



MARINE MAMMAL COMMISSION

15 November 2016

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 National Marine Fisheries Service's (NMFS) 25 August 2016 notice (81 Fed. Reg. 58443) and the letter of authorization application submitted by the U.S. Army Corps of Engineers, Portland District (USACE) seeking issuance of regulations under section 101(a)(5)(A) of the Marine Mammal Protection Act. The taking would be incidental to rehabilitation of a jetty system in Oregon and Washington during a five-year period—an incidental harassment authorization was issued for the first year of activities.

USACE plans to repair and stabilize three jetties at the mouth of the Columbia River. Operators would install and potentially remove up to 96 timber or steel pipe piles and 373 sections of sheet or Z- or H-type piles using a vibratory hammer during approximately 58 days during the five-year period. In addition, pedestrian surveys of the jetties could occur on up to six days during the five-year period. All proposed activities would be limited to daylight hours only.

NMFS preliminarily has determined that, at most, the proposed activities temporarily would modify the behavior of small numbers of seven marine mammal species or stocks. 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 disturbance will be at the least practicable level because of the proposed mitigation measures. The mitigation, monitoring, and reporting measures include—

- prohibiting pile-driving and -removal activities from 1 October to 30 April to minimize impacts on southern resident killer whales;
- conducting empirical sound source and sound propagation measurements during 25 percent¹ of installation and removal activities, including ambient measurements, and adjusting the Level A and B harassment zones, if necessary;
- using only one vibratory hammer at a given time;
- using standard² soft-start, delay, and shut-down procedures;

¹ 25 percent of each different type of pile and each method of installation and removal.

² NMFS informed the Commission that it incorrectly included in the notice 30 rather than 15 minutes as the clearance time for small cetaceans and will amend this for the final rule.

- using delay and shut-down procedures if killer whales are observed approaching or within the Level B harassment zone between 1 May to 30 June;
- using delay and shut-down procedures if a species for which authorization has not been granted (including but not limited to northern fur seals and Guadalupe fur seals) or if a species for which authorization has been granted but the authorized number of takes are met, approaches or is observed within the Level B harassment zone;
- ceasing or delaying in-water activities if any marine mammal comes within 20 m of the equipment;
- using two to four qualified land- or vessel-based protected species observers to monitor the Level B harassment zone 30 minutes prior to, during, and 30 minutes after vibratory pile installation and removal;
- reporting injured and dead marine mammals to NMFS and West Coast Regional Stranding Coordinator using NMFS's phased approach and suspending activities, if appropriate; and
- submitting a final report.

General concerns and comments

The Commission had extensive questions and comments regarding the preamble and proposed rule³. Those comments primarily involved incorrect information, general oversights, and inaccurate assessments of species-specific takes. After numerous communications with the Commission over nearly three months, NMFS indicated that all issues⁴ would be resolved prior to issuance of final rule. Those include—

- removing all references to impact pile driving, drilling, and installation of concrete piles since those activities would not occur;
- using the standard clearance time of 15 minutes for small cetaceans rather than 30 minutes;
- incorporating NMFS's new Level A harassment thresholds, revising the exclusion zones accordingly, and requiring implementation of standard mitigation and monitoring measures based on those revised zones;
- using Department of the Navy (DoN; 2015) rather than DoN (2014) as the basis for cetacean density estimates and choosing the appropriate densities from the seasonal distribution maps, which
 - decreased the densities and numbers of estimated Level B harassment takes for humpback whales⁵ and harbor porpoises, and
 - increased the densities for killer whales and gray whales—the number of estimated Level B harassment takes for (1) killer whales remained the same because the takes

³ Some of which were conveyed to NMFS in 2015 when it published a proposed incidental harassment authorization for the first year of activities. Others were conveyed to NMFS as it revised the various take estimates in the last few months.

⁴ In addition, NMFS indicated that USACE reduced the (1) number of piles to be driven and/or extracted from 96 to 52 timber or steel pipe piles and 393 to 139 sheet or Z- or H-type piles and (2) proposed number of activity days from 58 to 49 days, which would reduce the overall number of takes. Further, USACE incorrectly incorporated the Level B harassment zones for impact pile driving in its estimation of the Level B harassment zones for vibratory pile driving. All Level B harassment zones were recalculated based on that error and the inclusion of NMFS's new Level A harassment thresholds and associated ensounded areas discussed herein.

⁵ Takes then were increased based on group size but were still less than those originally proposed.

were increased based on group size and frequency of occurrence and (2) gray whales increased; and

- reducing the number of Level B harassment takes of California sea lions and harbor seals based on computational errors.

The Commission agrees that NMFS should include all the aforementioned modifications in the preamble and/or final rule.

Estimation of takes

The method NMFS used to estimate the numbers of takes during the proposed activities, which summed fractions of takes for each cetacean species across days, does not account for and negates the intent of NMFS's 24-hour reset policy. Instead of summing fractions of takes across days and then rounding to estimate total takes, NMFS should have calculated a daily take estimate (determined by multiplying the estimated density of marine mammals in the area by the daily ensonified area) and then rounded that to a whole number *before* multiplying it by the number of days that activities would occur. As stated in previous Commission letters, NMFS should use the average group size as a proxy for the estimated number of takes for species in which estimated daily takes would round down to zero, as has been done for other incidental harassment authorizations (80 Fed. Reg. 75380, 81 Fed. Reg. 23144). Furthermore, if NMFS believes any of those species could be taken on multiple days, NMFS should multiply the average group size by the number of days of activities or the frequency of occurrence in the project area. NMFS took that latter approach for takes of killer whales and gray whales⁶ and a portion of the pinniped takes⁷ in the preamble to the proposed rule and for numerous species in the incidental harassment authorization for the first year of activities.

As the Commission has indicated in previous letters regarding this matter⁸, the issue at hand involves policy rather than mathematical accuracy. Summing fractions of takes⁹ across days nullifies the intent of the 24-hour reset, which is a policy decision that NMFS made many years ago and continues to implement¹⁰. It appears NMFS understands the implications for certain applications of its 24-hour reset but is choosing to inconsistently apply the method across the various metrics, which in this case is the sound pressure level (root-mean-square) metric. Thus, the Commission recommends that NMFS (1) follow its policy of a 24-hour reset for enumerating the number of each species that could be taken during the proposed activities, (2) apply standard rounding rules before summing the numbers of estimated takes across days, and (3) for species that have the potential to be taken but model-estimated or calculated takes round to zero, use group size to inform the take estimates—these methods should be used consistently for all future incidental take authorizations. The Commission has discussed this matter with NMFS and is willing to engage in further discussions to resolve this matter in the near future.

⁶ However, NMFS's revised take estimates were based on summing fractions of takes across days and then rounding to estimate the total number of takes.

⁷ But not for takes associated with pedestrian surveys.

⁸ See the Commission's 7 September 2016 letter detailing this issue.

⁹ Especially those that are much less than 1 (e.g., 0.05 takes).

¹⁰ See the *Federal Register* notice regarding NMFS's technical guidance for assessing the effects of anthropogenic sound on marine mammal hearing—underwater acoustic thresholds for onset of permanent and temporary threshold shifts (PTS and TTS, respectively; 81 Fed. Reg. 51694).

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Please contact me if you have questions regarding the Commission's recommendation.

Sincerely,

A handwritten signature in blue ink that reads "Rebecca J. Lent". The signature is written in a cursive style with a large initial "R" and a long horizontal stroke extending to the left.

Rebecca J. Lent, Ph.D.
Executive Director

References

- DoN. 2014. Pacific Navy Marine Species Density Database: Technical Report. Naval Facilities Engineering Command Pacific, Pearl Harbor, Hawaii. 438 pages.
- DoN. 2015. Pacific Navy Marine Species Density Database: Revised Final Northwest Training and Testing Technical Report. Naval Facilities Engineering Command Pacific, Pearl Harbor, Hawaii. 488 pages.