may send an email to Mr. Kris Kleinschmidt (*kris.kleinschmidt@noaa.gov*) or contact him at (503) 820–2412 for technical assistance.

Council address: Pacific Fishery Management Council, 7700 NE Ambassador Place, Suite 101, Portland, OR 97220–1384.

FOR FURTHER INFORMATION CONTACT: Dr. Kit Dahl, Staff Officer, Pacific Council; telephone: (503) 820–2422.

SUPPLEMENTARY INFORMATION: Drs. Harvey and Garfield of the NMFS Northwest and Southwest Fisheries Science Centers lead NOAA's CCIEA Team, which produces the Ecosystem Status Report. It is presented to the Pacific Council annually at its March meeting. This annual reporting process was established through the Pacific Council's Fishery Ecosystem Plan. These annual reports present a summary of environmental, biological, economic, and social indicators that give a snapshot of current ecosystem health. This information provides context for fishery management decisions taken by the Pacific Council throughout the year. The Pacific Council also regularly provides feedback to the CCIEA Team on potential improvements to the Report. This presentation is aimed at a broad audience of Council members, advisory body members, and the public. The CCIEA Team may follow up with more targeted discussions with advisory bodies during their March meetings, upon request. Drs. Harvey and Garfield will also brief the Council directly at its March meeting.

Although non-emergency issues not contained in the meeting agenda may be discussed, those issues may not be the subject of formal action during this meeting. Action will be restricted to those issues specifically listed in this document and any issues arising after publication of this document that require emergency action under section 305(c) of the Magnuson-Stevens Fishery Conservation and Management Act, provided the public has been notified of the intent to take final action to address the emergency.

Special Accommodations

Requests for sign language interpretation or other auxiliary aids should be directed to Mr. Kris Kleinschmidt (*kris.kleinschmidt@noaa.gov;* (503) 820–2412) at least 10 days prior to the meeting date.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: February 7, 2022.

Tracey L. Thompson,

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

[FR Doc. 2022–02842 Filed 2–9–22; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648–XB657]

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to U.S. Navy 2022 Ice Exercise Activities in the Arctic Ocean

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 (Navy) to incidentally harass, by Level B harassment only, marine mammals during submarine training and testing activities including establishment of a tracking range on an ice floe in the Arctic Ocean, north of Prudhoe Bay, Alaska. 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 (2004 NDAA).

DATES: This Authorization is effective from February 4, 2022 through April 30, 2022.

FOR FURTHER INFORMATION CONTACT: Leah Davis, 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 proposed or, if the taking is limited to harassment, a notice of a proposed incidental harassment authorization is provided to the public for review.

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

The 2004 NDAA (Pub. L. 108–136) removed the ''small numbers'' and ''specified geographical region'' limitations indicated above and amended the definition of ''harassment'' as applied to a ''military readiness activity.'' The activity for which incidental take of marine mammals is being requested here qualifies as a military readiness activity. The definitions of all applicable MMPA statutory terms cited above are included in the relevant sections below.

Summary of Request

On August 26, 2021, NMFS received a request from the Navy for an IHA to take marine mammals incidental to submarine training and testing activities including establishment of a tracking range on an ice floe in the Arctic Ocean, north of Prudhoe Bay, Alaska. The application was deemed adequate and complete on November 4, 2021. The Navy's request is for take of ringed seals (*Pusa hispida*) by Level B harassment only. Neither the Navy nor NMFS expects serious injury or mortality to result from this activity and, therefore, an IHA is appropriate.

NMFS previously issued IHAs to the Navy for similar activities (83 FR 6522; February 14, 2018, 85 FR 6518; February 5, 2020). The Navy complied with all the requirements (*e.g.,* mitigation,

monitoring, and reporting) of the previous IHAs and information regarding their monitoring results may be found below, in the Estimated Take section.

Description of the Specified Activity

The Navy proposes to conduct submarine training and testing activities, which includes the establishment of a tracking range and temporary ice camp, and research in the Arctic Ocean for six weeks beginning in February 2022. Submarine active acoustic transmissions may result in occurrence of Level B harassment, including temporary hearing impairment (temporary threshold shift (TTS)) and behavioral harassment, of ringed seals. A detailed description of the planned 2022 Ice Exercise (ICEX22) activities is provided in the **Federal Register** notice for the proposed IHA (86 FR 70451; December 10, 2021). Since that time, no changes have been made to the planned ICEX22 activities. Therefore, a detailed description is not provided here. Please refer to that **Federal Register** notice for the description of the specific activity.

Comments and Responses

A notice of NMFS's proposal to issue an IHA to the Navy was published in the **Federal Register** on December 10, 2021 (86 FR 70451). That notice described, in detail, the Navy'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 comments from the Center for Biological Diversity (CBD) and a member of the general public. Please see the CBD's letter for full details regarding their recommendations and rationale. The letter is available online at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-military-readiness-activities.* A summary of all substantive comments as well as NMFS' responses is below.

Comment 1: CBD asserted that annual mortality and serious injury [for ringed seals] already exceeds Potential Biological Removal (PBR) and therefore additional take is not negligible and thus should not be authorized. CBD stated that the rationale that the stock's population estimate is an underestimate because it is only a partial stock abundance is insufficient, and NMFS must therefore determine what the appropriate stock abundance and PBR are.

Response: PBR is defined in section 3 of 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'' and, although not controlling, can be one measure considered among other factors when evaluating the effects of morality and serious injury (M/SI) on a marine mammal species or stock during the section 101(a)(5)(A) process. As stated in Muto *et al.* (2021), PBR ''is defined as the product of the minimum population estimate, one-half the maximum theoretical net productivity rate, and a recovery factor: PBR = NMIN $\times$ 0.5RMAX $\times$ FR.''

No serious injury or mortality is expected or authorized in this IHA and neither is the take by harassment expected to accrue in a manner that will impact the reproduction or survival of any individual marine mammals. Therefore, it is neither required nor appropriate to directly and/or quantitatively consider PBR in the negligible impact analysis of the take, by harassment only, authorized in this IHA. Rather, PBR, and the number of known mortalities per year are qualitatively considered as a gross indicator of stock status in the baseline of this analysis. Below, we reemphasize the basis for the negligible impact determination and, as a secondary matter, we further explain that the PBR values for this stock are likely significantly underestimated.

Given that the calculation is based upon the minimum population estimate, if a minimum population estimate is negatively biased, the resulting PBR would be negatively biased as well. The PBR for the Alaska stock of ringed seals is based upon a minimum population estimate which is expected to be an underestimate for multiple reasons. First, the minimum and best population estimates for the stock reflect the Bering Sea population only, as reliable abundance estimates for the Chukchi Sea and Beaufort Sea, which are also included in the stock's range, are not available. Further, the available abundance estimate for the Bering Sea population was not adjusted for seals in the water at the time of the surveys, nor does it include ringed seals in the shorefast ice zone; therefore, the partial abundance that is available, for the Bering Sea only, is an underestimate even for the Bering Sea portion of the stock alone. Therefore, the minimum population estimate (and best population estimate) and PBR for the Alaska stock of ringed seals are negatively biased (*i.e.,* underestimates).

PBR and information on annual serious injury and mortality from anthropogenic sources was presented in the notice of proposed IHA and is presented again in this notice of final IHA as gross indicators of the status of the Alaska stock of ringed seals, even though for the reasons discussed above and below, respectively, these numbers do not accurately reflect certain aspects of the status of the stock.

As noted by the commenter, the abundance estimate and PBR considered by NMFS and included in the notice of proposed IHA (86 FR 70451, December 10, 2021) and this final IHA, is a partial abundance, as reported in the 2020 Alaska Stock Assessment Report (SAR; Muto *et al.* 2021). As stated above, the partial abundance estimate reflects the Bering Sea population only, as reliable abundance estimates for the Chukchi Sea and Beaufort Sea, which are also included in the stock's range, are not available. Further, the available abundance estimate for the Bering Sea population was not adjusted for seals in the water at the time of the surveys, nor does it include ringed seals in the shorefast ice zone; therefore, the partial abundance that is available, for the Bering Sea only, is an underestimate even for the Bering Sea portion of the stock alone. And so, if a more accurate PBR were available, it would be higher, as it would be based on a higher, more-accurate minimum abundance estimate. Muto *et al.* (2021) state that ''researchers expect to provide a population estimate, corrected for availability bias, for the entire U.S. portion of the ringed seal stock once the final Bering Sea results are combined with the results from spring surveys of the Chukchi Sea (conducted in 2016) and Beaufort Sea (planned for 2020).'' In the meantime, given the limited available information at this time, NMFS is not able to produce a stock abundance estimate and PBR that are more accurate than what NMFS included in the proposed IHA.

No serious injury or mortality is anticipated or authorized in this IHA. Even if serious injury and mortality from other sources (in this case, nearly all from Alaska Native subsistence harvest) exceeded what was accepted as a more accurate PBR, that would not inherently indicate that take by Level B harassment at the numbers and level authorized in this IHA would have more than a negligible impact on the stock, as implied by the commenter. (See further discussion below.) However, in this case, given that the abundance estimate and PBR are negatively biased for the reasons discussed above, it is unlikely that mortality and serious injury actually exceed the maximum number of animals, not including natural mortalities, that may be removed from

the Alaska ringed seal stock while allowing the stock to reach or maintain its optimum sustainable population.

Regarding the number of takes authorized in this IHA in comparison to the population status, while we do typically assess the number, intensity, and context of estimated takes by evaluating this information relative to population status, as stated in the Negligible Impact Analysis and Determination section, NMFS also 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. Further, 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). PBR is one consideration included in this baseline as a gross indicator of stock status. Explicit quantitative consideration of PBR in the analysis was neither required nor appropriate, given that no serious injury or mortality was included in the proposed IHA, and none is authorized in this final IHA. NMFS' preliminary and final negligible impact determinations do not depend solely on the stock abundance provided in the 2020 Alaska SAR (and the accuracy of that abundance estimate). An accurate abundance estimate (and minimum population estimate) for the entire stock, which would include the unknown number of animals in the Beaufort and Chukchi Seas, in addition to the Bering Sea population which is reported in the 2020 Alaska SAR, as well as adjust for uncounted animals in the water and animals in the shorefast ice zone at the time of the Bering Sea survey, is not necessary to make the negligible impact determination. (Though if a complete stock abundance were available, the number of takes authorized in this IHA in comparison to that abundance would be even lower than described in NMFS' Negligible Impact Analysis and Determination herein, given that the stock abundance would be larger.)

As described in the Negligible Impact Analysis and Determination section of the notice of the proposed IHA (86 FR 70451; December 10, 2021) and this notice, the following factors primarily support our negligible impact determination:

- No Level A harassment (injury), serious injury, or mortality is anticipated or authorized;
- Impacts will be limited to Level B harassment, primarily in the form of behavioral disturbance that results in minor changes in behavior;
- TTS is expected to affect only a limited number of animals (approximately 0.5 percent of the partial stock abundance described in Table 1) and TTS is expected to be minor and short term;
- The number of authorized takes is low relative to the estimated abundances of the affected stock, even given the extent to which abundance is significantly underestimated;
- Submarine training and testing activities will occur over only 4 weeks of the total 6-week activity period;
- There will be no loss or modification of ringed seal habitat and minimal, temporary impacts on prey;
- Physical impacts to ringed seal subnivean lairs will be avoided; and
- Mitigation requirements for ice camp activities will prevent impacts to ringed seals during the pupping season.

Comment 2: CBD stated that the take estimates from modeling likely underestimate or incorrectly estimate take. NMFS relies on Navy's modeling and a density of 0.3957 ringed seals per km^2. It is unclear if this assumes an even distribution of seals throughout the Study Area, which would fail to account for concentrated activities near the Ice Camp Study Area. NMFS stated that ''[w]hile the total ICEX22 Study Area is large, the Navy expects that most activities would occur within the Ice Camp Study Area in relatively close proximity to the ice camp.'' The density of ringed seals for this area has not been determined, and thus the modeling does not accurately estimate take. CBD asserted that there are likely more ringed seals near the Ice Camp Study Area than across the entire Study Area because they are in their home ranges near their subnivean lairs.

Response: The Navy estimated take using the density of 0.3957 ringed seals per km^2 as noted by the commenter, and NMFS concurs that this is currently the best available information. Information regarding the density of ice seals (which include ringed seals) in the Arctic Ocean is sparse. While the commenter suggests that NMFS and the Navy should use density data that is specific to the Ice Camp Study Area and the area in close proximity to the ice camp, given that most of the activities will occur there, NMFS and the Navy are not aware of any such data, and the commenter did not provide or reference any data which it thinks would be more appropriate than that used by the Navy and NMFS. Further, the statement that animals occur in their home ranges near their subnivean lairs does not support an assertion that there are likely more ringed seals near the Ice Camp Study Area than in other areas across the entire Study Area, as an animal's home range is a separate concept from the density of animals in any given area.

Comment 3: CBD stated that the assumption that having activities ongoing at the ice camp will dissuade ringed seals from pupping near the area should not be considered to mitigate harassment, and instead should be counted as additional take. Ringed seals build their subnivean lairs in habitat like that where the ice camp will be constructed. The proposed activities are planned during the season that the ringed seals give birth and raise their pups. Further, CBD stated that the assumption that a ringed seal may be able to relocate its pup or find another breathing hole due to human disturbance is naïve and fails to consider the energetic cost as well as predation risk that these seals may face.

Response: Regarding the potential displacement of ringed seals to other pupping sites, NMFS would not consider it as mitigating harassment, rather, in the case of ICEX, we consider it unlikely to occur. As a general matter, on-ice activities could cause a seal that would have otherwise built a lair in the area of an activity to be displaced and therefore, construct a lair in a different area outside of an activity area, or a seal could choose to relocate to a different existing lair outside of an activity area. However, in the case of the ice camp associated with ICEX22, displacement of seal lair construction or relocation to existing lairs outside of the ice camp area is unlikely, given the low average density of lairs (the average ringed seal lair density in the vicinity of Prudhoe Bay, Alaska is 1.58 lairs per km^2 (Table 3 of the notice of the proposed IHA; 86 FR 70451, December 10, 2021)), the relative footprint of the Navy's planned ice camp (2 km^2), the lack of previous ringed seal observations on the ice during ICEX activities, and mitigation requirements that require the Navy to construct the ice camp and runway on first-year or multi-year ice without pressure ridges and require personnel to avoid areas of deep snow drift or pressure ridges. We have clarified this explanation in the Negligible Impact Analysis and Determination section of this final notice. While the commenter is correct that ringed seals build their subnivean lairs in habitat similar to that

where the ice camp will be constructed, given that mitigation measures require that the ice camp and runway be established on first-year or multi-year ice without pressure ridges, where ringed seals tend to build their lairs, it is extremely unlikely that a ringed seal would build a lair in the vicinity of the ice camp. This measure, in combination with the other mitigation measures required for operation of the ice camp are expected to avoid impacts to the construction and use of ringed seal subnivean lairs, particularly given the already low average density of lairs, as described above.

Regarding the commenter's assertion that the assumption that a ringed seal may be able to relocate its pup or find another breathing hole due to human disturbance fails to consider the associated energetic cost and predation risk, NMFS has clarified in this response that for the reasons stated above, ringed seal lairs are not expected to occur in the ice camp study area, and therefore, NMFS does not expect ringed seals to relocate pups due to human disturbance from ice camp activities. Use of a breathing hole farther from the sound source, rather than one closer to the sound source, would be within the normal range of behavior (Kelly *et al.* 1988), and would not necessarily have an increased energetic cost. While relocating to a different breathing hole could change predation risk, such a risk is scenario-specific and speculative, and it is not possible to determine such risk.

Comment 4: CBD states that NMFS failed to provide an adequate explanation for discounting the impacts of the unusual mortality event (UME) on the cumulative effects of the proposed activities. New research about the event (that focused on spotted and ribbon seals) found that the body condition of the seals had declined, likely due to climate-related impacts on prey (Boveng *et al.,* 2020). This long-lasting unusual mortality event cannot simply be ignored in the authorization of additional take of ice seals.

Response: NMFS disagrees with the commenter that we ''discounted'' the impacts of the ice seal UME (which includes ringed seals, bearded seals, and spotted seals), and we have not ignored it. Rather, NMFS stated that the take proposed for authorization (and now authorized here) does not provide a concern for ringed seals when considered in the context of these UMEs, especially given that the anticipated low-level and short-term take by Level B harassment is unlikely to affect the reproduction or survival of any individuals. That continues to be our conclusion. In addition, the ICEX22 Study Area is in the Arctic Ocean, well north and east of the primary area where seals have stranded along the western coast of Alaska (see map of strandings at: *https://www.fisheries.noaa.gov/alaska/marine-life-distress/2018-2022-ice-seal-unusual-mortality-event-alaska*). No Level A harassment, serious injury, or mortality is expected or authorized, and take by Level B harassment of ringed seals will be reduced to the level of least practicable adverse impact through the incorporation of mitigation measures. As such, the authorized takes by Level B harassment of ringed seals are not expected to exacerbate or compound the ongoing UME.

NOAA is investigating the UME, and has assembled an independent team of scientists to coordinate with the Working Group on Marine Mammal Unusual Mortality Events to review the data collected, sample stranded seals, and determine the next steps for the investigation. However, the study referenced by the commenter took place in the Bering Sea and Aleutian Islands, far from the Navy's proposed activity, and was conducted on spotted seals, ribbon seals, and harbor seals, none of which are authorized for taking through this IHA. (The current UME does not include harbor seals or ribbon seals, though as noted above, it does include spotted seals).

Comment 5: CBD asserted that NMFS should consider new and additional information on marine mammal exposure criteria (Southall *et al.* 2019; 2021). Additionally, CBD stated that NMFS relies on an ''unsubstantiated'' cut-off distance of 10 km that according to the Marine Mammal Commission ''contradicts the data underlying the Bayesian Behavioral Response Functions (BRFs), negates the intent of the functions themselves, and underestimates the numbers of takes'' (Thomas, 2020). CBD states that NMFS should consider that at received levels of less than or equal to 140 dB (decibel) re 1 µPa (microPascal) some pinnipeds had strong reactions (Thomas, 2020).

Response: As discussed further below, neither is the 10-km cut-off distance unsubstantiated nor does it contradict the BRFs. Received level and distance have been shown to independently affect how marine mammals respond to sound—the BRFs and the cut-off distances work together to consider how these two factors, respectively, can predict marine mammal responses. Separately, given the extensive development process, it is unreasonable to revise and update the criteria and risk functions every time a new paper is published, though both NMFS and the Navy review and consider the implications of any new papers as they arise. Further, we note that NMFS and the Navy are currently considering new information in development of the next version (Phase IV) of the Navy's Criteria and Thresholds for U.S. Navy Acoustic and Explosive Effects Analysis.

We disagree with the commenter's assertion that the 10 km cutoff distance is unsubstantiated, as we disagreed with the Marine Mammal Commission's initial comment, cited by CBD in its letter. 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. Cutoffs representing the distances beyond which the potential of significant behavioral responses were considered to be unlikely were used in conducting analysis for ICEX22. 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.

Regarding consideration of pinniped reactions at received levels of less than or equal to 140 dB re 1 µPa, the current criteria (Phase III) use a slightly modified version of the Southall *et al.* (2007) severity scaling when considering pinniped reactions, including to exposures less than 140 dB SPL (sound pressure level), given that Southall *et al.* (2007) did not meet the criteria for inclusion (*i.e.,* received level paired with observation of response). Pinniped data included in the Phase III BRFs did include reactions in grey seals slightly below 140 dB SPL, but these were captive studies conducted in a pool where the sound sources were within a few meters of the animal (Götz and Janik 2011). Therefore, the context (*i.e.,* proximity to the source) was likely an important factor mediating the seals reactions. Significant behavioral reactions in pinnipeds have not been observed beyond a few kilometers. The *Navy's Criteria and Thresholds for U.S. Navy Acoustic and Explosive Effects Analysis (Phase III),* summarizes grey seal reactions on pg. 61, and individual experimental trials from Götz and Janik (2011) are summarized in Appendix B, starting on pg. 157, including several significant behavioral reactions. Götz (2008) and Gotz and Janik (2010) were not included in development of the criteria because they did not include

observations specific enough to pair received levels with behavioral reactions.

Comment 6: CBD stated that NMFS discounts impacts from aircraft or incorrectly assumes complete mitigation. CBD asserted that some pinnipeds are equally susceptible to noise in air as in water (Kastak *et al.* 2007). Southall (2019) provides in-air PTS (154 dB SEL) and TTS (134 dB SEL) thresholds for pinnipeds. Ice seals are sensitive to out-of-water noise, including hauling out in response to aircraft noise (Bradford *et al.* 1999).

Response: While NMFS agrees with the commenter that in some situations in-air noise can result in take of marine mammals, NMFS assessed the impacts of aircraft for the Navy's ICEX22 activities and does not expect aircraft noise from this project to take marine mammals given the required mitigation included in the IHA. Born *et al.* (1999) analyzed ''escape responses'' (*i.e.,* hauled out ringed seals entering the water) from an aircraft and a helicopter flying at an altitude of 150 m (164 yd). The results of the study indicated that if the aircraft do not approach the seals closer than 500 m (547 yd) at that altitude, the risk of flushing the seals into the water can be greatly reduced. In a separate paper, Bradford and Weller (2005) noted that helicopter presence resulted in flushing of most of the hauled out seals during observations, though they did not note specific distances of the helicopter at which flushing occurred.

The final IHA requires that fixed wing aircraft must operate at the highest altitudes practicable taking into account safety of personnel, meteorological conditions, and need to support safe operations of a drifting ice camp. Aircraft must not reduce altitude if a seal is observed on the ice. In general, cruising elevation must be 305 m (1,000 ft) or higher. This altitude is significantly higher than the 150 m (164 yd) aircraft and helicopter altitudes analyzed in Born *et al.* (1999). Unmanned Aircraft Systems (UASs) must maintain a minimum altitude of at least 15.2 m (50 ft) above the ice. They must not be used to track or follow marine mammals. Further, helicopter flights must use prescribed transit corridors when traveling to or from Prudhoe Bay and the ice camp. Helicopters must not hover or circle above marine mammals or within 457 m (1,500 ft) of marine mammals, and aircraft must maintain a minimum separation distance of 1.6 km (1 mi) from groups of 5 or more seals and must not land on ice within 800 m (0.5 mi) of hauled-out seals. These measures are expected to prevent the take of marine mammals from aircraft and UASs, and the commenter has not offered data that suggests otherwise.

Comment 7: CBD asserted that the proposed mitigation fails to ensure the least practicable adverse impact. First, the proposed IHA does not include any mitigation for the sonar. There are several additional mitigation measures that would reduce the potential for harassment of marine mammals including:

- Placing a cap on the overall use of sonar to ensure the lowest level of marine mammal disturbance;
- Requiring that activities conclude before April when bowhead whales migrate into the area;
- Requiring passive acoustic and/or thermal monitoring and restricting sonar in the presence of marine mammals or aggregations of marine mammals; and
- Limiting the number of aircraft transits and prohibiting dipping sonar.

Response: The commenter appears to have overlooked required mitigation measures for sonar that were included in the proposed IHA and are included in the final IHA. The mitigation measures ''for activities involving acoustic transmissions'' described in the proposed and final IHAs apply to sonar. These measures include the following: (1) Personnel must begin passive acoustic monitoring (PAM) for vocalizing marine mammals 15 minutes prior to the start of activities involving active acoustic transmissions from submarines and exercise weapons. (2) Personnel must delay active acoustic transmissions and exercise weapon launches if a marine mammal is detected during pre-activity PAM and must shutdown active acoustic transmissions if a marine mammal is detected during acoustic transmissions. (3) Personnel must not restart acoustic transmissions or exercise weapon launches until 15 minutes have passed with no marine mammal detections.

Regarding the commenter's recommendation that NMFS place a ''cap'' on the overall use of sonar to ensure the lowest level of marine mammal disturbance, the Navy must use the amount of sonar required to successfully conduct the activity, and such a limit set by NMFS is, therefore, not practicable. Unlike incidental take authorizations in other Navy training and testing areas that include limits on sonar use in certain areas during certain times, such as in the Navy's Northwest Training and Testing Area, ICEX22 is limited in duration and scope, and there are no known Biologically Important Areas or other factors that warrant a time/area restriction in the ICEX22 Navy Activity Study Area.

Regarding the commenter's recommendation that activities conclude before April when bowhead whales migrate into the area, NMFS has, by default, required that the Navy's activities that have the potential to harass marine mammals conclude by the end of April, as that is when the IHA expires. Please see Comment 11 for additional information regarding NMFS' conclusion that bowhead whales are not likely to be in the Navy Activity Study Area before the end of April, and therefore will not be taken during ICEX22.

Regarding the commenter's recommendation that NMFS require PAM and/or thermal monitoring and restrict sonar use in the presence of marine mammals or aggregations of marine mammals, NMFS had already included such measures in the proposed IHA, and has included them in this final IHA, as described in the first paragraph of this comment response.

Regarding the commenter's recommendation that NMFS limit the number of aircraft transits and prohibit dipping sonar, the Navy is already minimizing the number of aircraft transits to only those that are necessary for successful completion of the ICEX22 activity, and therefore, an additional limit set by NMFS is not practicable. (See Sections 2.1.3 (Prudhoe Bay) and 2.2.2 (Aircraft) of the 2022 ICEX EA/OEA for additional information regarding planned aircraft use in ICEX22.) Dipping sonar is not a part of the Navy's planned ICEX22 activities (see the Navy's ICEX22 IHA application), nor has the Navy utilized dipping sonar in 2018 or 2020 ICEX activities. Therefore, a prohibition on dipping sonar is not warranted.

Comment 8: CBD stated that the mitigation for ice camps, while good, could be more robust to ensure that ringed seals are not disturbed. For example, there are not any mitigation measures designed for ringed seals that may be present in the ice camp area or for pupping ice seals.

Response: The mitigation measures included in the proposed IHA, and this final IHA, include measures to avoid impacts to ringed seal subnivean lairs, which is where ringed seals would be expected to occur in the area if they were out of the water during the February to April timeframe.

It is unclear what the commenter means by its suggested inclusion of ''mitigation measures designed for ringed seals that may be present in the ice camp area or for pupping ice seals'' and the commenter has not suggested

any additional measures that would satisfy this vague recommendation, beyond what NMFS has already included in the proposed and final IHA. As discussed in the response to Comment 3, given the expected density of ringed seal lairs in the Ice Camp Study Area, the relative footprint of the Navy's planned ice camp (2 km^2), the lack of previous ringed seal observations on the ice during ICEX activities, and mitigation requirements that require the Navy to construct the ice camp and runway on first-year or multi-year ice without pressure ridges and require personnel to avoid areas of deep snow drift or pressure ridges, ringed seal pups are not anticipated to occur in the vicinity of the ice camp at the commencement of and during ICEX22 activities.

Comment 9: CBD stated that the monitoring provisions are woefully insufficient by only requiring reporting of dead and injured seals, and stated that there should, at minimum, also be monitoring and reporting of harassment of any marine mammals.

Response: The Navy is required to conduct far more monitoring and reporting than just reporting observations of injured and dead marine mammals. As stated in the proposed IHA, and in this final IHA, in addition to reporting observations of injured or dead marine mammals, the Navy is required to submit an exercise monitoring report which will include the number of marine mammals sighted, by species, and any other available information about the sighting(s) such as date, time, and approximate location (latitude and longitude). The Navy must also report data regarding sonar use and the number of shutdowns during ICEX22 activities in the Atlantic Fleet Training and Testing (AFTT) Letter of Authorization 2023 annual classified report. The Navy is also required to analyze any declassified underwater recordings collected during ICEX22 for marine mammal vocalizations and report that information to NMFS, including the types and natures of sounds heard (*e.g.,* clicks, whistles, creaks, burst pulses, continuous, sporadic, strength of signal) and the species or taxonomic group (if determinable). This information will also be submitted to NMFS with the 2023 annual AFTT declassified monitoring report. Further, as stated in the Monitoring and Reporting section of this notice, the Navy is also now exploring the potential of implementing an environmental DNA (eDNA) study on ice seals.

Comment 10: CBD stated that there cannot be a renewal of this authorization because the renewal process violates section 101(a)(5)(D) of the MMPA. Also, this authorization should not be eligible for a renewal because the activities are supposed to finish in April, and thus are far less than would need to be continued next year. The activities must be concluded on time to avoid additional take of bowhead whales and other protected species. Additionally, CBD stated that the Navy only conducts ICEX every 2 or 3 years; and therefore, even if the activity is similar next time, it is not eligible for a one-year renewal.

Response: In prior responses to comments about IHA renewals (*e.g.,* 84 FR 52464; October 02, 2019 and 85 FR 53342, August 28, 2020), NMFS has explained how the renewal process, as implemented, is consistent with the statutory requirements contained in section 101(a)(5)(D) of the MMPA, provides additional efficiencies beyond the use of abbreviated notices and, further, promotes NMFS' goals of improving conservation of marine mammals and increasing efficiency in the MMPA compliance process. Therefore, we intend to continue implementing the renewal process.

Regarding the commenters assertion that this particular activity does not qualify for a renewal IHA, NMFS considers renewals on a case-by-case basis, and would consider the eligibility of a request for a renewal if and when such a request is received from the Navy.

Regarding the commenter's statement that the activities must be concluded on time to avoid take of bowhead whales and other protected species, the Navy's authorization, which authorizes take of ringed seals only, expires April 30, 2022. Therefore, activities which may result in the take of marine mammals must be completed by that date. The final IHA explicitly prohibits the take of any other species of marine mammal, other than ringed seals as authorized. Please also refer to the response to Comment 11, which describes why bowhead whales are not expected to occur in the Study Area during the Navy's ICEX22 activities.

Comment 11: CBD stated that the determination that there will be no take of other marine mammals within NMFS' jurisdiction seems insufficiently supported. NMFS acknowledges that bearded seals are present in the area during the project timeframe; however, it discounts the potential impact on bearded seals because they are unlikely to be near the ice camp or where submarine activities would be conducted. This fails to consider that noise from sonar can travel great distances, and that even if a bearded seal does not dive to 800 m or would prefer other habitat with benthic organisms, this does not preclude harassment impacts from more distant submarine activities.

CBD also stated that endangered bowhead whales migrate through the area and may be present during the end of the ICEX activities.

Response: Regarding bearded seals, although acoustic data indicate that some bearded seals remain in the Beaufort Sea year round (MacIntyre *et al.* 2013, 2015; Jones *et al.* 2014), satellite tagging data (Boveng and Cameron 2013; ADF&G 2017) show that large numbers of bearded seals move south in fall/winter with the advancing ice edge to spend the winter in the Bering Sea, confirming previous visual observations (Burns and Frost 1979; Frost *et al.* 2008; Cameron and Boveng 2009). The southward movement of bearded seals in the fall means that very few individuals are expected to occur along the Beaufort Sea continental shelf in February through April, the timeframe ICEX22 activities. The northward spring migration through the Bering Strait, begins in mid-April (Burns and Frost 1979).

In the event some bearded seals were to remain in the Beaufort Sea during the season when ICEX22 activities will occur, the most probable area in which bearded seals might occur during winter months is along the continental shelf. Bearded seals feed extensively on benthic invertebrates (*e.g.,* clams, gastropods, crabs, shrimp, bottom-dwelling fish; Quakenbush *et al.* 2011; Cameron *et al.* 2010) and are typically found in water depths of 200 m (656 ft) or less (Burns 1970). The Bureau of Ocean Energy Management (BOEM) conducted an aerial survey from June through October that covered the shallow Beaufort and Chukchi Sea shelf waters, and observed bearded seals from Point Barrow to the border of Canada (Clarke *et al.* 2015). The farthest from shore that bearded seals were observed was the waters of the continental slope (though this study was conducted outside of the ICEX22 time frame). The Navy anticipates that the ice camp will be established 185–370 km (100–200 nmi) north of Prudhoe Bay in water depths of 800 m (2,625 ft) or more. The continental shelf near Prudhoe Bay is approximately 55 nmi (100 km) wide. Therefore, even if the ice camp were established at the closest estimated distance (100 nmi from Prudhoe Bay), it would still be approximately 45 nmi (83 km) distant from habitat potentially occupied by bearded seals. Empirical evidence has not shown responses to

sonar that would constitute take beyond a few km from an acoustic source, and therefore, NMFS and the Navy conservatively set a distance cutoff of 10 km. Regardless of the source level at that distance, take is not estimated to occur beyond 10 km from the source. Although bearded seals are found 20 to 100 nmi (37 to 185 km) offshore during spring (Simpkins *et al.* 2003, Bengtson *et al.* 2005), during the winter we expect bearded seals to select habitats where food is abundant and easily accessible to minimize the energy required to forage and maximize energy reserves in preparation for whelping, lactation, mating, and molting. Bearded seals are not known to dive to 800 m to forage and it is highly unlikely that they would occur near the ice camp or where the research activities will be conducted. This conclusion is supported by the fact that the Navy did not visually observe or acoustically detect bearded seals during required PAM during the 2020 ice exercises.

Regarding bowhead whales, NMFS provided a detailed description of their migratory route and the typical timing of their northward migration in the notice of the proposed IHA (86 FR 70451; December 10, 2021). As explained in that notice, bowhead whales are unlikely to occur in the Navy Activity Study Area between February and April, as they spend winter (December to March) in the northern Bering Sea and southern Chukchi Sea, and migrate north through the Chukchi Sea and Beaufort Sea during April and May (Muto *et al.* 2021). On their spring migration, the earliest that bowhead whales reach Point Hope in the Chukchi Sea, well south of Point Barrow, is late March to mid-April (Braham *et al.* 1980). Although the ice camp location is not known with certainty, the distance between Point Barrow and the closest edge of the Ice Camp Study Area is over 200 km. The distance between Point Barrow and the closest edge of the Navy Activity Study Area is over 50 km, and the distance between Point Barrow and Point Hope is an additional 525 km (straight line distance); accordingly, bowhead whales are unlikely to occur in the ICEX22 Study Area before ICEX22 activities conclude. NMFS is not aware of, nor has the commenter provided, information that suggests that bowhead whales would be present in the Navy Activity Study Area during the planned ICEX22 activities.

Comment 12: CBD stated that NMFS should better analyze the potential impacts on subsistence harvest. CBD asserted that because serious injury and mortality are already over PBR, authorization of additional take from sources other than subsistence harvest may reduce availability of ice seals. NMFS must either provide more data and support its assumption that the population estimate for the stock is wrong or provide a more robust analysis of the potential impacts on subsistence harvest.

Response: See the response to Comment 1 for discussion of PBR. Further, NMFS' unmitigable adverse impact determination is not based upon the abundance estimate for the Alaska stock of ringed seals.

Impacts to marine mammals from the specified activity will mostly include limited, temporary behavioral disturbances of ringed seals; however, some TTS is also anticipated. No Level A harassment (injury), serious injury, or mortality of marine mammals is expected or authorized, and the activities are not expected to have any impacts on the reproduction or survival of any animals. NMFS' determination is based on the anticipated effects to marine mammals (take by Level B harassment only), the short-term, temporary nature of the ICEX22 activities which will occur outside of the primary subsistence hunting seas, and the distance offshore from known subsistence hunting areas. (The Study Area boundary is seaward of subsistence hunting areas, approximately 50 km from shore at the closest point, though exercises will occur farther offshore.) Further, the Navy plans to provide advance public notice to local residents and other users of the Prudhoe Bay region of Navy activities and measures used to reduce impacts on resources. This includes notification to local Alaska Natives who hunt marine mammals for subsistence. If any Alaska Natives express concerns regarding project impacts to subsistence hunting of marine mammals, the Navy will further communicate with the concerned individuals or community. The Navy will provide project information and clarification of any mitigation measures that may reduce impacts to marine mammals. While it seems clear that ringed seals generally are an important subsistence species for Alaska Natives, no concerns specific to this activity have been expressed so far. Apart from clarifying that the unmitigable adverse impact determination is not based upon the abundance estimate for the Alaska stock of ringed seals, it is unclear what the commenter would consider a ''better'' analysis of the potential impacts on subsistence harvest.

Comment 13: CBD asserted that because of the impacts on threatened and endangered species and their critical habitat, the Finding of No Significant Impact is arbitrary, and the Navy should have prepared an Environmental Impact Statement.

Response: The Navy has drafted the EA to analyze the full scope of ICEX22 activities, given that conducting the ICEX22 activities is their proposed action. NMFS' authority is limited to the issuance, if appropriate, of an IHA for the take of marine mammals that it manages. However, NMFS concurs with the analysis presented in the 2022 ICEX EA. Regarding issuance of an IHA to the Navy, given the scope of the impacts of the Navy's activity on marine mammals that NMFS manages, NMFS finds that the 2022 ICEX EA fully supports NMFS' Finding of No Significant Impact, which was made following finalization of the EA. Given that the comment is directed at the Navy and NMFS' role in managing the resources analyzed in the EA is limited, NMFS provided this comment to the Navy to consider for the final EA.

In response, the Navy has explained that in accordance with requirements of the National Environmental Policy Act (NEPA) and Executive Order 12114, the Navy analyzed all potential impacts resulting from the proposed action and found that the short-term effects, the absence of injury or mortality, and the planned mitigation implementation resulted in no significant impact or significant harm to the resources. The Navy's consultations with NMFS and U.S. Fish and Wildlife Service also support these findings and therefore, an EIS is not required.

Separately, of note, as stated in the Endangered Species Act section of this notice, NMFS' Alaska Regional Office Protected Resources Division issued a Biological Opinion on January 31, 2022, which concluded that the Navy's activities and NMFS' issuance of an IHA are not likely to jeopardize the continued existence of the Arctic stock of ringed seals. As described in the notice of the proposed IHA, NMFS has proposed Designation of Critical Habitat for the Arctic Subspecies of the Ringed Seal (86 FR 1452; January 8, 2021). However, this proposed critical habitat has not been finalized.

Comment 14: CBD stated that the 2022 ICEX EA fails to analyze any alternatives beyond the no-action alternative. CBD stated that NMFS should consider an alternative that incorporates additional mitigation measures such as limits on sonar, time restrictions, passive acoustic and/or thermal monitoring, and limits on aircraft.

Response: As discussed in the response to Comment 13, NMFS

considers the analysis in the 2022 ICEX EA, including its discussion of alternatives, sufficient to support a Finding of No Significant Impact with respect to the issuance of an IHA. As discussed in NMFS' response to Comment 7, the proposed and final IHAs require that the Navy conduct PAM for marine mammals, and that the Navy delay or shut down active acoustic transmissions if a marine mammal is detected during pre-activity PAM or during acoustic transmissions, respectively. These measures are considered as part of the proposed action in the EA. However, an alternative that incorporated the additional mitigation measures identified by the commenter would not be viable. The limits on aircraft and sonar recommended by the commenter for inclusion in a new alternative in the 2022 ICEX EA cannot be implemented by the Navy for the reasons described in the response to Comment 7. It is unclear what the commenter means by its suggested time restrictions, however, the Navy has selected the February to April time period due to the environmental conditions required to successfully complete the exercises.

Comment 15: CBD stated that NMFS, which is charged with protecting marine mammals, cannot adopt the Navy's purpose and need for military activities such as evaluating the employment and tactics of submarine operability in Arctic conditions.

Response: Section 1.2 of the 2022 ICEX Draft EA and the Final EA state NMFS' purpose and need, which are separate from that of the Navy. As stated in Section 1.2, NMFS' purpose is to evaluate the Navy's Proposed Action pursuant to NMFS' authority under the MMPA, and to make a determination whether to issue an IHA, including any conditions or mitigation measures along with monitoring and reporting requirements needed to meet the statutory requirements of the MMPA. As also stated in Section 1.2, the need for NMFS' proposed action is to consider the impacts of the Navy's activities on marine mammals and meet NMFS' obligations under the MMPA.

Comment 16: CBD states that the EA fails to adequately examine important environmental effects, and that it suffers from some of the same flaws as the negligible impact determination. For example, it underestimates the potential impact of the activities on ringed seals, the impacts of sonar, and discounts all impacts on wildlife other than ice seals. The EA assumes that avoidance and displacement of ringed seals will mitigate impacts, but instead they displace ringed seals from preferred habitat and constitute a taking.

Response: Please see *Comment 1* for NMFS' response to the alleged ''flaws'' identified by the commenter in the negligible impact determination, and see *Comment 3* for NMFS' response to the commenter's concerns regarding potential avoidance and displacement of ringed seals. Those responses also address analysis of the impacts of the Navy's activity on ringed seals, including impacts of sonar and the potential for avoidance and displacement of ringed seals in the EA. Otherwise, NMFS has provided this comment to the Navy to consider as it relates to the impacts of sonar and impacts on wildlife other than ice seals for which NMFS does not have management authority.

In response, the Navy has explained that the 2022 ICEX EA analyzed all resources and all potential affects as a result of its Proposed Action. The Navy consulted with NMFS regarding impacts to bearded seals and ringed seals, and the U.S. Fish and Wildlife Service regarding polar bears. The effects of sonar were analyzed using the best available science and the Navy conducted extensive modeling to determine potential effects, which resulted in the Navy requesting an IHA from NMFS.

Comment 17: CBD stated that it finds the assumption that polar bears will not be harassed, displaced, or disturbed by the proposed activities particularly troubling. CBD referenced instances of disturbance of polar bears by snow machine noise, and raised concerns about impacts of noise on denning polar bears.

Response: Polar bears are managed by the U.S. Fish and Wildlife Service rather than NMFS. Therefore, NMFS has provided this comment to the Navy to consider for the final EA.

Comment 18: CBD states that the EA fails to adequately consider the impacts of climate change both on the proposed activities as well as the additional pressure that the activities exert on arctic wildlife that is already threatened by climate change. The commenter stated that the primary threat facing ringed seals is habitat alteration flowing from climate change due to its effects on sea ice and snow cover, which ringed seals depend on for pupping, nursing, molting, and resting (Andersen, Kovacs and Lydersen, N.D.; Boucher 2018; Boucher 2019; Crain *et al.* 2021; Crawford *et al.* 2019; Fauchald *et al.* 2017; Ferguson *et al.* 2017, 2020; Hezel *et al.* 2012; Hamilton *et al.* 2015, 2018, 2019; Hamilton, Kovacs and Lydersen 2019; Harwood *et al.* 2020; Karpovich, Horstmann and Polasek 2020; Lone *et al.* 2019; Lydersen *et al.* 2017; Martinez-Bakker *et al.* 2013; Reimer *et al.* 2019; Ritchie 2018; Von Duyke *et al.* 2020; Yurkowski, David J., *et al.* 2019). The commenter states that ocean warming and acidification resulting from increased CO_2 emissions also alter prey populations and other ecosystem dynamics important to the listed ringed seals (77 FR 76708, December 28, 2012; Andersen, Kovacs and Lydersen, N.D.; Beltran *et al.* 2016; Boucher 2018; Hamilton *et al.* 2016; Lowther *et al.* 2017; Matley, Fisk and Dick 2015; Wang *et al.* 2016a, 2016b; Young and Ferguson 2013, 2014).CBD further stated that the proposed activities deepen the imperilment of climate-threatened ice seals, polar bears, and other wildlife, and that the cursory cumulative impacts analysis lacks any substance or discussion of other actions in the area such as oil and gas, shipping, and fishing activities (77 FR 76712, December 28, 2012; Andersen, Kovacs and Lydersen, N.D.; Lomac-Macnair, Andrade and Esteves 2019; Muto 2021; Siddon, Zador and Hunt Jr. 2020; Von Duyke *et al.* 2020; Yurkowski *et al.* 2019).

Response: NMFS has considered CBD's comments regarding the impacts of climate change on ringed seals, and additional analysis has been added to the final 2022 ICEX EA/OEA. As stated in the final 2022 ICEX EA/OEA, the habitat of Arctic species has been altered by the warming climate, and scientific consensus projects continued and accelerated warming in the foreseeable future. This continued warming will decrease sea ice and snow cover that seals and polar bears rely on throughout their lifecycle. Ringed seals use sea ice for resting, whelping, and molting, while polar bears primarily use it for hunting, mating, and maternity denning. Climate change has caused a reduction in the distribution, abundance, and body condition of Arctic species. Additionally, ocean warming and acidification alter prey populations that marine mammal species rely on, and increase competition with subarctic species (Laidre *et al.* 2008). Although climate change is a continuing threat to Arctic species, activities conducted during ICEX will have an inconsequential additional impact since they are temporary, and planned mitigation measures are expected to reduce impacts to protected species during the activities.

Changes From the Proposed IHA to Final IHA

NMFS slightly modified the IHA start date. The proposed IHA reflected a start date of February 1, 2022, while the final IHA becomes effective February 4, 2022.

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' SARs (*https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments*) and more general information about these species (*e.g.,* physical and behavioral descriptions) may be found on NMFS' website (*https://www.fisheries.noaa.gov/find-species).*

Table 1 lists all species or stocks for which take is expected and authorized, and summarizes information related to the population or stock, including regulatory status under the MMPA and the Endangered Species Act (ESA; 16 U.S.C. 1531 *et seq.*) and potential biological removal (PBR), where known. For taxonomy, we follow Committee on Taxonomy (2021). PBR is defined by the MMPA as the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population (as described in NMFS' SARs). While no serious injury or mortality is anticipated or authorized here, PBR and annual serious injury and mortality from anthropogenic sources are included in Table 1 as gross indicators of the status of the species and other threats. That said, in this case for the Arctic stock of ringed seals and as explained in footnotes 6 and 7 of Table 1, the lack of complete population information significantly impacts the usefulness of PBR in considering the status of the stock, as explained below.

Marine mammal abundance estimates 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's U.S. Alaska SARs (Muto *et al.* 2021). All values presented in Table 1 are the most recent available at the time of publication and are available in the 2020 Alaska SAR (Muto *et al.* 2021) and draft 2021 Alaska SAR (available online at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/draft-marine-mammal-stock-assessment-reports*). However, for the same reason noted above and as described in footnotes 4 and 5 of Table 1, the lack of complete population information for the Arctic stock of ringed seals impacts the usefulness of these numbers in considering the impacts of the anticipated take on the stock.

TABLE 1—SPECIES THAT SPATIALLY CO-OCCUR WITH THE ACTIVITY TO THE DEGREE THAT TAKE IS REASONABLY LIKELY TO OCCUR

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]
Family Phocidae (earless seals): Ringed seal	*Pusa hispida*	Arctic	T/D;Y	171,418 [4 5], (N/A, 158,507 [4 5]; 2013).	[6] 4,755	[7] 6,459

[1] ESA status: Endangered (E), Threatened (T)/MMPA status: Depleted (D). 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-assessments.* CV is coefficient of variation; Nmin is the minimum estimate of stock abundance. In some cases, CV is not applicable.

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

[4] These estimates reflect the Bering Sea population only, as reliable abundance estimates for the Chukchi Sea and Beaufort Sea are not available.

[5] This is expected to be an underestimate of ringed seals in the Bering Sea, as the estimate was not adjusted for seals in the water at the time of the surveys, nor does it include ringed seals in the shorefast ice zone.

[6] The PBR value for this stock is based on a partial stock abundance estimate, and is therefore an underestimate for the full stock.

[7] The majority of the M/SI for this stock (6,454 of 6,459 animals) is a result of the Alaska Native subsistence harvest. While M/SI appears to exceed PBR, given that the reported PBR is based on a partial stock abundance estimate, and is therefore an underestimate for the full stock, M/SI likely does not exceed PBR.

As indicated in Table 1, ringed seals (with one managed stock) temporally and spatially co-occur with the activity to the degree that take is reasonably likely to occur, and we have authorized such take. A detailed description of the Arctic stock of ringed seals, including brief introductions to the species and stock, available information regarding population trends and threats, information regarding local occurrence, proposed ESA-designated Critical Habitat, and information regarding a current UME were provided in the **Federal Register** notice for the proposed IHA (86 FR 70451; December 10, 2021). Since that time, we are not aware of any changes in the status of the Arctic stock of ringed seals, and therefore, detailed descriptions are not provided here. Please refer to that **Federal Register** notice for these descriptions. Please also refer to NMFS' website (*https://www.fisheries.noaa.gov/find-species*) for generalized species accounts.

As described in footnotes 4, 5, 6, and 7 of Table 1, the lack of complete population information significantly impacts the usefulness of abundance estimates and PBR for this stock. The PBR for the Alaska stock of ringed seals is based upon a minimum population estimate that is expected to be an underestimate, as it is an estimate for just a portion of the stock's range, and that estimate was also not corrected for seals in the water or shorefast ice zone during the survey. Therefore, the minimum population estimate (and best population estimate) and PBR for the Alaska stock of ringed seals are negatively biased (*i.e.,* underestimates). These metrics are considered as gross indicators of the stock status; however, an accurate abundance estimate and PBR for the entire stock is not necessary to make the negligible impact determination. For the full discussion on this issue, see our response to *Comment 1.*

Marine Mammal Hearing

Hearing is the most important sensory modality for marine mammals underwater, and exposure to anthropogenic sound can have deleterious effects. To appropriately assess the potential effects of exposure to sound, it is necessary to understand the frequency ranges marine mammals are able to hear. Current data indicate that not all marine mammal species have equal hearing capabilities (*e.g.,* Richardson *et al.* 1995; Wartzok and Ketten, 1999; Au and Hastings, 2008). To reflect this, Southall *et al.* (2007) recommended that marine mammals be divided into functional hearing groups based on directly measured or estimated hearing ranges on the basis of available behavioral response data, audiograms derived using auditory evoked potential techniques, anatomical modeling, and other data. Note that no direct measurements of hearing ability have been successfully completed for mysticetes (*i.e.,* low-frequency cetaceans). Subsequently, NMFS (2018) described generalized hearing ranges for these marine mammal hearing groups. Generalized hearing ranges were chosen based on the approximately 65 decibel (dB) threshold from the normalized composite audiograms, with the exception for lower limits for low-frequency cetaceans where the lower bound was deemed to be biologically implausible and the lower bound from Southall *et al.* (2007) retained. Marine mammal hearing groups and their associated hearing ranges are provided in Table 2.

TABLE 2—MARINE MAMMAL HEARING GROUPS

[NMFS, 2018]

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

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

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

For more detail concerning these groups and associated frequency ranges, please see NMFS (2018) for a review of available information. Only ringed seals (a phocid pinniped species) have the reasonable potential to co-occur with the planned ICEX22 activities.

Potential Effects of Specified Activities on Marine Mammals and Their Habitat

The underwater noise from the Navy's submarine training and testing activities has the potential to result in behavioral harassment of marine mammals in the vicinity of the ICEX22 Study Area. The notice of the proposed IHA (86 FR 70451; December 10, 2021) included a discussion of the effects of anthropogenic noise on marine mammals and the potential effects of underwater noise from the Navy's 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 (86 FR 70451; December 10, 2021).

Estimated Take

This section provides the number of incidental takes estimated to occur, which will inform NMFS' analysis for 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 the behavioral patterns are abandoned or significantly altered (Level B harassment).

Authorized takes for the Navy's ICEX22 activities are by Level B harassment only, in the form of disruption of behavioral patterns and/or TTS for individual marine mammals resulting from exposure to acoustic transmissions. Based on the nature of the activity, Level A harassment is neither anticipated nor authorized. As described previously, no mortality or serious injury is anticipated or authorized for this activity. Below we describe how the incidental take is estimated.

Generally speaking, we estimate take by considering: (1) Acoustic thresholds above which the best available science indicates marine mammals will be behaviorally disturbed or incur some degree of permanent hearing impairment; (2) the area or volume of water that will be ensonified above these levels in a day; (3) the density or occurrence of marine mammals within these ensonified areas; and (4) the number of days of activities. For this IHA, the Navy employed a sophisticated model known as the Navy Acoustic Effects Model (NAEMO) to assess the estimated impacts of underwater sound.

Acoustic Thresholds

NMFS recommends the use of acoustic thresholds that identify the received level of underwater sound above which exposed marine mammals would be reasonably expected to be behaviorally disturbed (equated to Level B harassment) or to incur permanent threshold shift (PTS) of some degree (equated to Level A harassment).

Level B Harassment by behavioral disturbance 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

specified activities. The behavioral 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) address studies conducted since 1995 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 PAM of beaked whales during 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 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. Phocid seals showed avoidance reactions at or below 190 dB re 1 µPa at 1 m; thus, seals may actually receive levels adequate to produce TTS before avoiding the source.

The Navy's Phase III 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). Overall exposure levels were 110–170 dB re 1 µPa for hooded seals, 140–180 dB re 1 µPa for gray seals, and 125–185 dB re 1 µPa for California sea lions; responses occurred at received levels ranging from 125 to 185 dB re 1 µPa. However, the means of the response data were between 159 and 170 dB re 1 µPa. 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. Because these data represent a dose-response type relationship between received level and a response, and because the means were all tightly clustered, the Bayesian biphasic Behavioral Response Function for pinnipeds most closely resembles a traditional sigmoidal dose-response function at the upper received levels and has a 50 percent probability of response at 166 dB re 1 µPa. Additionally, to account for proximity to the source discussed above and based on the best scientific information, a conservative distance of 10 km is used beyond which exposures would not constitute a take under the military readiness definition of Level B harassment. The Navy proposed, and NMFS concurs with, the use of this dose response function to predict behavioral harassment of pinnipeds for this activity.

Level A harassment and Level B harassment by threshold shift 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).

These thresholds were developed by compiling the best available science and soliciting input multiple times from both the public and peer reviewers to inform the final product. 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.*

The Navy's PTS/TTS analysis begins with mathematical modeling to predict the sound transmission patterns from Navy sources, including sonar. These data are then coupled with marine species distribution and abundance data to determine the sound levels likely to be received by various marine species. These criteria and thresholds are applied to estimate specific effects that animals exposed to Navy-generated sound may experience. For weighting function derivation, the most critical data required are TTS onset exposure levels as a function of exposure frequency. These values can be estimated from published literature by examining TTS as a function of sound exposure level (SEL) for various frequencies.

To estimate TTS onset values, only TTS data from behavioral hearing tests were used. To determine TTS onset for each subject, the amount of TTS observed after exposures with different SPLs and durations were combined to create a single TTS growth curve as a function of SEL. The use of (cumulative) SEL is a simplifying assumption to accommodate sounds of various SPLs, durations, and duty cycles. This is referred to as an ''equal energy'' approach, since SEL is related to the energy of the sound and this approach assumes exposures with equal SEL result in equal effects, regardless of the duration or duty cycle of the sound. It is well known that the equal energy rule will over-estimate the effects of intermittent noise, since the quiet periods between noise exposures will allow some recovery of hearing compared to noise that is continuously present with the same total SEL (Ward 1997). For continuous exposures with the same SEL but different durations, the exposure with the longer duration will also tend to produce more TTS (Finneran *et al.* 2010; Kastak *et al.* 2007; Mooney *et al.* 2009a).

As in previous acoustic effects analysis (Finneran and Jenkins 2012; Southall *et al.* 2007), the shape of the PTS exposure function for each species group is assumed to be identical to the TTS exposure function for each group. A difference of 20 dB between TTS onset and PTS onset is used for all marine mammals including pinnipeds. This is based on estimates of exposure levels actually required for PTS (*i.e.,* 40

dB of TTS) from the marine mammal TTS growth curves, which show differences of 13 to 37 dB between TTS and PTS onset in marine mammals. Details regarding these criteria and thresholds can be found in NMFS' Technical Guidance (NMFS 2018).

Table 3 below provides the weighted criteria and thresholds used in this analysis for estimating quantitative acoustic exposures of marine mammals from the specified activities.

TABLE 3—ACOUSTIC THRESHOLDS IDENTIFYING THE ONSET OF BEHAVIORAL DISTURBANCE, TTS, AND PTS FOR NON-IMPULSIVE SOUND SOURCES [1]

Functional hearing group	Species	Behavioral criteria	Physiological criteria	
			TTS threshold SEL (weighted)	PTS threshold SEL (weighted)
Phocid Pinnipeds (Underwater).	Ringed seal	Pinniped Dose Response Function [2].	181 dB SEL cumulative	201 dB SEL cumulative.

[1] The threshold values provided are assumed for when the source is within the animal's best hearing sensitivity. The exact threshold varies based on the overlap of the source and the frequency weighting.
[2] See Figure 6–1 in the Navy's IHA application.
NOTE: SEL thresholds in dB re: 1 μPa^2s

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 specified activities. Inputs to the quantitative analysis included marine mammal density estimates, marine mammal depth occurrence distributions (U.S Department of the Navy, 2017), oceanographic and environmental data, marine mammal hearing data, and criteria and thresholds for levels of potential effects.

The density estimate used to estimate take is derived from habitat-based modeling by Kaschner *et al.* (2006) and Kaschner (2004). The area of the Arctic where the specified activities will occur (185–370 km (100–200 nmi) north of Prudhoe Bay, Alaska) has not been surveyed in a manner that supports quantifiable density estimation of marine mammals. In the absence of empirical survey data, information on known or inferred associations between marine habitat features and (the likelihood of) the presence of specific species have been used to predict densities using model-based approaches. These habitat suitability models include relative environmental suitability (RES) models. Habitat suitability models can be used to understand the possible extent and relative expected concentration of a marine species distribution. These models are derived from an assessment of the species occurrence in association with evaluated environmental explanatory variables that results in defining the RES suitability of a given environment. A fitted model that quantitatively describes the relationship of occurrence with the environmental variables can be used to estimate unknown occurrence in conjunction with known habitat suitability. Abundance can thus be estimated for each RES value based on the values of the environmental variables, providing a means to estimate density for areas that have not been surveyed. Use of the Kaschner's RES model resulted in a value of 0.3957 ringed seals per km^2 in the cold season (defined as December through May).

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 sonars, 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 a marine mammal 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 Navy's standard mitigations (Lookouts, safety zones, avoidance zones, etc.). These tools and data sets are 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 or testing 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 is independent of all others, and therefore, the same individual marine animat could be impacted during each independent scenario or 24-hour period. In a few instances for the modeling of the specified activities here, although the activities themselves all occur within the ICEX22 Study Area, sound may propagate beyond the boundary of the ICEX22 Study Area. Any exposures occurring outside the boundary of the study area are counted as if they occurred within the ICEX22 Study Area boundary. NAEMO provides the initial estimated impacts on marine species with a static horizontal distribution.

There are limitations to the data used in the acoustic effects model, and the results must be interpreted within this context. While the most accurate data and input assumptions have been used in the modeling, when there is a lack of definitive data to support an aspect of the modeling, modeling assumptions believed to overestimate the number of exposures have been chosen:

- Animats are modeled as being underwater, stationary, and facing the source and therefore always predicted to receive the maximum sound level (*i.e.,* no porpoising or pinnipeds' heads above water);
- Animats do not move horizontally (but do 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 will 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 the temporary or permanent hearing loss, because there are not sufficient data to estimate a hearing recovery function for the time between exposures; and
- Mitigation measures that will be implemented are not considered in the model. In reality, sound-producing activities will be reduced, stopped, or delayed if marine mammals are detected by submarines via PAM.

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

For non-impulsive sources, NAEMO calculates the sound pressure level (SPL) and sound exposure level (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 training event's operational area. Table 4 provides range to effects for active acoustic sources planned for ICEX22 to phocid pinniped-specific criteria. Phocids within these ranges will be predicted to receive the associated effect. Range to effects is important information in not only predicting 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, to marine mammals.

TABLE 4—RANGE TO BEHAVIORAL DISTURBANCE, TTS, AND PTS IN THE ICEX22 STUDY AREA

Source/exercise	Range to effects (m)		
	Behavioral disturbance	TTS	PTS
Submarine Exercise	[a] 10,000	3,025	130

[a] Empirical evidence has not shown responses to sonar that would constitute take beyond a few km from an acoustic source, which is why NMFS and the Navy conservatively set a distance cutoff of 10 km. Regardless of the source level at that distance, take is not estimated to occur beyond 10 km from the source.

As discussed above, within NAEMO, animats do not move horizontally or react in any way to avoid sound. Furthermore, mitigation measures that are implemented during training or testing activities that reduce the likelihood of physiological impacts are not considered in quantitative analysis. Therefore, the current model overestimates 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 (TTS or PTS). 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 these specified activities, the implementation of avoidance and mitigation factors were not included in this analysis.

Table 5 shows the exposures expected for ringed seals based on NAEMO modeled results.

TABLE 5—QUANTITATIVE MODELING RESULTS OF POTENTIAL EXPOSURES FOR ICEX ACTIVITIES

Species	Level B harassment		Level A harassment	Total
	Behavioral disturbance	TTS		
Ringed seal	3,976	910	0	4,886

During monitoring for the 2018 IHA covering similar military readiness activities in the ICEX22 Study Area, the Navy did not visually observe or acoustically detect any marine mammals (U.S. Navy, 2018). During monitoring for the 2020 IHA covering similar military readiness activities in the ICEX22 Study Area, the Navy also did not visually observe any marine mammals (U.S. Navy, 2020). Acoustic monitoring associated with the 2020 IHA did not detect any discernible marine mammal vocalizations (Henderson *et al.* 2021). The monitoring report states that ''there were a few very faint sounds that could have been [ringed seal] barks or yelps.'' However, these were likely not from ringed seals, given that ringed seal vocalizations are generally produced in series (Jones *et al.* 2014). Henderson *et al.* (2021) expect that these sounds were likely ice-associated or perhaps anthropogenic.

Mitigation Measures

In order to issue an IHA under section 101(a)(5)(D) of the MMPA, NMFS must set forth the permissible methods of taking pursuant to the activity, and

other means of effecting the least practicable impact on the species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of the species or stock for taking for certain subsistence uses. NMFS regulations require applicants for incidental take authorizations to include information about the availability and feasibility (economic and technological) of equipment, methods, and manner of conducting the activity or other means of effecting the least practicable adverse impact upon the affected species or stocks and their habitat (50 CFR 216.104(a)(11)). The 2004 NDAA 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) and 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

Appropriate personnel (including civilian personnel) involved in mitigation and training or testing activity reporting under the specified activities must complete Arctic Environmental and Safety Awareness Training. Modules include: Arctic Species Awareness and Mitigations, Environmental Considerations, Hazardous Materials Management, and General Safety.

Further, the following general mitigation measures are required to prevent incidental take of ringed seals on the ice floe associated with the ice camp (further explanation of certain mitigation measures is provided in parentheses following the measure):

- The ice camp and runway must be established on first-year and multi-year ice without pressure ridges. (This will minimize physical impacts to subnivean lairs and impacts to sea ice habitat suitable for lairs.);
- Ice camp deployment must begin no later than mid-February 2022, and be gradual, with activity increasing over the first 5 days. Camp deployment must be completed by March 15, 2022. (Given that mitigation measures require that the ice camp and runway be established on first-year or multi-year ice without pressure ridges where ringed seals tend to build their lairs, as well as the average ringed seal lair density in the area, and the relative footprint of the Navy's planned ice camp (2 km^2), it is extremely unlikely that a ringed seal would build a lair in the vicinity of the ice camp. Additionally, based on the best available science, Arctic ringed seal whelping is not expected to occur prior to mid-March, and therefore, construction of the ice camp will be completed prior to whelping in the area of ICEX22. Further, as noted above, ringed seal lairs are not expected to occur in the ice camp study area, and therefore, NMFS does not expect ringed seals to relocate pups due to human disturbance from ice camp activities, including construction.);
- Personnel on all on-ice vehicles must observe for marine and terrestrial animals;
- Snowmobiles must follow established routes, when available. On-ice vehicles must not be used to follow any animal, with the exception of actively deterring polar bears if the situation requires;
- Personnel on foot and operating on-ice vehicles must avoid areas of deep snowdrifts near pressure ridges. (These areas are preferred areas for subnivean lair development.);
- Personnel must maintain a 100 m (328 ft) avoidance distance from all observed marine mammals; and
- All material (*e.g.,* tents, unused food, excess fuel) and wastes (*e.g.,* solid waste, hazardous waste) must be removed from the ice floe upon completion of ICEX22 activities.

The following mitigation measures are required for activities involving acoustic transmissions (further explanation of certain mitigation measures is provided in parentheses following the measure):

- Personnel must begin passive acoustic monitoring (PAM) for vocalizing marine mammals 15 minutes prior to the start of activities involving active acoustic transmissions from submarines and exercise weapons.
- Personnel must delay active acoustic transmissions and exercise weapon launches if a marine mammal is detected during pre-activity PAM and must shutdown active acoustic transmissions if a marine mammal is detected during acoustic transmissions.
- Personnel must not restart acoustic transmissions or exercise weapon launches until 15 minutes have passed with no marine mammal detections.

Ramp up procedures for acoustic transmissions are not required as the Navy determined, and NMFS concurs, that they would result in impacts on military readiness and on the realism of training that would be impracticable.

The following mitigation measures are required for aircraft activities to prevent incidental take of marine mammals due to the presence of aircraft and associated noise.

- Fixed wing aircraft must operate at the highest altitudes practicable taking into account safety of personnel, meteorological conditions, and need to support safe operations of a drifting ice camp. Aircraft must not reduce altitude if a seal is observed on the ice. In general, cruising elevation must be 305 m (1,000 ft) or higher.
- Unmanned Aircraft Systems (UASs) must maintain a minimum altitude of at least 15.2 m (50 ft) above the ice. They must not be used to track or follow marine mammals.
- Helicopter flights must use prescribed transit corridors when traveling to or from Prudhoe Bay and the ice camp. Helicopters must not hover or circle above marine mammals or within 457 m (1,500 ft) of marine mammals.
- Aircraft must maintain a minimum separation distance of 1.6 km (1 mi) from groups of 5 or more seals.
- Aircraft must not land on ice within 800 m (0.5 mi) of hauled-out seals.

Based on our evaluation of the Navy's proposed mitigation measures, as well as other measures considered by NMFS, NMFS has determined that the required 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) require requests for authorizations to 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 area of the specified activity. 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.

The Navy has coordinated with NMFS to develop an overarching program, the Integrated Comprehensive Monitoring Program (ICMP), intended to coordinate marine species monitoring efforts across all regions and to allocate the most appropriate level and type of effort for each range complex based on a set of standardized objectives, and in acknowledgement of regional expertise and resource availability. The ICMP was created in direct response to Navy requirements established in various MMPA regulations and ESA consultations. 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 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 by the Navy's activities. In comparison, ICEX is a short duration exercise that occurs approximately every other year. Due to the location and expeditionary nature of the ice camp, the number of personnel onsite is extremely limited and is constrained by the requirement to be able to evacuate all personnel in a single day with small planes. As such, the Navy asserts that a dedicated ICMP monitoring project is not feasible as it would require additional personnel and equipment, and NMFS concurs. However, the Navy is exploring the potential of implementing an environmental DNA (eDNA) study on ice seals.

Nonetheless, the Navy must conduct the following monitoring and reporting under the IHA. Ice camp personnel must generally monitor for marine mammals in the vicinity of the ice camp and record all observations of marine mammals, regardless of distance from the ice camp, as well as the additional data indicated below. Additionally, Navy personnel must conduct PAM during all active sonar use. Ice camp personnel must also maintain an awareness of the surrounding environment and document any observed marine mammals.

In addition, the Navy is required to provide NMFS with a draft exercise monitoring report within 90 days of the conclusion of the specified activity. A final report must be prepared and submitted within 30 calendar days following receipt of any NMFS comments on the draft report. If no comments are received from NMFS within 30 calendar days of receipt of the draft report, the report shall be considered final. The report, at minimum, must include:

- Marine mammal monitoring effort (dedicated hours);
- Ice camp activities occurring during each monitoring period (*e.g.,* construction, demobilization, safety watch, field parties);
- Number of marine mammals detected;
- Upon observation of a marine mammal, record the following information:
  - Environmental conditions when animal was observed, including relevant weather conditions such as cloud cover, snow, sun glare, and overall visibility, and estimated observable distance;
  - Lookout location and ice camp activity at time of sighting (or location and activity of personnel who made observation, if observed outside of designated monitoring periods);
  - Time and approximate location of sighting;
  - Identification of the animal(s) (*e.g.,* seal, or unidentified), also noting any identifying features;
  - Distance and location of each observed marine mammal relative to the ice camp location for each sighting;
  - Estimated number of animals (min/max/best estimate);
  - Description of any marine mammal behavioral observations (*e.g.,* observed behaviors such as traveling), including an assessment of behavioral responses thought to have resulted from the activity (*e.g.,* no response or changes in behavioral state such as ceasing feeding, changing direction, flushing).

Also, all sonar usage will be collected via the Navy's Sonar Positional Reporting System database. The Navy is required to provide data regarding sonar use and the number of shutdowns during ICEX22 activities in the Atlantic Fleet Training and Testing (AFTT) Letter of Authorization 2023 annual classified report. The Navy is also required to analyze any declassified underwater recordings collected during ICEX22 for marine mammal vocalizations and report that information to NMFS, including the types and nature of sounds heard (*e.g.,* clicks, whistles, creaks, burst pulses, continuous, sporadic, strength of signal) and the species or taxonomic group (if determinable). This information will also be submitted to NMFS with the 2023 annual AFTT declassified monitoring report.

Finally, in the event that personnel discover an injured or dead marine mammal, personnel must report the incident to the Office of Protected Resources (OPR), NMFS and to the Alaska regional stranding network as soon as feasible. The report must include the following information:

- Time, date, and location (latitude/longitude) of the first discovery (and updated location information if known and applicable);
- Species identification (if known) or description of the animal(s) involved;

- Condition of the animal(s) (including carcass condition if the animal is dead);
- Observed behaviors of the animal(s), if alive;
- If available, photographs or video footage of the animal(s); and
- General circumstances under which the animal(s) was discovered (*e.g.,* during submarine activities, observed on ice floe, or by transiting aircraft).

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' 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 ICEX22, as outlined previously, have the potential to result in Level B harassment of ringed seals in the form of TTS and behavioral disturbance. No take by Level A harassment, serious injury, or mortality are anticipated to result from this activity. Further, at close ranges and high sound levels approaching those that could cause PTS, seals will likely avoid the area immediately around the sound source.

NMFS estimates 910 takes of ringed seals by TTS from the submarine activities. 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. This activity has the potential to result in only minor levels of TTS, and hearing sensitivity of affected animals would be expected to recover quickly. Though TTS may occur as indicated, the overall fitness of the impacted individuals is unlikely to be affected given the temporary nature of TTS and the minor levels of TTS expected from these activities. Negative impacts on the reproduction or survival of affected ringed seals as well as impacts on the stock are not anticipated.

Effects on individuals that are taken by Level B harassment by behavioral disturbance could include alteration of dive behavior, alteration of foraging behavior, effects to breathing, 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 and mitigation using PAM, which will limit exposure to active acoustic sources. Most likely, individuals will be temporarily displaced by moving away from the sound source. As described in the Acoustic Impacts section of the notice of proposed IHA (86 FR 70451; December 10, 2021), 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 specified activity, these changes will 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). 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 will not result in any adverse impact on reproduction or survival of affected individuals or to the stock as a whole.

The Navy's planned activities are localized and of relatively short duration. While the total ICEX22 Study Area is large, the Navy expects that most activities will occur within the Ice Camp Study Area in relatively close proximity to the ice camp. The larger Navy Activity Study Area depicts the range where submarines may maneuver during the exercise. The ice camp will be in existence for up to six weeks with acoustic transmission occurring intermittently over approximately 4 weeks.

The project is not expected to have significant adverse effects on marine mammal habitat. The project activities are limited in time and will not modify physical marine mammal habitat. While the activities may cause some fish to leave a specific area ensonified by acoustic transmissions, temporarily impacting marine mammals' foraging opportunities, these fish will likely return to the affected area. As such, the impacts to marine mammal habitat are not expected to cause significant or long-term negative consequences.

For on-ice activity, Level A harassment, Level B harassment, serious injury, and mortality are not anticipated, given the nature of the activities, the lack of previous ringed seal observations, and the mitigation measures NMFS has included in the IHA. The ringed seal pupping season on the ice lasts for five to nine weeks during late winter and spring. As discussed in the Potential Effects of Specified Activities on Marine Mammals and Their Habitat section, March 1 is generally expected to be the onset of ice seal lairing season. The ice camp and runway will be established on first-year or multi-year ice without pressure ridges, as ringed seals tend to build their lairs near pressure ridges. Ice camp deployment will begin no later than mid-February, and be gradual, with activity increasing over the first 5 days. Ice camp deployment will be completed by March 15, before the pupping season. Displacement of seal lair construction or relocation to existing lairs outside of the ice camp area is unlikely, given the low average density of lairs (the average ringed seal lair density in the vicinity of Prudhoe Bay, Alaska is 1.58 lairs per km^2 (Table 3 of the notice of the proposed IHA; 86 FR 70451, December 10, 2021)), the relative footprint of the Navy's planned ice camp (2 km^2), the lack of previous ringed seal observations on the ice during ICEX activities, and mitigation requirements that require the Navy to construct the ice camp and runway on first-year or multi-year ice without pressure ridges and require personnel to avoid areas of deep snow drift or pressure ridges. Given that mitigation measures require that the ice camp and runway be established on first-year or multi-year ice without pressure ridges, where ringed seals tend to build their lairs, it is extremely unlikely that a ringed seal would build a lair in the vicinity of the ice camp.

This measure, in combination with the other mitigation measures required for operation of the ice camp are expected to avoid impacts to the construction and use of ringed seal subnivean lairs, particularly given the already low average density of lairs, as described above. Given that ringed seal lairs are not expected to occur in the ice camp study area, NMFS does not expect ringed seals to relocate pups due to human disturbance from ice camp activities.

Additional mitigation measures will also prevent damage to and disturbance of ringed seals and their lairs that could otherwise result from on-ice activities. Personnel on on-ice vehicles will observe for marine mammals, and will follow established routes when available, to avoid potential damage to or disturbance of lairs. Personnel on foot and operating on-ice vehicles will avoid deep snow drifts near pressure ridges, also to avoid potential damage to or disturbance of lairs. Further, personnel will maintain a 100 m (328 ft) distance from all observed marine mammals to avoid disturbing the animals due to the personnel's presence. Implementation of these measures will also prevent ringed seal lairs from being crushed or damaged during ICEX22 activities.

There is an ongoing UME for ice seals, including ringed seals. Elevated strandings have occurred in the Bering and Chukchi Seas since June 2018. As of November 17, 2021, 95 ringed seal strandings have occurred, which is well below the partial abundance estimate of 171,418 ringed seals in the Arctic stock. The take authorized here does not provide a concern for any of these populations when considered in the context of these UMEs, especially given that the anticipated Level B harassment is unlikely to affect the reproduction or survival of any individuals. In addition, the ICEX22 Study Area is in the Arctic Ocean, well north and east of the primary area where seals have stranded along the western coast of Alaska (see map of strandings at: *https://www.fisheries.noaa.gov/alaska/marine-life-distress/2018-2021-ice-seal-unusual-mortality-event-alaska*). No Level A harassment, serious injury, or mortality is expected or authorized here, and take by Level B harassment of ringed seals will be reduced to the level of least practicable impact through the incorporation of mitigation measures. As such, the authorized takes by Level B harassment of ringed seals are not expected to exacerbate or compound the ongoing UME.

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 Level A harassment (injury), serious injury, or mortality is anticipated or authorized;
- Impacts will be limited to Level B harassment, primarily in the form of behavioral disturbance that results in minor changes in behavior;
- TTS is expected to affect only a limited number of animals (approximately 0.5 percent of the partial stock abundance described in Table 1) and TTS is expected to be minor and short term;
- The number of authorized takes is low relative to the estimated abundances of the affected stock, even given the extent to which abundance is significantly underestimated;
- Submarine training and testing activities will occur over only 4 weeks of the total 6-week activity period;
- There will be no loss or modification of ringed seal habitat and minimal, temporary impacts on prey;
- Physical impacts to ringed seal subnivean lairs will be avoided; and
- Mitigation requirements for ice camp activities will prevent impacts to ringed seals during the pupping season.

Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, and taking into consideration the implementation of the required monitoring and mitigation measures, NMFS finds that the total marine mammal take from the specified activity will have a negligible impact on the Arctic stock of ringed seals.

Unmitigable Adverse Impact Analysis and Determination

In order to issue an IHA, NMFS must find that the specified activity will not have an ''unmitigable adverse impact'' on the subsistence uses of the affected marine mammal species or stocks by Alaska Natives. NMFS has defined ''unmitigable adverse impact'' in 50 CFR 216.103 as an impact resulting from the specified activity: (1) That is likely to reduce the availability of the species to a level insufficient for a harvest to meet subsistence needs by: (i) Causing the marine mammals to abandon or avoid hunting areas; (ii) Directly displacing subsistence users; or (iii) Placing physical barriers between the marine mammals and the subsistence hunters; and (2) that cannot be sufficiently mitigated by other measures to increase the availability of marine mammals to allow subsistence needs to be met.

Impacts to marine mammals from the specified activity will mostly include limited, temporary behavioral disturbances of ringed seals; however, some TTS is also anticipated. No Level A harassment (injury), serious injury, or mortality of marine mammals is expected or authorized, and the activities are not expected to have any impacts on reproductive or survival rates of any marine mammal species.

The specified activity and associated harassment of ringed seals are not expected to impact marine mammals in numbers or locations sufficient to reduce their availability for subsistence harvest given the short-term, temporary nature of the activities, and the distance offshore from known subsistence hunting areas. The specified activity will occur for a brief period of time outside of the primary subsistence hunting season, and though seals are harvested for subsistence uses off the North Slope of Alaska, the ICEX22 Study Area is seaward of known subsistence hunting areas. (The Study Area boundary is approximately 50 km from shore at the closest point, though exercises will occur farther offshore.)

The Navy plans to provide advance public notice to local residents and other users of the Prudhoe Bay region of Navy activities and measures used to reduce impacts on resources. This includes notification to local Alaska Natives who hunt marine mammals for subsistence. If any Alaska Natives express concerns regarding project impacts to subsistence hunting of marine mammals, the Navy will further communicate with the concerned individuals or community. The Navy will provide project information and clarification of the mitigation measures that will reduce impacts to marine mammals.

Based on the description and location of the specified activity, and the required mitigation and monitoring measures, NMFS has determined that there will not be an unmitigable adverse impact on subsistence uses from the Navy's specified 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 (EA) to consider the direct, indirect, and cumulative effects to the human environment resulting from the ICEX22 project. The Navy's EA was made available for public comment at *https://www.nepa.navy.mil/icex/* for 28 days beginning November 24, 2021. The public comment period was reopened

from January 5 to January 28 due to a delay in publication of a notice to the public in the *Arctic Sounder* newspaper. In the notice of proposed IHA (86 FR 70451; December 10, 2021), NMFS described its plan to adopt the Navy's EA, provided our independent evaluation of the document found that it includes adequate information analyzing the effects on the human environment of issuing the IHA. In compliance with NEPA and the CEQ regulations, as well as NOAA Administrative Order 216–6, NMFS has reviewed the Navy's EA and determined it to be sufficient. NMFS adopted that EA and signed a Finding of No Significant Impact (FONSI) on February 4, 2022.

Endangered Species Act

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

The NMFS Office of Protected Resources (OPR) is authorizing take of ringed seals, which are listed under the ESA. The NMFS Alaska Regional Office Protected Resources Division issued a Biological Opinion on January 31, 2022, which concluded that the Navy's activities and NMFS' issuance of an IHA are not likely to jeopardize the continued existence of the Arctic stock of ringed seals. There is no ESA designated critical habitat for ringed seals.

Authorization

NMFS has issued an IHA to the Navy for conducting submarine training and testing activities in the ICEX22 Study Area of the Arctic Ocean beginning in February 2022 that includes the previously explained mitigation, monitoring, and reporting requirements.

Dated: February 4, 2022.

Kimberly Damon-Randall,

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

[FR Doc. 2022–02800 Filed 2–9–22; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648–XB792]

Marine Mammals and Endangered Species

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

ACTION: Notice; issuance of permits, permit amendments, and permit modifications.

SUMMARY: Notice is hereby given that permits, permit amendments, and permit modifications have been issued to the following entities under the Marine Mammal Protection Act (MMPA) and the Endangered Species Act (ESA), as applicable.

ADDRESSES: The permits and related documents are available for review upon written request via email to *NMFS.Pr1Comments@noaa.gov.*

FOR FURTHER INFORMATION CONTACT: Shasta McClenahan, Ph.D. (Permit Nos. 20646–01 and 25885); Courtney Smith, Ph.D. (Permit No. 21143–01); Erin Markin, Ph.D. (Permit No. 23200–01); Carrie Hubard (Permit No. 25900); and Malcolm Mohead (Permit Nos. 19641–03 and 25864); at (301) 427–8401.

SUPPLEMENTARY INFORMATION: Notices were published in the **Federal Register** on the dates listed below that requests for a permit, permit amendment, or permit modification had been submitted by the below-named applicants. To locate the **Federal Register** notice that announced our receipt of the application and a complete description of the activities, go to *www.federalregister.gov* and search on the permit number provided in Table 1 below.

TABLE 1—ISSUED PERMITS, PERMIT AMENDMENTS, AND PERMIT MODIFICATIONS

Permit No.	RTID	Applicant	Previous **Federal Register** notice	Issuance date
20646–01	0648–XF213	Morgridge Institute for Research, 330 North Orchard Street, Madison, WI 53715 (Responsible Party: James Thomson, Ph.D.).	82 FR 29053; June 27, 2017.	January 4, 2022.
23200–01	0648–SB500	University of North Carolina, Wilmington, 601 South College Road, Wilmington, NC 28403 (Responsible Party: Frederick Scharf, Ph.D.).	86 FR 56692; October 12, 2021.	January 24, 2022.
25885	0648–XB610	Peter Thielen, D. Eng., Johns Hopkins University, Applied Physics Laboratory, 11100 Johns Hopkins Road, Laurel, MD 20723.	86 FR 67036; November 24, 2021.	January 18, 2022.
21143–01	0648–XF500	Jeremy Kiszka, Ph.D., Florida International University, 3000 NE 151st Street, Marine Science Building, Room 250D, North Miami, FL 33181.	82 FR 31950; July 11, 2017.	January 27, 2022.
25900	0648–XB547	Echo Pictures Ltd., St Nicholas House, 31–34 High Street, Bristol, BS1 2AW, United Kingdom (Responsible Party: Joe Stevens).	86 FR 69622; December 8, 2021.	January 24, 2022.
25864	0648–SB500	Gregg Poulakis, Ph.D., Florida Fish and Wildlife Conservation Commission, 585 Prineville Street, Port Charlotte, FL 33954.	86 FR 56692; October 12, 2021.	January 24, 2022.
19641–03	0648–SB500	Tom Savoy, Connecticut Department of Energy and Environmental Protection, P.O. Box 719, Old Lyme, CT 06371.	86 FR 56692; October 12, 2021.	January 24, 2022.

In compliance with the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*), a final determination has been made that the activities proposed are categorically excluded from the requirement to prepare an environmental assessment or environmental impact statement.