific experiments conducted in support of the Arctic and Global Prediction Program, the

Stratified Ocean Dynamics of the Arctic (SODA), Arctic Mobile Observing System (AMOS), Ocean Acoustics field work, and Naval Research Laboratory (NRL) in the Beaufort and Chukchi Seas in 2018 and 2019. The study area for the Arctic Research Activities is located in the U.S. Exclusive Economic Zone (EEZ) and the high seas north of Alaska (see Figure 1–1 in the IHA application). The total area of the study area is 257,723 square miles (mi^2) (667,500 square kilometers (km^2)).

Beginning in late September 2018, the U.S. Coast Guard Cutter (CGC) HEALY and the Research Vessel (R/V) Sikuliaq will be used to tow and deploy acoustic sources. CGC HEALY may also be required to perform icebreaking to deploy the moored and ice-tethered acoustic sources. A maximum of four research cruises (one cruise per vessel in each calendar year) of up to 30 days are expected. Each vessel may tow sources for up to 8 hours per day for 15 days during each cruise in open water or marginal ice. Once deployed, moored and drifting sources would operate intermittently each day for up to three years (only the first year is authorized by this IHA). Icebreaking may occur on up to 4 days.

A detailed description of the planned Arctic Research Activities project is provided in the **Federal Register** notice for the proposed IHA (83 FR 40234; August 14, 2018). Since that time, no changes have been made to the planned Arctic Research Activities. Therefore, a detailed description is not provided here. Please refer to that **Federal Register** notice for the description of the specified activity.

Comments and Responses

A notice of NMFS's proposal to issue an IHA to ONR was published in the **Federal Register** on August 14, 2018 (83 FR 40234). That notice described, in detail, ONR's activity, the marine mammal species that may be affected by the activity, and the anticipated effects on marine mammals. During the 30-day public comment period, NMFS received a comment from the Marine Mammal Commission (Commission).

Comment 1: The Commission noted that the Navy used cutoff distances instead of relying on Bayesian biphasic dose response functions (BRFs) to inform take estimates. The Commission asserted that the cutoff distances used by the Navy are unsubstantiated and that the Navy arbitrarily set a cutoff distance of 10 kilometers (km) for pinnipeds, which could effectively eliminate a large portion of the estimated number of takes. The Commission, therefore, recommended that the Navy refrain from using cut-off distances in conjunction with the Bayesian BRFs.

Response: We disagree with the Navy's recommendation. The derivation of the behavioral response functions and associated cutoff distances is provided in the Navy's Criteria and Thresholds for U.S. Navy Acoustic and Explosive Effects Analysis (Phase III) technical report (Navy 2017a). The consideration of proximity (distance cutoff) was part of criteria developed in consultation with NMFS and was applied within the Navy's BRF. Distance cutoffs beyond which the potential of significant behavioral responses were considered to be unlikely were used in conducting analysis for ONR's Arctic Research Activities. The Navy's BRF applied within these distances is an appropriate method for providing a realistic (but still conservative where some uncertainties exist) estimate of impact and potential take for these activities.

Comment 2: The Commission also noted that a standard requirement for coordinating vessel presence in the Beaufort Sea with the Alaska Eskimo Whaling Commission (AEWC) to ensure that ONR vessels do not disrupt subsistence hunting was left out of the proposed IHA.

Response: NMFS has included this requirement to coordinate with the AEWC in the final authorization.

Description of Marine Mammals in the Area of Specified Activities

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

Table 1 lists all species with expected potential for occurrence in the study area and summarizes information related to the population or stock, including regulatory status under the MMPA and the Endangered Species Act (ESA) and potential biological removal (PBR), where known. For taxonomy, we follow Committee on Taxonomy (2017). 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's SARs). While no mortality is anticipated or authorized here, PBR and annual serious injury and mortality from anthropogenic sources are included here as gross indicators 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's 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's U.S. 2017 SARs (*e.g.,* Muto *et al.,* 2018, Carretta *et al.,* 2018). All values presented in Table 1 are the most recent available at the time of publication and are available in the 2017 SARs (Muto *et al.,* 2018; Carretta *et al.,* 2018).

TABLE 1—MARINE MAMMAL SPECIES POTENTIALLY PRESENT IN THE PROJECT AREA

Common name	Scientific name	Stock	ESA/ MMPA status; strategic (Y/N) [1]	Stock abundance (CV, N_{min}, most recent abundance survey) [2]	PBR	Annual M/SI [3]
Order Cetartiodactyla—Cetacea—Superfamily Mysticeti (baleen whales)						
Family Eschrichtiidae:						
Gray whale	*Eschrichtius robustus*	Eastern North Pacific	-/-; N	20,900 (0.05, 20,125, 2011).	624	4.25
Family Balaenidae:						

TABLE 1—MARINE MAMMAL SPECIES POTENTIALLY PRESENT IN THE PROJECT AREA—Continued

Common name	Scientific name	Stock	ESA/ MMPA status; strategic (Y/N) [1]	Stock abundance (CV, N_{min}, most recent abundance survey) [2]	PBR	Annual M/SI [3]
Bowhead whale	*Balaena mysticetus*	Western Arctic	E/D; Y	16,820 (0.052, 16,100, 2011).	161	43
Superfamily Odontoceti (toothed whales, dolphins, and porpoises)						
Family Delphinidae:						
Beluga whale	*Delphinapterus leucas*	Beaufort Sea	-/-; N	39,258 (0.229, N/A, 1992).	Undet.[4]	139
Beluga whale	*Delphinapterus leucas*	Eastern Chukchi Sea	-/-; N	20,752 (0.70, 12.194, 2012).	244	67
Order Carnivora—Superfamily Pinnipedia						
Family Phocidae (earless seals):						
Bearded seal [5]	*Erignathus barbatus*	Alaska	T/D; Y	299,174 (-, 273,676, 2013).	8,210	391
Ribbon seal	*Histriophoca fasciata*	Alaska	-/-; N	184,000 (-, 163,086, 2013).	9,785	3.8
Ringed seal [5]	*Pusa hispida hispida*	Alaska	T/D; Y	170,000 (-, 170,000, 2013).	5,100	1,054
Spotted seal	*Phoca largha*	Alaska	-/-; N	461,625 (-, 423,237, 2013).	12,697	329

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

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

[3] These values, found in NMFS's SARs, represent annual levels of human-caused mortality plus serious injury from all sources combined (*e.g.,* commercial fisheries, ship strike). Annual M/SI often cannot be determined precisely and is in some cases presented as a minimum value or range. A CV associated with estimated mortality due to commercial fisheries is presented in some cases.

[4] The 2016 guidelines for preparing SARs state that abundance estimates older than 8 years should not be used to calculate PBR due to a decline in the reliability of an aged estimate. Therefore, the PBR for this stock is considered undetermined.

[5] Abundances and associated values for bearded and ringed seals are for the U.S. population in the Bering Sea only.

Note—*Italicized species are not expected or authorized to be taken.*

A detailed description of the species likely to be affected by the Arctic Research Activities, including brief information regarding population trends and threats, and information regarding local occurrence, were provided in the **Federal Register** notice for the proposed IHA (83 FR 40234; August 14, 2018). 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 **Federal Register** notice for those descriptions. Please also refer to NMFS' website (*https://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 the towed and deployed acoustic sources, as well as icebreaking, have the potential to result in behavioral harassment of marine mammals in the vicinity of the study area. The **Federal Register** notice for the proposed IHA (83 FR 40234; August 14, 2018) included a discussion of the effects of anthropogenic noise on marine mammals and their habitat, therefore that information is not repeated here; please refer to the **Federal Register** notice (83 FR 40234; August 14, 2018) for that information.

Estimated Take

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

Harassment is the only type of take expected to result from these activities. For this military readiness activity, the MMPA defines ''harassment'' as: (i) Any act that injures or has the significant potential to injure a marine mammal or marine mammal stock in the wild (Level A harassment); or (ii) Any act that disturbs or is likely to disturb a marine mammal or marine mammal stock in the wild by causing disruption of natural behavioral patterns, including, but not limited to, migration, surfacing, nursing, breeding, feeding, or sheltering, to a point where such behavioral patterns are abandoned or significantly altered (Level B harassment).

Authorized takes would be by Level B harassment only, in the form of disruption of behavioral patterns and temporary threshold shift (TTS) for individual marine mammals resulting from exposure to acoustic transmissions and icebreaking noise. Based on the nature of the activity, Level A harassment is neither anticipated nor authorized.

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). For this IHA, ONR employed a sophisticated model known as the Navy Acoustic Effects Model (NAEMO) for assessing the impacts of underwater sound. Below, we describe the factors considered here in more detail and present the authorized takes.

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 or incur TTS of some degree (equated to Level B harassment) or to incur a permanent threshold shift (PTS) of some degree (equated to Level A harassment).

Level B Harassment for non-explosive sources—In coordination with NMFS, the Navy developed behavioral thresholds to support environmental analyses for the Navy's testing and training military readiness activities utilizing active sonar sources; these behavioral harassment thresholds are used here to evaluate the potential effects of the active sonar components of the planned action. The response of a marine mammal to an anthropogenic sound will depend on the frequency, duration, temporal pattern and amplitude of the sound as well as the animal's prior experience with the sound and the context in which the sound is encountered (*i.e.,* what the animal is doing at the time of the exposure). The distance from the sound source and whether it is perceived as approaching or moving away can also affect the way an animal responds to a sound (Wartzok *et al.* 2003). For marine mammals, a review of responses to anthropogenic sound was first conducted by Richardson *et al.* (1995). Reviews by Nowacek *et al.* (2007) and Southall *et al.* (2007) addressed additional studies and focus on observations where the received sound level of the exposed marine mammal(s) was known or could be estimated. Multi-year research efforts have conducted sonar exposure studies for odontocetes and mysticetes (Miller *et al.* 2012; Sivle *et al.* 2012). Several studies with captive animals have provided data under controlled circumstances for odontocetes and pinnipeds (Houser *et al.* 2013a; Houser *et al.* 2013b). Moretti *et al.* (2014) published a beaked whale dose-response curve based on passive acoustic monitoring of beaked whales during U.S. Navy training activity at Atlantic Underwater Test and Evaluation Center during actual Anti-Submarine Warfare exercises. This new information necessitated the update of the behavioral response criteria for the U.S. Navy's environmental analyses.

Southall *et al.* (2007) synthesized data from many past behavioral studies and observations to determine the likelihood of behavioral reactions at specific sound levels. While in general, the louder the sound source the more intense the behavioral response, it was clear that the proximity of a sound source and the animal's experience, motivation, and conditioning were also critical factors influencing the response (Southall *et al.* 2007). After examining all of the available data, the authors felt that the derivation of thresholds for behavioral response based solely on exposure level was not supported because context of the animal at the time of sound exposure was an important factor in estimating response. Nonetheless, in some conditions, consistent avoidance reactions were noted at higher sound levels depending on the marine mammal species or group, allowing conclusions to be drawn.

Odontocete behavioral criteria for U.S. Navy non-impulsive, intermittent sources were updated based on controlled exposure studies for dolphins and sea mammals, sonar, and safety (3S) studies where odontocete behavioral responses were reported after exposure to sonar (Antunes *et al.,* 2014; Houser *et al.,* 2013b); Miller *et al.,* 2011; Miller *et al.,* 2014; Miller *et al.,* 2012). For the 3S study the sonar outputs included 1–2 kilohertz (kHz) up- and down-sweeps and 6–7 kHz up-sweeps; source levels were ramped up from 152–158 decibels (dB) re 1 microPascal (μPa) to a maximum of 198–214 re 1 μPa at 1 m. Sonar signals were ramped up over several pings while the vessel approached the mammals. The study did include some control passes of ships with the sonar off to discern the behavioral responses of the mammals to vessel presence alone versus active sonar. The controlled exposure studies included exposing the Navy's trained bottlenose dolphins to mid-frequency sonar while they were in a pen. Mid-frequency sonar was played at 6 different exposure levels from 125–185 dB re 1 μPa (root mean square (rms)). The behavioral response function for odontocetes resulting from the studies described above has a 50 percent probability of response at 157 dB re 1 μPa. Additionally, distance cutoffs (20 km for MF cetaceans and 10 km for pinnipeds) were applied to exclude exposures beyond which the potential of significant behavioral responses is considered to be unlikely.

The pinniped behavioral threshold was updated based on controlled exposure experiments on the following captive animals: hooded seal, gray seal, and California sea lion (Götz *et al.* 2010; Houser *et al.* 2013a; Kvadsheim *et al.* 2010). Hooded seals were exposed to increasing levels of sonar until an avoidance response was observed, while the grey seals were exposed first to a single received level multiple times, then an increasing received level. Each individual California sea lion was exposed to the same received level ten times. These exposure sessions were combined into a single response value, with an overall response assumed if an animal responded in any single session. The resulting behavioral response function for pinnipeds has a 50 percent probability of response at 166 dB re 1 μPa. Additional details regarding these criteria may be found in the technical report, Criteria and Thresholds for U.S. Navy Acoustic and Explosive Effects Analysis (2017a) which may be found at: *http://aftteis.com/Portals/3/docs/newdocs/Criteria%20and%20Thresholds_TR_Submittal_05262017.pdf.* This technical report was included as part of the Navy's Atlantic Fleet Training and Testing Draft Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS) (Navy 2017b) which is located at: *http://www.aftteis.com/.*

NMFS adopted the Navy's approach to estimating incidental take by Level B harassment from the active acoustic sources for this action, which includes use of these dose response functions. The Navy's dose response functions were developed to estimate take from sonar and similar transducers and are not applicable to icebreaking. 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 120 dB re 1 μPa (rms) for continuous (*e.g.,* vibratory pile-driving, drilling, icebreaking) and above 160 dB re 1 μPa (rms) for non-explosive impulsive (*e.g.,* seismic airguns) or non-impulsive, intermittent (*e.g.,* scientific sonar) sources. Thus, take of marine mammals by Level B harassment due to icebreaking has been calculated using the Navy's NAEMO model using the 120 dB re 1 μPa (rms) received level threshold for behavioral response.

Level A harassment for non-explosive sources—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). ONR's planned activities involve only non-impulsive sources.

These thresholds are provided in Table 2 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: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-acoustic-technical-guidance*.

TABLE 2—INJURY (PTS) THRESHOLDS FOR UNDERWATER SOUNDS

Hearing group	PTS onset acoustic thresholds *	
	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 threshold 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 1 µPa^{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.

Quantitative Modeling

The Navy performed a quantitative analysis to estimate the number of marine mammals that could be harassed by the underwater acoustic transmissions during the planned action. Inputs to the quantitative analysis included marine mammal density estimates, marine mammal depth occurrence distributions (Navy 2017a), oceanographic and environmental data, marine mammal hearing data, and criteria and thresholds for levels of potential effects. The quantitative analysis consists of computer modeled estimates and a post-model analysis to determine the number of potential animal exposures. The model calculates sound energy propagation from the planned non-impulsive acoustic sources and icebreaking, the sound received by animat (virtual animal) dosimeters representing marine mammals distributed in the area around the modeled activity, and whether the sound received by animats exceeds the thresholds for effects.

The Navy developed a set of software tools and compiled data for estimating acoustic effects on marine mammals without consideration of behavioral avoidance or mitigation. These tools and data sets serve as integral components of NAEMO. In NAEMO, animats are distributed non-uniformly based on species-specific density, depth distribution, and group size information and animats record energy received at their location in the water column. A fully three-dimensional environment is used for calculating sound propagation and animat exposure in NAEMO. Site-specific bathymetry, sound speed profiles, wind speed, and bottom properties are incorporated into the propagation modeling process. NAEMO calculates the likely propagation for various levels of energy (sound or pressure) resulting from each source used during the training event.

NAEMO then records the energy received by each animat within the energy footprint of the event and calculates the number of animats having received levels of energy exposures that fall within defined impact thresholds. Predicted effects on the animats within a scenario are then tallied and the highest order effect (based on severity of criteria; *e.g.,* PTS over TTS) predicted for a given animat is assumed. Each scenario, or each 24-hour period for scenarios lasting greater than 24 hours (which NMFS recommends in order to ensure more consistent quantification of take across actions), is independent of all others, and therefore, the same individual marine animal (as represented by an animat in the model environment) could be impacted during each independent scenario or 24-hour period. In few instances, although the activities themselves all occur within the study area, sound may propagate beyond the boundary of the study area. Any exposures occurring outside the boundary of the study area are counted as if they occurred within the study area boundary. NAEMO provides the initial estimated impacts on marine species with a static horizontal distribution (*i.e.,* animats in the model environment do not move horizontally).

There are limitations to the data used in the acoustic effects model, and the results must be interpreted within this context. While the best available data and appropriate input assumptions have been used in the modeling, when there is a lack of definitive data to support an aspect of the modeling, conservative modeling assumptions have been chosen (*i.e.,* assumptions that may result in an overestimate of acoustic exposures):

- Animats are modeled as being underwater, stationary, and facing the source and therefore always predicted to receive the maximum potential sound level at a given location (*i.e.,* no porpoising or pinnipeds' heads above water);
- Animats do not move horizontally (but change their position vertically within the water column), which may overestimate physiological effects such as hearing loss, especially for slow moving or stationary sound sources in the model;
- Animats are stationary horizontally and therefore do not avoid the sound source, unlike in the wild where animals would most often avoid exposures at higher sound levels, especially those exposures that may result in PTS;
- Multiple exposures within any 24-hour period are considered one continuous exposure for the purposes of calculating potential threshold shift, because there are not sufficient data to estimate a hearing recovery function for the time between exposures; and
- Mitigation measures were not considered in the model. In reality, sound-producing activities would be reduced, stopped, or delayed if marine mammals are detected by visual monitoring.

Because of these inherent model limitations and simplifications, model-estimated results were further analyzed, considering such factors as the range to specific effects, avoidance, and the likelihood of successfully implementing mitigation measures. This analysis uses a number of factors in addition to the acoustic model results to predict acoustic effects on marine mammals.

The underwater radiated noise signature for icebreaking in the central Arctic Ocean by CGC HEALY during different types of ice cover was characterized in Roth *et al.* (2013). The radiated noise signatures were characterized for various fractions of ice cover (represented as the proportion of ice out of 10, with 10/10 being total ice coverage). For modeling, the 8/10 and 3/10 ice cover were used based on the data available. Each modeled day of icebreaking consisted of 16 hours of 8/10 ice cover and 8 hours of 3/10 ice cover, which was considered a fairly conservative way of representing the expected ice cover based on what is known. Icebreaking was modeled for 4 days each year. The sound signature of each of the ice coverage levels was broken into 1-octave bins (Table 3). In the model, each bin was included as a separate source on the modeled vessel. When these independent sources go active concurrently, they simulate the sound signature of CGC HEALY. The modeled source level summed across these bins was 196.2 dB for the 8/10 signature and 189.3 dB for the 3/10 ice signature. These source levels are a good approximation of the icebreaker's observed source level (Roth *et al.,* 2013). Each frequency and source level was modeled as an independent source, and applied simultaneously to all of the animats within the model environment. Each second was summed across frequency to estimate sound pressure level (SPL_{rms}). This value was incorporated into NAEMO using NMFS' 120 dB re 1 µPa continuous sound source threshold to estimate Level B harassment. For PTS and TTS determinations, sound exposure levels were summed over the duration of the test and the transit to the deep water deployment level.

TABLE 3—MODELED BINS FOR ICEBREAKING IN FRACTIONAL ICE COVERAGE ON CGC HEALY

Frequency (Hz)	8/10 Ice coverage (full power)	3/10 Ice coverage (quarter power)
	Source level (dB)	Source level (dB)
25	189	187
50	188	182
100	189	179
200	190	177
400	188	175
800	183	170
1,600	177	166
3,200	176	171
6,400	172	168
12,800	167	164

For the other non-impulsive sources, NAEMO calculates the SPL and SEL for each active emission during an event. This is done by taking the following factors into account over the propagation paths: Bathymetric relief and bottom types, sound speed, and attenuation contributors such as absorption, bottom loss, and surface loss. Platforms such as a ship using one or more sound sources are modeled in accordance with relevant vehicle dynamics and time durations by moving them across an area whose size is representative of the testing event's operational area. Table 4 provides range to effects for non-impulsive sources and icebreaking noise planned for the Arctic research activities to mid-frequency cetacean and pinniped specific criteria. Marine mammals within these ranges would be predicted to receive the associated effect. Range to effects is important information in not only predicting non-impulsive acoustic impacts, but also in verifying the accuracy of model results against real-world situations and determining adequate mitigation ranges to avoid higher level effects, especially physiological effects in marine mammals. Therefore, the ranges in Table 4 provide realistic maximum distances over which the specific effects from the use of non-impulsive sources during the planned action would be possible.

TABLE 4—RANGE TO PTS, TTS, AND BEHAVIORAL EFFECTS IN THE STUDY AREA

Source	Range to behavioral effects (m)		Range to TTS effects (m)		Range to PTS effects (m)	
	MF cetacean	Pinniped	MF cetacean	Pinniped	MF cetacean	Pinniped
LF4 towed source	20,000	10,000	0	1	0	0
LF5 towed source	20,000	10,000	0	1	0	0
MF9 towed source	20,000	10,000	4	50	0	4
Navigation and real-time sensing sources	20,000	10,000	0	6	0	0
Tomography sources	20,000	10,000	0	2	0	0
Spherical Wave source	20,000	10,000	0	0	0	0
Icebreaking noise	4,275	4,525	3	12	0	0

A behavioral response study conducted on and around the Navy range in Southern California (SOCAL BRS) observed reactions to sonar and similar sound sources by several marine mammal species, including Risso's dolphins (*Grampus griseus*), a mid-frequency cetacean (DeRuiter *et al.,* 2013; Goldbogen *et al.,* 2013; Southall *et al.,* 2011; Southall *et al.,* 2012; Southall *et al.,* 2013; Southall *et al.,* 2014). In preliminary analysis, none of the Risso's dolphins exposed to simulated or real mid-frequency sonar demonstrated any overt or obvious responses (Southall *et al.,* 2012, Southall *et al.,* 2013). In general, although the responses to the simulated sonar were varied across individuals and species, none of the animals exposed to real Navy sonar responded; these exposures occurred at distances beyond 10 km, and were up to 100 km away (DeRuiter *et al.,* 2013; B. Southall pers. comm.). These data suggest that most odontocetes (not including beaked whales and harbor porpoises) likely do not exhibit significant behavioral reactions to sonar and other transducers beyond approximately 10 km. Therefore, the Navy uses a cutoff distance for odontocetes of 10 km for moderate source level, single platform training and testing events, and 20 km for all other events, including the planned Arctic Research Activities (Navy 2017a).

Southall *et al.* (2007) report that pinnipeds do not exhibit strong reactions to SPLs up to 140 dB re 1 μPa from non-impulsive sources. While there are limited data on pinniped behavioral responses beyond about 3 km in the water, the Navy uses a distance cutoff of 5 km for moderate source level, single platform training and testing events, and 10 km for all other events, including the planned Arctic Research Activities (Navy 2017a).

NMFS and the Navy conservatively implemented a distance cutoff of 5.4 nmi (10 km) for pinnipeds, and 10.8 nmi (20 km) for mid-frequency cetaceans (Navy 2017a). Regardless of the received level at that distance, take is not estimated to occur beyond 10 and 20 km from the source for pinnipeds and cetaceans, respectively. Not all sources are likely to result in TTS or PTS for pinnipeds or MF cetaceans. These sources show a range to effects of 0 m (Table 4).

As discussed above, within NAEMO animats do not move horizontally or react in any way to avoid sound. Furthermore, mitigation measures that reduce the likelihood of physiological impacts are not considered in quantitative analysis. Therefore, the model may overestimate acoustic impacts, especially physiological impacts near the sound source. The behavioral criteria used as a part of this analysis acknowledges that a behavioral reaction is likely to occur at levels below those required to cause hearing loss. At close ranges and high sound levels approaching those that could cause PTS, avoidance of the area immediately around the sound source is the assumed behavioral response for most cases.

In previous environmental analyses, the Navy has implemented analytical factors to account for avoidance behavior and the implementation of mitigation measures. The application of avoidance and mitigation factors has only been applied to model-estimated PTS exposures given the short distance over which PTS is estimated. Given that no PTS exposures were estimated during the modeling process for this planned action, the quantitative consideration of avoidance and mitigation factors were not included in this analysis.

If exposure were to occur, beluga whales, bearded seals, and ringed seals could exhibit behavioral responses. Additionally, ringed seals may exhibit a TTS. For the reasons included above, Level A harassment is not anticipated for any of the exposed species or stocks.

Table 5 shows the exposures expected for the beluga whale, bearded seal, and ringed seal based on NAEMO modeled results. While density estimates for the two stocks of beluga whales are equal (Kaschner *et al.,* 2006; Kaschner 2004), take of the Eastern Chukchi Sea beluga whale stock has been reduced to account for the lower overlap of this stock's range with the study area.

TABLE 5—AUTHORIZED TAKES

Species	Density estimate within study area (animals per square km) [1]	Level B harassment from towed and deployed sources	Level B harassment from icebreaking	Level A harassment	Total authorized take	Percentage of stock taken
Beluga Whale (Beaufort Sea Stock)	0.0087	60	24	0	84	0.21
Beluga Whale (Eastern Chukchi Sea stock)	0.0087	6	2	0	8	0.04
Bearded Seal	0.0332	5	0	0	5	<0.01
Ringed Seal	0.3760	1,826	1,245	0	3,071	1.81

[1] Kaschner *et al.* (2006); Kaschner (2004).

Effects of Specified Activities on Subsistence Uses of Marine Mammals

Subsistence hunting is important for many Alaska Native communities. A study of the North Slope villages of Nuiqsut, Kaktovik, and Barrow identified the primary resources used for subsistence and the locations for harvest (Stephen R. Braund & Associates 2010), including terrestrial mammals (caribou, moose, wolf, and wolverine), birds (geese and eider), fish (Arctic cisco, Arctic char/Dolly Varden trout, and broad whitefish), and marine mammals (bowhead whale, ringed seal, bearded seal, and walrus). Bearded seals, ringed seals, and beluga whales are located within the study area during the planned action. The permitted sources would be placed outside of the range for subsistence hunting and the study plans have been communicated to the Native communities. The closest active acoustic source within the study area (aside from the *de minimis* sources), is approximately 141 mi (227 km) from land. As stated above, the range to effects for acoustic sources in this experiment is relatively small (20 km). In addition, the planned action would not remove individuals from the population. Therefore, there would be no impacts caused by this action to the availability of bearded seal, ringed seal, or beluga whale for subsistence hunting. Therefore, subsistence uses of marine mammals would not be impacted by the planned action.

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. (As explained above, subsistence uses of marine mammals will not be affected.) 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)). The NDAA for FY 2004 amended the MMPA as it relates to military readiness activities and the incidental take authorization process such that ''least practicable impact'' shall include consideration of personnel safety, practicality of implementation, and impact on the effectiveness of the military readiness activity.

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, as well as subsistence uses. This considers the nature of the potential adverse impact being mitigated (likelihood, scope, range). It further considers the likelihood that the measure will be effective if implemented (probability of accomplishing the mitigating result if implemented as planned) the likelihood of effective implementation (probability implemented as planned); and

(2) The practicability of the measures for applicant implementation, which may consider such things as cost, 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 for Marine Mammals and Their Habitat

Ships operated by or for the Navy have personnel assigned to stand watch at all times, day and night, when moving through the water. While in transit, ships must use extreme caution and proceed at a safe speed such that the ship can take proper and effective action to avoid a collision with any marine mammal and can be stopped within a distance appropriate to the prevailing circumstances and conditions.

Exclusion zones for active acoustics involve turning off towed sources when a marine mammal is sighted within 200 yards (yd; 183 m) from the source. Active transmission will re-commence if any one of the following conditions are met: (1) The animal is observed exiting the exclusion zone, (2) the animal is thought to have exited the exclusion zone based on its course and speed and relative motion between the animal and the source, (3) the exclusion zone has been clear from any additional sightings for a period of 15 minutes for pinnipeds and 30 minutes for cetaceans, or (4) the ship has transited more than 400 yd (366 m) beyond the location of the last sighting.

During mooring deployment, visual observation must start 30 minutes prior to and continue throughout the deployment within an exclusion zone of 60 yd (55 m) around the deployed mooring. Deployment will stop if a marine mammal is visually detected within the exclusion zone. Deployment will re-commence if any one of the following conditions are met: (1) The animal is observed exiting the exclusion zone, (2) the animal is thought to have exited the exclusion zone based on its course and speed, or (3) the exclusion zone has been clear from any additional sightings for a period of 15 minutes for pinnipeds and 30 minutes for cetaceans. Visual monitoring will continue through 30 minutes following the deployment of sources.

Ships must avoid approaching marine mammals head on and maneuver to maintain an exclusion zone of 500 yd (457 m) around observed whales, and 200 yd (183 m) around all other marine mammals, provided it is safe to do so in ice free waters.

Moored and drifting sources are left in place and cannot be turned off until the following year during ice free months. Once they are programmed, they will operate at the specified pulse lengths and duty cycles until they are either turned off the following year or there is failure of the battery and are not able to operate. Due to the ice covered nature of the Arctic, it is not possible to recover the sources or interfere with their transmit operations in the middle of the year.

These requirements do not apply if a vessel's safety is at risk, such as when a change of course would create an imminent and serious threat to safety, person, vessel, or aircraft, and to the extent vessels are restricted in their ability to maneuver. No further action is necessary if a marine mammal other than a whale continues to approach the vessel after there has already been one maneuver and/or speed change to avoid the animal. Avoidance measures should continue for any observed whale in order to maintain an exclusion zone of 500 yd (457 m).

All personnel conducting on-ice experiments, as well as all aircraft operating in the study area, are required to maintain a separation distance of 1,000 ft (305 m) from any sighted pinniped.

All ships are required to coordinate with the Alaska Eskimo Whaling Commission (AEWC) using established check-in and communication procedures when vessels approach subsistence hunting areas.

Based on our evaluation of the applicant's planned measures, 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, and on the availability of such species or stock for subsistence uses.

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 action area. Effective reporting is critical both to compliance as well as ensuring that the most value is obtained from the required monitoring.

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

- Occurrence of marine mammal species or stocks in the area in which take is anticipated (*e.g.,* presence, abundance, distribution, density).
- Nature, scope, or context of likely marine mammal exposure to potential stressors/impacts (individual or cumulative, acute or chronic), through better understanding of: (1) Action or environment (*e.g.,* source characterization, propagation, ambient

noise); (2) affected species (*e.g.,* life history, dive patterns); (3) co-occurrence of marine mammal species with the action; or (4) biological or behavioral context of exposure (*e.g.,* age, calving or feeding areas).

- Individual marine mammal responses (behavioral or physiological) to acoustic stressors (acute, chronic, or cumulative), other stressors, or cumulative impacts from multiple stressors.
- How anticipated responses to stressors impact either: (1) Long-term fitness and survival of individual marine mammals; or (2) populations, species, or stocks.
- Effects on marine mammal habitat (*e.g.,* marine mammal prey species, acoustic habitat, or other important physical components of marine mammal habitat).
- Mitigation and monitoring effectiveness.

While underway, the ships (including non-Navy ships operating on behalf of the Navy) utilizing active acoustics and towed in-water devices will have at least one watch person during activities. Watch personnel undertake extensive training in accordance with the U.S. Navy Lookout Training Handbook or civilian equivalent, including on the job instruction and a formal Personal Qualification Standard program (or equivalent program for supporting contractors or civilians), to certify that they have demonstrated all necessary skills (such as detection and reporting of floating or partially submerged objects). Their duties may be performed in conjunction with other job responsibilities, such as navigating the ship or supervising other personnel. While on watch, personnel employ visual search techniques, including the use of binoculars, using a scanning method in accordance with the U.S. Navy Lookout Training Handbook or civilian equivalent. A primary duty of watch personnel is to detect and report all objects and disturbances sighted in the water that may be indicative of a threat to the ship and its crew, such as debris, or surface disturbance. Per safety requirements, watch personnel also report any marine mammals sighted that have the potential to be in the direct path of the ship as a standard collision avoidance procedure.

The U.S. Navy has coordinated with NMFS to develop an overarching program plan in which specific monitoring would occur. This plan is called the Integrated Comprehensive Monitoring Program (ICMP) (Navy 2011). The ICMP was developed in direct response to Navy permitting requirements established through various environmental compliance efforts. As a framework document, the ICMP applies by regulation to those activities on ranges and operating areas for which the Navy is seeking or has sought incidental take authorizations. The ICMP is intended to coordinate monitoring efforts across all regions and to allocate the most appropriate level and type of effort based on a set of standardized research goals, and in acknowledgement of regional scientific value and resource availability.

The ICMP is focused on Navy training and testing ranges where the majority of Navy activities occur regularly as those areas have the greatest potential for being impacted. ONR's Arctic Research Activities in comparison is a less intensive test with little human activity present in the Arctic. Human presence is limited to a minimal amount of days for possible towed source operations and source deployments, in contrast to the large majority (>95%) of time that the sources will be left behind and operate autonomously. Therefore, a dedicated monitoring project is not warranted.

ONR previously conducted experiments in the Beaufort Sea as part of the Canadian Basin Acoustic Propagation Experiments (CANAPE) project in 2016 and 2017. The goal of the CANAPE project was to determine the fundamental limits to the use of acoustic methods and signal processing imposed by ice and ocean processes in the changing Arctic. The CANAPE project included ten moored receiver arrays (frequencies ranging from 200 Hz to 16 kHz) that recorded 24 hours per day for one year. Recordings from the CANAPE arrays are currently being compiled and analyzed by Defense Research and Development Canada, University of Delaware, and Woods Hole Oceanographic Institute (WHOI). Researchers from WHOI are planning to do marine mammal analysis of the recordings, including density estimation. ONR is planning to release the marine mammal data collected from the CANAPE receivers to other researchers.

As part of the planned Arctic Research Activities, ONR is deploying a moored receiver array similar to those used in CANAPE. The receiver array would be deployed during the SODA research cruises in 2018 and be recovered one year later. While a single array is a modest effort compared to the ten arrays used in CANAPE, it would provide new marine mammal monitoring data for the 2018–2019 time frame. The array would be deployed at one of the locations labeled on Figure 1–1 in the IHA application. There would be no active sources associated with the array. Once the array is recovered, the recordings would be shared alongside the CANAPE data.

The Navy is committed to documenting and reporting relevant aspects of research and testing activities to verify implementation of mitigation, comply with permits, and improve future environmental assessments. If any injury or death of a marine mammal is observed during the 2018–19 Arctic Research Activities, the Navy will immediately halt the activity and report the incident to the Office of Protected Resources, NMFS, and the Alaska Regional Stranding Coordinator, NMFS. The following information must be provided:

- Time, date, and location of the discovery;
- Species identification (if known) or description of the animal(s) involved;
- Condition of the animal(s) (including carcass condition if the animal is dead);
- Observed behaviors of the animal(s), if alive;
- If available, photographs or video footage of the animal(s); and
- General circumstances under which the animal(s) was discovered (*e.g.,* during use of towed acoustic sources, deployment of moored or drifting sources, during on-ice experiments, or by transiting vessel).

ONR will provide NMFS with a draft exercise monitoring report within 90 days of the conclusion of the planned activity. The draft exercise monitoring report will include data regarding acoustic source use and any mammal sightings or detection will be documented. The report will include the estimated number of marine mammals taken during the activity. The report will also include information on the number of shutdowns recorded. If no comments are received from NMFS within 30 days of submission of the draft final report, the draft final report will constitute the final report. If comments are received, a final report must be submitted within 30 days after receipt of comments.

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).

Underwater acoustic transmissions associated with the Arctic Research Activities, as outlined previously, have the potential to result in Level B harassment of beluga whales, ringed seals, and bearded seals in the form of TTS and behavioral disturbance. No serious injury, mortality, or Level A harassment are anticipated to result from this activity.

Minimal takes of marine mammals by Level B harassment would be due to TTS since the range to TTS effects is small at only 50 m or less while the behavioral effects range is significantly larger extending up to 20 km (Table 4). TTS is a temporary impairment of hearing and can last from minutes or hours to days (in cases of strong TTS). In many cases, however, hearing sensitivity recovers rapidly after exposure to the sound ends. Though TTS may occur in a single ringed seal, the overall fitness of the individual seal is unlikely to be affected and negative impacts to the entire stock of ringed seals are not anticipated.

Effects on individuals that are taken by Level B harassment could include alteration of dive behavior, alteration of foraging behavior, effects to breathing rates, interference with or alteration of vocalization, avoidance, and flight. More severe behavioral responses are not anticipated due to the localized, intermittent use of active acoustic sources. Most likely, individuals will simply be temporarily displaced by moving away from the sound source. As described previously in the behavioral effects section, seals exposed to non-impulsive sources with a received sound pressure level within the range of calculated exposures (142–193 dB re 1 µPa), have been shown to change their behavior by modifying diving activity and avoidance of the sound source (Götz *et al.,* 2010; Kvadsheim *et al.,* 2010). Although a minor change to a behavior may occur as a result of exposure to the sound sources associated with the planned action, these changes would be within the normal range of behaviors for the animal (*e.g.,* the use of a breathing hole further from the source, rather than one closer to the source, would be within the normal range of behavior). Thus, even repeated Level B harassment of some small subset of the overall stock is unlikely to result in any significant realized decrease in fitness for the affected individuals, and would not result in any adverse impact to the stock as a whole.

The project is not expected to have significant adverse effects on marine mammal habitat. While the activities may cause some fish to leave the area of disturbance, temporarily impacting marine mammals' foraging opportunities, this would encompass a relatively small area of habitat leaving large areas of existing fish and marine mammal foraging habitat unaffected. Icebreaking may temporarily affect the availability of pack ice for seals to haul out but the proportion of ice disturbed is small relative to the overall amount of available ice habitat. Icebreaking will not occur during the time of year when ringed seals are expected to be within subnivean lairs or pupping (Chapskii 1940; McLaren 1958; Smith and Stirling 1975). As such, the impacts to marine mammal habitat are not expected to cause significant or long-term negative consequences.

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 injury, serious injury, or mortality is anticipated or authorized;
- Behavioral Impacts will be limited to Level B harassment of a relatively minor nature;
- Minimal takes by Level B harassment will be due to TTS; and
- There will be no permanent or significant loss or modification of marine mammal prey or habitat.

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 planned activity will have a negligible impact on all affected marine mammal species or stocks.

Unmitigable Adverse Impact Analysis and Determination

Impacts to subsistence uses of marine mammals resulting from the planned action are not anticipated. The closest active acoustic source within the study area is approximately 141 mi (227 km) from land, outside of known subsistence use areas. Based on this information, NMFS has determined that there will be no unmitigable adverse impact on subsistence uses from ONR's planned activities.

National Environmental Policy Act

In compliance with the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*), as implemented by the regulations published by the Council on Environmental Quality (40 CFR parts 1500–1508), the Navy prepared an Environmental Assessment/Overseas Environmental Assessment (EA/OEA) to consider the direct, indirect and cumulative effects to the human environment resulting from the Arctic Research Activities project. NMFS made the Navy's EA/OEA available to the public for review and comment, concurrently with the publication of the proposed IHA, on the NMFS website (at *https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-military-readiness-activities*), in relation to its suitability for adoption by NMFS in order to assess the impacts to the human environment of issuance of an IHA to ONR. Also in compliance with NEPA and the CEQ regulations, as well as NOAA Administrative Order 216–6, NMFS has reviewed the Navy's EA/OEA, determined it to be sufficient, and adopted that EA/OEA and signed a Finding of No Significant Impact (FONSI) on September 20, 2018.

Endangered Species Act (ESA)

Section 7(a)(2) of the ESA 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 Alaska Regional Office (AKR) whenever we propose to

authorize take for endangered or threatened species.

The AKR issued a Biological Opinion on September 7, 2018, which concluded that ONR's Arctic Research Activities and NMFS's issuance of an IHA for those activities are not likely to jeopardize the continued existence of the Beringia DPS bearded seal or Arctic ringed seal or adversely modify any designated critical habitat.

Authorization

As a result of these determinations, NMFS has issued an IHA to the U.S. Navy's ONR for the Arctic Research Activities in the Beaufort and Chukchi Seas from September 20, 2018, through September 19, 2019, provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated.

Dated: September 24, 2018.

Donna S. Wieting,

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

[FR Doc. 2018–21070 Filed 9–26–18; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF DEFENSE

Office of the Secretary

[Docket ID: DoD–2018–OS–0068]

Privacy Act of 1974; System of Records

AGENCY: Office of the Secretary, DoD.

ACTION: Rescindment of a system of records notice.

SUMMARY: The Office of the Secretary of Defense (OSD) proposes to rescind a system of records, PEGASYS CARDKEY, DWHS D02. This system was used to maintain a list of individuals granted room access to areas of the Pentagon temporarily under the control of Washington Headquarters Services (WHS).

DATES: This action will be effective September 27, 2018. This system was decommissioned on June 30, 2014 when the Pentagon Force Protection Agency (PFPA) accepted access control responsibility for these areas. The Pentagon Facilities Access Control System, DPFPA 01 applies to those individuals who continue to require access to these spaces.

FOR FURTHER INFORMATION CONTACT: Ms. Luz D. Ortiz, Chief, Records, Privacy and Declassification Division (RPDD), 1155 Defense Pentagon, Washington, DC 20301–1155, or by phone at (571) 372–0478.

SUPPLEMENTARY INFORMATION: This system of records was temporary and was decommissioned on June 30, 2014 when responsibility for access and security for wedge 1, corridors 3 and 4 at the Pentagon were transferred to PFPA. Continued access by personnel originally covered by PEGASYS CARDKEY is now addressed by the Pentagon Facilities Access Control System, DPFPA 01 (May 13, 2011, 76 FR 28001).

The Office of the Secretary of Defense system of records notices subject to the Privacy Act of 1974, as amended, have been published in the **Federal Register** and are available from the address in the **FOR FURTHER INFORMATION CONTACT** section or at the Defense Privacy, Civil Liberties, and Transparency Division website at *http://defense.gov/privacy.* The proposed systems reports, as required by the Privacy Act of 1974, as amended, were submitted on August 9, 2018, to the House Committee on Oversight and Government Reform, the Senate Committee on Homeland Security and Governmental Affairs, and the Office of Management and Budget (OMB) pursuant to Section 6 to OMB Circular No. A–108, ''Federal Agency Responsibilities for Review, Reporting, and Publication under the Privacy Act,'' revised December 23, 2016 (December 23, 2016, 81 FR 94424).

SYSTEM NAME AND NUMBER:

PEGASYS CARDKEY, DWHS D02

HISTORY:

November 14, 2011, 76 FR 70425; March 18, 2010, 75 FR 13088.

Dated: September 20, 2018.

Shelly E. Finke,

Alternate OSD Federal Register, Liaison Officer, Department of Defense.

[FR Doc. 2018–21082 Filed 9–26–18; 8:45 am]

BILLING CODE 5001–06–P

DEPARTMENT OF DEFENSE

Department of the Navy

Meeting of the Board of Visitors of Marine Corps University

AGENCY: Department of the Navy, DoD.

ACTION: Notice of open meeting.

SUMMARY: The Board of Visitors of the Marine Corps University (BOV MCU) will meet to review, develop and provide recommendations on all aspects of the academic and administrative policies of the University; examine all aspects of professional military education operations; and provide such oversight and advice, as is necessary, to facilitate high educational standards and cost effective operations. The Board will be focusing primarily on the internal procedures of Marine Corps University. All sessions of the meeting will be open to the public.

DATES: The meeting will be held on Thursday, 18 Oct. 2018, from 8:00 a.m. to 4:30 p.m. and Friday, 19 Oct. 2018, from 8:00 a.m. to 12:30 p.m. Eastern Time Zone.

ADDRESSES: The meeting will be held at Marine Corps University in Quantico, Virginia. The address is: 2076 South Street, Quantico, VA 22134.

FOR FURTHER INFORMATION CONTACT: Dr. Kim Florich, Director of Faculty Development and Outreach, Marine Corps University Board of Visitors, 2076 South Street, Quantico, Virginia 22134, 703–432–4682.

Dated: September 24, 2018.

Meredith Steingold Werner,

Lieutenant Commander, Judge Advocate General's Corps, U.S. Navy, Federal Register Liaison Officer.

[FR Doc. 2018–21045 Filed 9–26–18; 8:45 am]

BILLING CODE 3810–FF–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Project No. 6470–006]

Winooski Hydroelectric Company; Notice of Intent To File License Application, Filing of Pre-Application Document, and Approving Use of the Traditional Licensing Process

a. *Type of Filing:* Notice of Intent to File License Application and Request to Use the Traditional Licensing Process.

b. *Project No.:* 6470–006.

c. *Date Filed:* July 31, 2018.

d. *Submitted By:* Winooski Hydroelectric Company.

e. *Name of Project:* Winooski 8 Hydroelectric Project.

f. *Location:* On the Winooski River in Washington County, Vermont. No federal lands are occupied by the project works or located within the project boundary.

g. *Filed Pursuant to:* 18 CFR 5.3 of the Commission's regulations.

h. Potential *Applicant Contact:* Mathew Rubin, General Partner, Winooski Hydroelectric Company, 26 State Street, Montpelier, Vermont 05602; (802) 793–5939; or email at *m@mrubin.biz.*

i. *FERC Contact:* Mike Tust at (202) 502–6522; or email at *michael.tust@ferc.gov.*

j. Winooski Hydroelectric Company (Winooski Hydro) filed its request to use