



MARINE MAMMAL COMMISSION

18 August 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 U.S. Navy's application seeking authorization under section 101(a)(5)(D) of the Marine Mammal Protection Act to take marine mammals by harassment. The taking would be incidental to pile driving and removal in association with a pier replacement project in San Diego Bay, California, during a one-year period. The Commission also has reviewed the National Marine Fisheries Service's (NMFS) 7 August 2016 notice (81 Fed. Reg. 52645) announcing receipt of the application and proposing to issue the authorization, subject to certain conditions.

Background

The Navy plans to install and remove piles during demolition and replacement of the fuel pier at Naval Base Pt. Loma. This would be the fourth authorization for the proposed activities. During the fourth year of activities, the Navy would install 127 steel pipe, concrete, or concrete-filled fiberglass piles using a vibratory and/or an impact hammer. The Navy would remove up to 498 concrete, plastic, or steel piles and 51 concrete-filled steel caissons using dead pull, a diamond belt saw, pile cutter, and/or vibratory hammer. The Navy expects the proposed activities to occur for up to 156 days, primarily from 1 October 2016–30 April 2017. Activities would be limited to daylight hours only.

NMFS preliminarily has determined that, at most, the proposed activities would temporarily modify the behavior of small numbers of eight species of marine mammals. It also anticipates that any impact on the affected species and stocks would be negligible. NMFS does not anticipate any take of marine mammals by death or serious injury and believes that the potential for temporary or permanent hearing impairment would be at the least practicable level because of the proposed mitigation measures. The proposed mitigation, monitoring, and reporting measures include—

- conducting empirical sound measurements of installation of the concrete fender piles and removal of the multiple pile types using various demolition tools;
- using soft-start, delay, and shut-down procedures;

- using delay and shut-down procedures if a species for which authorization has not been granted or for which the authorized numbers of takes have been met approaches or is observed within the Level B harassment zone;
- using one to six qualified protected species observers (land-, pier-, and/or vessel-based) to monitor the Level A¹ and B harassment zones for 15 minutes before, during, and for 30 minutes after pile driving and removal activities;
- ceasing other heavy machinery work if any marine mammal comes within 10 m of the vessel or equipment;
- reporting injured and dead marine mammals to NMFS and West Coast Regional Stranding Coordinator using NMFS's phased reporting approach and suspending activities, if appropriate; and
- submitting draft and final acoustic and marine mammal monitoring reports to NMFS.

Estimation of takes

The method NMFS used to estimate the numbers of takes during the proposed activities, which summed fractions of takes for each 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—a method NMFS implemented for the previous three years of activities authorized at Pt. Loma (80 Fed. Reg. 53130, 79 Fed. Reg. 53041, 78 Fed. Reg. 30892). For species in which estimated daily takes would round down to zero, NMFS should use the average group size as a proxy for the estimated number of takes, as has been done for other incidental harassment authorizations (80 Fed. Reg. 75380, 81 Fed. Reg. 23144). 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. The Commission is unsure why NMFS changed approaches for this authorization but has commented on NMFS's inconsistent use of its 24-hour reset and standard rounding rules numerous times in the past.

In response to Commission comments, NMFS recently indicated that the objective of take estimation is to provide more accurate assessments of potential impacts to marine mammals for the entire project, and rounding in the middle of the calculation would introduce large errors into the process (81 Fed. Reg. 52408). From a purely mathematical standpoint, NMFS may be correct but the question at hand involves policy rather than mathematical accuracy. Summing fractions of takes² across days nullifies the intent of the 24-hour reset, which is a policy decision that NMFS made many years ago and continues to implement³. Specifically, NMFS indicated that using a fixed 24-hour accumulation period for the new thresholds⁴ is no different from how take calculations are

¹ Those include an additional buffer zone to further reduce the potential for Level A harassment during pile driving activities at the fuel pier.

² Especially those that are much less than 0 (e.g., 0.05 takes).

³ 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).

⁴ Which are based on sound exposure level and peak sound pressure level (SPL) metrics.

done under the current thresholds⁵ (81 Fed. Reg. 51717). In addition, NMFS indicated that a key consideration in accurately accumulating exposure beyond the recommended 24-hour period is the ability to accurately predict the location of the receivers⁶ relative to the source. Given that the understanding of marine mammal distribution and movement (especially during periods of sound exposure) is limited, those limitations hamper the ability to make realistic exposure predictions for longer duration exposures (81 Fed. Reg. 51717). Yet in summing exposures across days, as proposed in the current authorization, NMFS assumes animals would remain in the area and accumulate sound exposure over multiple days⁷. 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 SPL (rms) metric.

For all of these reasons, 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 have further discussions to resolve this matter.

The Commission hopes its comments are useful. Please contact me if you have questions regarding the Commission's recommendation.

Sincerely,



Rebecca J. Lent, Ph.D.
Executive Director

⁵ Which the Commission notes include Level B harassment thresholds based on SPL (root mean square; rms) that remain unchanged with the new thresholds.

⁶ i.e., the animal(s) exposed to the sound.

⁷ For example, NMFS would assume that 4 animals could be taken during an 85-day activity based on 0.05 animals being taken in a given day.