



United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE
1011 East Tudor Road
Anchorage, Alaska 99503



In Reply Refer to:
FWS/IR11/AFES/MMM

Dr. Peter O. Thomas
Executive Director
Marine Mammal Commission
4340 East-West Highway, Room 700
Bethesda, Maryland 20814-4498

Dear Dr. Thomas:

Thank you for your letter, dated June 30, 2021, providing the U.S. Fish and Wildlife Service (Service) with the Marine Mammal Commission's (Commission) comments and recommendations on the Service's proposed Incidental Take Regulations (ITR) (86 FR 29364) (June 1, 2021) under section 101(a)(5)(A) of the Marine Mammal Protection Act of 1972, as amended (MMPA). This proposed rule was for the incidental take of small numbers of polar bears (*Ursus maritimus*) and Pacific walrus (*Odobenus rosmarus divergens*) during year round oil and gas industry activities in the Beaufort Sea (Alaska and the Outer Continental Shelf) and adjacent northern coast of Alaska and were in response to a petition we received from the Alaska Oil and Gas Association on behalf of its members and other participating companies to promulgate regulations for nonlethal incidental take of small numbers of walrus and polar bears in the Beaufort Sea and adjacent Northern coast of Alaska for a period of 5 years (2021-2026). We appreciate your thoughtful review, comments, and recommendations.

On August 5, 2021, after careful consideration of all comments we received, including those from the Commission, the Service finalized those regulations (86 FR 42982). As required under section 202(d) of the MMPA we are providing the Commission our responses to your recommendations. We have organized this response below by topic and in the order the recommendations appear in the Commission's June 30, 2021, letter. We first provide a summary of each of the Commission's recommendations, followed by our response.

Once again, we appreciate your comments and recommendations, and we look forward to our continued collaborations on marine mammal conservation and management activities. Should you have any questions or concerns please do not hesitate to contact the Regulatory Branch Program Manager, Ms. Sierra Franks, at 907-268-0577 or via email at sierra_franks@fws.gov.

Sincerely,
**PATRICK
LEMONS**

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PATRICK LEMONS
Date: 2021.09.02 10:18:48
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Chief, Marine Mammals Management

Enclosed

Response to Marine Mammal Commission Comments:

Comment: The Service should clarify that applicants must submit a POC whenever concerns are expressed by subsistence communities or organizations about the potential impacts of proposed activities on subsistence hunting, and those concerns are not resolved prior to submission of the LOA application.

Response: We agree. The Service included this information in the Description of Letters of Authorization section in the final rule.

Comment: Because of increased shipping the Service should ensure that applicants include outreach to all coastal communities and subsistence/co-management organizations, including those in the Bering Strait region and Chukchi Sea, to identify and address concerns regarding disturbance of marine mammals and subsistence traffic that may result from project-related vessel traffic.

Response: The Service appreciates the concerns raised by this comment. However, we recognize there is already shipping and barging activities that occur throughout the open water season in the Bering Strait and Chukchi Sea and we have no evidence that the specific activities identified in the request for these regulations would substantially increase already on-going marine traffic. Additionally, the Service included vessel traffic restrictions in the ITR as a precautionary measure, however, AOGA has not requested take authorizations for vessel activity through the Bering Strait and Chukchi Sea, and therefore no take has been estimated or authorized for these activities.

Comment: The Service should either: (1) include all entities expected to conduct oil and gas activities in the Beaufort Sea over the next five years in the subject rulemaking, along with a description and analysis of the expected impacts of their proposed activities; (2) issue a separate notice of proposed regulations or incidental harassment authorization for those other entities; or (3) refrain from issuing LOAs to entities whose activities were not explicitly considered in this rulemaking (i.e., were not factored into the negligible impact determination and were not subject to public review and comment).

Response: It is not the Service's role to request coverage on behalf of Industry. Entities that wish to apply for coverage under the MMPA for specified activities may submit a request to the Service for review. Activities that were not analyzed within the scope of this ITR will not be able to receive an LOA under this ITR.

Comment: The Service should identify, in section 18.119 of the final rule, the specific types of oil and gas activities that the Service has evaluated as part of its rulemaking and that would be authorized under LOAs issued pursuant to the final rule.

Response: This suggestion is not practicable given the broad scope of activities specified in AOGA's request and analyzed in the ITR. The Service sees no reason to depart from its prior practices when promulgating this ITR.

Comment: The Service indicated in the preamble that for this proposed rule, it was distinguishing between non-serious and serious Level A harassment, with “serious Level A take” defined as an injury that is likely to result in mortality (86 Fed. Reg. 29395). Rather than considering serious Level A take as a lethal or mortality take, as specified by the Service’s own definition, the Service considered it Level A harassment in some instances (86 Fed. Reg. 29395 and Table 7 in the Federal Register notice) and serious Level A lethal take in other instances (see Table 8 in the Federal Register notice). Serious injuries, and any permutation thereof, should have been considered as mortalities consistently throughout the preamble to the proposed rule.

Response: While the probabilities of Serious Level A and Lethal takes were separated in Table 7, when summarizing model results in Table 8 these values were reported as a combined result. All necessary MMPA determinations were made using take estimates that combined Serious Level A and Lethal take into the same general category.

Comment: The Service indicated that incidental lethal take of polar bears could result from vehicle collisions or collapse of a den if it was run over by a vehicle, as well as from a female either abandoning a den prematurely with her cubs or abandoning her cubs in the den before the cubs can survive on their own (86 Fed. Reg. 29395). The Service further stated that lethal take of a walrus could occur if it was struck by a vessel or trampled by other walruses during a stampede (86 Fed. Reg. 29395). The Service estimated that a mean of 1.2 polar bear mortalities could occur due to den disturbance during each year of activities but then stated that the results were skewed and not representative of the median value of 0 (Table 8 and 86 Fed. Reg. 29412). However, the Service estimated that the probability of disturbance was approximately 90 percent, resulting in a mean of 3.1 Level B harassment takes per year, with a similar trend for serious injuries and mortalities with a probability of 46 percent resulting in a mean of 1.2 mortalities (Table 8). When accounting for serious injuries and mortalities, the agency should always err on the side of caution. The Service should have proposed to authorize lethal takes rather than disregarding or downplaying the potential for such takes.

Response: As stated in the Proposed ITR, the Service does not estimate the proposed activities will result in non-serious or serious Level A injury or lethal take due to the low (< 0.29 for non-serious Level A and ≤ 0.462 for serious Level A/Lethal takes) probability of greater than or equal to 1 non-serious or serious injury Level A harassment/Lethal take each year of the proposed ITR period, and a median of 0.0 for each.

Comment: Level A and B harassment zones were not estimated by the Service, and the numbers of polar bears and walruses that could be taken during in-water activities were underestimated.

Response: Thank you for your comment. The Service has revised Table 1 to include details regarding the sound measurement units and included peak SPL for impulsive sound sources. The Service has also revised references to past ITR Level B harassment and TTS thresholds. With regards to the need for Level A harassment zones, the Service did not calculate this area as no sound sources identified in the proposed activities would produce Level A threshold noise. As was stated in the proposed rule, the Level B harassment zone was smaller than the impact area of surface activities, so we estimated take using the more conservative impact area.

Comment: The Service incorrectly specified in Table 1 that the permanent threshold shift (PTS) and temporary threshold shift (TTS) thresholds are based on simply dB rather than (1) the appropriate reference pressure of 20 μPa for in-air and 1 μPa in water and (2) the appropriate metric of a cumulative weighted sound exposure level (SEL_{CUM}) in units of dB re 20 $\mu\text{Pa}^2\text{-sec}$ and dB re 1 $\mu\text{Pa}^2\text{-sec}$, respectively. The Service did not mention the weighting functions that are to be used in conjunction with the SEL_{CUM} thresholds or the dual criterion of SPL_{PEAK} and the relevant unweighted thresholds for impulsive sources.

Response: The Service has revised Table 1 to include details regarding the sound measurement units and included peak SPL for impulsive sound sources. The Service has also revised references to past ITR Level B harassment and TTS thresholds.

Comment: The Service's rationale for concluding that in-water activities would not result in TTS or PTS was based on received levels of SPL_{RMS} (86 Fed. Reg. 29413) rather than SPL_{PEAK} or weighted SEL_{CUM} .

Response: As has been noted above, the Service has revised Table 1 to reflect the appropriate received sound level metrics (i.e., either SPL_{RMS} , SPL_{PEAK} , or SEL_{CUM}). However, the Service has included in our harassment estimates impacts from surface activities that extend beyond the potential impact areas for all three sound thresholds. Therefore, the potential for take from underwater noise was appropriately considered in our analyses.

Comment: The Service indicated that Level A harassment of polar bears for on-land or on-ice activities is extremely rare and has never been reported for walrus. As such, it did not propose to authorize Level A harassment takes (86 Fed. Reg. 29395). It is unclear how one would determine definitively that PTS has not occurred during in-water activities or how the Service can make an assessment that Level A harassment is not expected to occur when it has not estimated what the Level A harassment zones would in fact be.

Response: With regards to the need for Level A harassment zones, the Service did not calculate this area as no sound sources identified in the proposed activities would produce Level A threshold noise. As was stated in the proposed rule, the Level B harassment zone was smaller than the impact area of surface activities, so we estimated take using the more conservative impact area.

Comment: The Service indicated that it applied a 190-dB re 1 μPa Level B harassment threshold in the previous AOGA rulemaking in the Beaufort and Chukchi Seas. However, the Service actually used a 180-dB re 1 μPa threshold for behavioral disturbance and a 190-dB re 1 μPa threshold for TTS for polar bears in the Beaufort Sea (81 Fed. Reg. 52306). Contrary to the Service's assertion that these were based on evidence, neither was substantiated by any data; rather, both were based on the Service's opinion (81 Fed. Reg. 52306).

Response: Thank you for your comment. We have revised this reference in the Final ITR.

Comment: The Service stipulated that since the TTS threshold is 188 dB, it used a threshold of 180 dB re 1 μPa for the proposed rule (86 Fed. Reg. 29413). The Service did not recognize that

the TTS threshold is weighted, based on SEL_{CUM} not SPL_{RMS}, and applies to pile-driving activities or, more importantly, that the TTS threshold that results in the larger harassment zone is very likely based on SPL_{PEAK} for seismic surveys. As such, the thresholds are not directly comparable. Moreover, the Service provided no data to support the 180-dB re 1 μ Pa threshold for behavioral disturbance for impulsive, non-impulsive, continuous, or intermittent sources.

Response: The Service provides reference to Southall et al. (2019) which estimates the TTS for other marine carnivores, which include polar bears and walruses, at 188-dB re 1 μ Pa. The Service applies a 180-dB re 1 μ Pa threshold as a conservative approach to estimate Level B harassment of polar bears from all types of sound sources during in-water activities.

Comment: The Service indicated in the preamble to the proposed rule that AOGA would conduct in-water seismic exploration surveys, vertical seismic profiling, seafloor imagery surveys, and offshore bathymetry surveys in one portion of the Federal Register notice (86 Fed. Reg. 29367) but omitted reference to those activities in other portions of the notice, including in its take estimation method for polar bears during in-water activities (86 Fed. Reg. 29412–29413).

Response: The Service did not include in-water seismic exploration surveys within the preamble as they are not included within the proposed activities. Vertical seismic profiling, seafloor imagery surveys, and offshore bathymetry surveys will result in impact areas smaller than the current 1.6 km impact area used to estimate harassment from surface-based activities.

Comment: AOGA indicated in its application that it could conduct any of the aforementioned geophysical activities within the petition area but did not specify the number of surveys that could be conducted in a given year, the minimum or maximum number of airguns that would be deployed during a given survey, the maximum number of days that a survey could last, the overall discharge volume of a given array, a range of associated source levels, shot rate, vessel speed, or line-kilometers to be surveyed in a given day. AOGA similarly did not estimate the Level A or B harassment zones or the numbers of either polar bears or walruses that could be taken during geophysical surveys.

Response: As was described in the ITR, all of the geophysical seismic surveys included in the proposed activities will be terrestrial. No in-water noise will be produced as a result of the activities. An analysis of the effects to polar bears as a result of terrestrial seismic surveys has been included in the ITR.

Comment: Neither the Service in its preamble to the proposed rule nor AOGA in its application indicated how often or where pile driving would occur, what type of pile driving (e.g., impact, vibratory, and/or DTH pile installation, augering/drilling) would be conducted, whether pile removal would be conducted, what type (e.g., steel, concrete, sheet, timber, polycarbonate, etc.) of piles would be installed and/or removed, how many piles would be installed and/or removed in a given area and on a given day, the number of strikes or time necessary to install or remove a given pile type and size, the number of locations that pile driving and/or removal could occur, whether simultaneous installation or removal methods would be used, how many days of pile driving and/or removal would occur in a given year, or the associated source levels. The Service

and AOGA also did not estimate the Level A or B harassment zones or the numbers of either polar bears or walrus that could be taken during pile driving and/or removal.

Response: The specificity of pile driving activities is evaluated during requests for Letters of Authorization for each applicant to ensure that the proposed activities are consistent with the project activity descriptions described in the ITR and that anticipated take of marine mammals during these activities does not exceed the take estimations determined in the ITR. With regards to the need for Level A harassment zones during pile driving activities, the Service did not calculate this area as no sound sources identified in the proposed activities would produce Level A threshold noise. As was stated in the proposed rule, the Level B harassment zone was smaller than the impact area of surface activities, so we estimated take using the more conservative impact area.

Comment: The Service assumed that its presumed 1.6-km impact area for polar bears during surface interactions would encompass the area in which polar bears could be taken in water during construction activities (86 Fed. Reg. 29413). The 1.6-km impact area is associated with polar bear responses to in-air (on-land or on-ice) activities that may affect female bears with cubs (86 Fed. Reg. 29392 and 29400) and to aircraft overflights (86 Fed. Reg. 29400), rather than in-water stimuli. Given that sound moves more than four times faster in water than air and in-water activities would occur beyond 2 km from shore, any such assumptions are unsubstantiated.

Response: The underwater areas that will experience noise above the Level B harassment threshold for polar bears during in-water activities are small and fall within the current 1.6-km impact area that is used to estimate polar bear harassment. The 1.6-km impact area is a more conservative approach to estimate take of polar bears during in-water activities.

Comment: The similarly assumed a 1.6-km impact area for estimating takes of polar bears by vessel disturbance (86 Fed. Reg. 29412) but provided no justification for selecting the 1.6-km impact area.

Response: The potential behavioral responses of polar bears to surface-level activities, including vessels, was included in the ITR under Polar Bear: Surface Interactions, Impact Area.

Comment: Level B harassment takes of polar bears during aircraft overflights were underestimated by the Service. The Service conducted a very detailed and complicated analysis that, in the end, indicated only one polar bear would be taken annually during aircraft overflights for both passenger and cargo transport and for infrared aerial surveys. Given that (i) major construction activities are planned to occur at various sites, (ii) helicopters could be used more frequently than in previous years, and (iii) helicopter overflights have elicited a 65-percent behavioral response rate (see Figure 19 in AOGA's application), the Service's proposed number of Level B harassment takes during aircraft overflights is not supported by previous monitoring data and should be increased.

Response: Any flight paths associated with major construction activities have been incorporated into the aircraft analysis. AOGA provided the Service with a list of aircrafts that would likely be used for each activity-an increase in helicopter use is speculative. While the harassment rates were calculated using data from Aerocommander flights, the Service discusses results from

observational flights using helicopters. The harassment rates associated with these helicopter flights were found to be lower than the rates used in the AOGA application. No significant relationship between polar bear response and distance to aircraft was concluded from the dataset. We are working to further refine our take rates associated with these analyses, however more data is needed before we can differentiate take rates based on the type of aircraft. More detailed information on behavioral responses from these overflights can be found in the ITR section Aircraft Impacts to Surface Bears.

Comment: The distance established for avoidance of polar bear dens (1.6 km) appears to be somewhat arbitrary and worthy of additional research.

Response: The Service has relied upon several studies, representing the best available science, to arrive at the potential impact area of 1.6 km. The rates of harassment used to quantitatively estimate potential take were developed using a dataset that includes observations of human-polar bear encounters on the North Slope of Alaska. These encounters include observations of polar bear responses to snowmachines, trucks, Tuckers, bulldozers, and other industrial equipment. As such, the effects of these noise sources are incorporated into the Service's take estimates.

Comment: The Service should work with the U.S. Geological Survey to (1) support cooperative, timely analysis of all infrared and photographic data and images of suspected or known dens and (2) ensure timely reporting and analysis of all human-bear interactions. Particular attention should be paid to the collection and analysis of data that would enhance understanding of the effectiveness of the proposed mitigation measures for avoiding takes of polar bears in the project area.

Response: The Service appreciates the recommendation.

Comment: The mitigation measures specified in the proposed rule are inadequate for in-water sound-producing activities, including seismic surveys, pile driving, and drilling. Although AOGA included proposed mitigation measures specific to seismic surveys in one portion of its application (see sections 6.1.2 and 6.3.1.2 in the application), it did not include them in the mitigation section (see section 10).

Response: The proposal for the ITR period includes several in-water activities that will create underwater sound: dredging, screeding, pile driving, gravel placement, and geohazard surveys. No offshore seismic operations were included in the proposed activities, thus take will not be authorized for offshore seismic projects in this ITR. As such, the Service did not need to include mitigation measures for offshore seismic activities.

Comment: If the Service finalizes this regulation it should include in the final rule and any LOA issued thereunder the following additional mitigation and monitoring measures for sound-producing activities—

- establishing in-water exclusion zones (based on Level A harassment thresholds identified in Southall et al. 2019 for “other marine carnivores” and summarized in Table 1 of the preamble to the proposed rule; 86 Fed. Reg. 29391) and establishing, verifying, and

monitoring in-water monitoring zones (based on a Level B harassment threshold of 160 dB re 1 μ Pa for impulsive sources and 120 dB re 1 μ Pa for continuous sources) for sound-producing activities;

- using ramp-up and shut-down procedures;
- monitoring exclusion zones and surrounding waters 30 minutes prior to and during ramp-up procedures; and
- shutting down all sound sources if a walrus or polar bear is observed or reported as injured, in distress, or dying within the area of the sound source activity, pending review by the Service and approval to reinitiate activities.

Response: No offshore seismic operations were included in the proposed activities, thus take will not be authorized for offshore seismic projects in this ITR. As such the Service did not need to include mitigation measures such as ramp-up and shutdown procedures.

Comment: The Service should include in the final rule and any LOA issued thereunder explicit requirements to cease activities if a walrus or polar bear is injured or killed until the Service reviews the circumstances involving any injury or death that is likely attributable to the activities and determines what additional measures may be necessary to minimize additional injuries or deaths.

Response: The Service has included in the proposed rule immediate reporting requirements upon the injury or death of a walrus or polar bear. While it may aid in any subsequent investigation, ceasing activities in an active oil field may not be practicable or safe in certain circumstances, and thus will not be mandated.

Comment: The Service did not specify how many individuals constitute a “concentration” or “group” of walrus or polar bears in any of its proposed mitigation measures in section 18.126 of the proposed rule. For both walrus and polar bears, the Service should define a group to be two or more individuals.

Response: Thank you, we have added this revision in the final rule.

Comment: The Service should suspend the proposed rulemaking, require AOGA to submit a revised application that addresses shortcomings and publish a revised proposed rule in the *Federal Register* that addresses shortcomings before moving forward on this action.

Response: The Service appreciates this recommendation.

Comment: The Service should take a more active and responsible role in the development, review, and implementation of any and all acoustic and behavior thresholds for marine mammal species under its jurisdiction and consult with NMFS on whether, when, and how the current thresholds should be implemented.

Response: The Service appreciates this recommendation.