



# MARINE MAMMAL COMMISSION

1 April 2019

Ms. Jolie Harrison, Chief  
Permits and Conservation Division  
Office of Protected Resources  
National Marine Fisheries Service  
1315 East-West Highway  
Silver Spring, MD 20910-3225

Dear Ms. Harrison:

The Marine Mammal Commission (the Commission), in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the application submitted by the Federal Aviation Administration (FAA) seeking authorization under section 101(a)(5)(D) of the Marine Mammal Protection Act (the MMPA) to take small numbers of marine mammals by harassment. The taking would be incidental to replacement of the Biorca Island dock in Alaska. The Commission also has reviewed the National Marine Fisheries Service's (NMFS) 7 March 2019 notice (84 Fed. Reg. 8308) announcing receipt of the application and proposing to issue the authorization, subject to certain conditions.

FAA plans to remove and install piles during construction of a new dock on Biorca Island. This is the second authorization for the proposed activities. Operators would install up to 4 18-in and 2 30-in steel pipe piles and 12 temporary H-piles using a vibratory and/or impact hammer. They would remove the temporary H-piles using a vibratory hammer, clamshell bucket, direct pull, and/or excavator. FAA expects activities to take 12 days<sup>1</sup>, weather permitting. It would limit pile-driving and -removal activities to daylight hours.

NMFS preliminarily has determined that, at most, the proposed activities could cause Level A and/or B harassment<sup>2</sup> of small numbers of five marine mammal species. NMFS anticipates that any impact on the affected species and stocks would be negligible. NMFS also does not anticipate any take of marine mammals by death or serious injury and believes that the potential for

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<sup>1</sup> Based on inquiries from the Commission, FAA confirmed that it expects activities to occur on 12 not 21 days, as was included in the *Federal Register* notice.

<sup>2</sup> The Commission informally noted that the proposed numbers of Level A harassment takes for harbor seals and humpback whales were underestimated, and lacking altogether for minke whales, based on previous monitoring reports for the first year of activities and for other activities in the Sitka area. The Commission noted that the Level B harassment takes for harbor seals and killer whales also were underestimated and again lacking for minke whales. Further, based on the reduction in days of activities, NMFS plans to decrease the Level B harassment takes for humpback whales and Steller sea lions. In the final authorization, NMFS will (1) include 1 Level A harassment and 12 Level B harassment takes for minke whales, (2) increase the Level A harassment takes from 5 to 20 for harbor seals and from 1 to 5 for humpback whales, (3) increase the Level B harassment takes from 100 to 220 for harbor seals and from 12 to 24 for killer whales, and (4) decrease the Level B harassment takes from 100 to 60 for both humpback whales and Steller sea lions.

disturbance will be at the least practicable level because of the proposed mitigation measures. The mitigation, monitoring, and reporting measures include—

- conducting in-situ sound source measurements during installation activities<sup>3</sup> and adjusting the Level A and B harassment zones, if necessary;
- using a sound attenuation device (e.g., hammer cushion) during impact driving of piles;
- ceasing pile-driving and -removal activities if any marine mammal comes within 10 m of the equipment;
- using two qualified land-based protected species observers to monitor the Level A and B harassment zones for 30 minutes before, during, and for 30 minutes after the proposed activities;
- using standard soft-start, delay, and shut-down procedures;
- using delay and shut-down procedures, if a species for which authorization has not been granted or if a species for which authorization has been granted but the authorized takes are met, approaches or is observed within the Level B harassment zone;
- reporting injured and dead marine mammals to the Office of Protected Resources and the Alaska Regional Stranding Coordinator using NMFS's phased approach and suspending activities, if appropriate; and
- submitting a final report.

In addition, the Sitka Tribe of Alaska, Central Council of the Tlingit and Haida, and Sealaska were contacted regarding impacts of the proposed activities on their cultural resources. No issues or concerns were raised. Based on the proposed activities and mitigation measures, NMFS has preliminarily determined that the proposed taking would not have an unmitigable adverse impact on the availability of marine mammals for subsistence use by Alaska Natives. The Commission concurs with NMFS's preliminary findings and recommends that NMFS issue the incidental harassment authorization, subject to the inclusion of the proposed mitigation, monitoring, and reporting measures.

### **Appropriateness of the Level A harassment zones**

As the Commission has indicated in previous letters, it supports NMFS's use of the updated permanent threshold shift (PTS) thresholds and associated weighting functions to estimate the Level A harassment zones. However, there are some shortcomings that need to be addressed regarding the methodology for determining the extent of the Level A harassment zones based on the associated

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<sup>3</sup> Based on a lack of validation for JASCO's pile driving source model and multiple Level A and B harassment zones that are illogical, the FAA was required to conduct measurements of two each of the 18- and 30-in pipe piles when a vibratory, down-the-hole, or impact hammer were used. The FAA conducted measurements on the 18-in but not on the 30-in piles during the first year of activities. It would be required to conduct measurements on the remaining 30-in piles, which only would be driven with an impact hammer this year. In addition, the Commission informally noted that NMFS should make FAA aware of the necessary statistics, metrics, and other required data for reporting such measurements. Those include providing minimums, means, medians, and maximums for root-mean-square sound pressure levels (SPLs), peak SPLs, and single-strike sound exposure levels (SELs) during impact driving and for SELs during vibratory driving. Spectra (including power spectral density reported as dB re 1  $\mu\text{Pa}^2/\text{Hz}$ ) for the various installation methods and pile sizes and pulse duration for impact driving should be reported as well—measurements of vibratory driving should be analyzed based on integrating data only when the hammer is active and based on 1-sec integration periods. NMFS should include *all* requirements in the final authorization.

PTS cumulative sound exposure level ( $SEL_{cum}$ ) thresholds for the various types of sound sources, including stationary sound sources. For determining the range to the  $SEL_{cum}$  thresholds, NMFS uses a baseline accumulation period of 24 hours unless an activity would occur for less time (e.g., 8 hours). The Commission supports that approach *if* an action proponent is able to conduct more sophisticated sound propagation and animat modeling. However, that approach is less than ideal for action proponents that either are unable, or choose not, to conduct more sophisticated modeling.

As an example, the Level A harassment zone for high-frequency cetaceans was estimated to be much greater than the Level B harassment zone (1.6 km vs. 430 m, respectively) for scenario 5<sup>4</sup>. Based on the extent of those zones, it is assumed that an animal would experience PTS before responding behaviorally and leaving or avoiding the area. That notion runs counter to the logic that permanent and temporary physiological effects are expected to occur closest to the sound source, with behavioral responses triggered at lower received levels, and thus at farther distances. Specifically, the Level A and B harassment zones do not make sense biologically or acoustically due to NMFS's unrealistic assumption that the animals remain stationary throughout the entire day of the activity.<sup>5</sup> By assuming a stationary receiver, all of the energy emitted during a 24-hour period is accumulated for the  $SEL_{cum}$  thresholds.

The Commission continues to believe that it would be prudent for NMFS to consult with scientists and acousticians to determine the appropriate accumulation time that action proponents should use to determine the extent of the Level A harassment zones based on the associated  $SEL_{cum}$  thresholds in such situations. Those zones should incorporate more than a few hammer strikes (or acoustic pulses) but less than an entire workday's worth of strikes (or pulses). This recommendation is the same as those made in the Commission's [11 July 2017 letter](#) on NMFS's final Technical Guidance and numerous previous letters. Other federal partners, including the Navy, have made similar recommendations. Since the Commission and other federal partners determined that this issue needs resolution, the Commission recommends that NMFS make this issue a *priority* to resolve in the near future. The Commission understands that NMFS formed an internal committee to address this issue but believes that external expertise also is needed to resolve it. Therefore, the Commission recommends that NMFS consult with external scientists and acousticians to determine the appropriate accumulation time that action proponents should use to determine the extent of the Level A harassment zones based on the associated  $SEL_{cum}$  thresholds for the various types of sound sources, including stationary sound sources. Estimated swimming speeds of various species and behavior patterns (including residency patterns)<sup>6</sup> should be considered. More specifically, animat modeling that considers various scenarios should be used to address this issue. This is especially important for ensuring that NMFS's assumptions regarding the appropriate accumulation time conform to real-world scenarios.

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<sup>4</sup> A similar trend was observed for high-frequency cetaceans for scenario 3 and for low-frequency cetaceans for scenarios 3 and 5 as well (see Table 2 in the proposed authorization).

<sup>5</sup> Which generally has been more of an issue for stationary sound sources. However, this also could be an issue for moving sound sources that have short distances between transect lines, in which the user spreadsheet may not be appropriate for use unless the source level could be adjusted accordingly.

<sup>6</sup> Results from monitoring reports, including animal responses, submitted in support of incidental harassment authorizations issued by NMFS also may inform this matter.

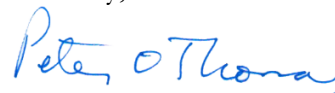
### **Proposed one-year authorization renewals**

NMFS has indicated that it may issue a second one-year<sup>7</sup> incidental harassment authorization renewal for this and other future authorizations if various criteria are met (see 83 Fed. Reg. 42489 for details). The Commission agrees that NMFS should take appropriate steps to streamline the authorization process under section 101(a)(5)(D) of the MMPA to the extent possible. However, the Commission is concerned that the renewal process proposed in the *Federal Register* notice is inconsistent with the statutory requirements. Section 101(a)(5)(D) clearly states that proposed authorizations are subject to publication in the *Federal Register* and elsewhere and that there be a presumably concurrent opportunity for public review and comment. NMFS's proposed renewal process would bypass the public notice and comment requirements when it is considering the renewal.

The Commission further notes that, for the proposed authorization, NMFS implemented an abbreviated authorization process by publishing the required information<sup>8</sup> via an abbreviated *Federal Register* notice, referencing the relevant documents, and providing a 30-day public comment period. The abbreviated process preserves the full opportunity for public review and comment for the MMPA's required 30-day period, does not appear to be unduly burdensome on either the applicant or NMFS, and is much preferred over NMFS's proposed renewal process<sup>9</sup>. Thus, the Commission recommends that NMFS refrain from implementing its proposed renewal process and instead use abbreviated *Federal Register* notices, reference existing documents to streamline the incidental harassment authorization process, and provide a 30-day period for the public to comment. If NMFS adopts the proposed renewal process notwithstanding the Commission's recommendation, the Commission further recommends that NMFS provide the Commission and the public with a legal analysis supporting its conclusion that the process is consistent with the requirements under section 101(a)(5)(D) of the MMPA.

Please contact me if you have questions regarding the Commission's comments or recommendations.

Sincerely,



Peter O. Thomas, Ph.D.,  
Executive Director

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<sup>7</sup> NMFS informed the Commission that the renewal would be issued as a one-time opportunity, after which time a new authorization application would be required. NMFS has yet to specify this in any *Federal Register* notice detailing its proposed renewal process but should do so.

<sup>8</sup> Including any changes to the proposed activities or assumptions made and results from the draft monitoring report.

<sup>9</sup> See the Commission's [30 April 2018 letter](#) detailing this matter.