



MARINE MAMMAL COMMISSION

11 June 2013

Mr. P. Michael Payne, Chief
Permits and Conservation Division
Office of Protected Resources
National Marine Fisheries Service
1315 East-West Highway
Silver Spring, MD 20910-3225

Dear Mr. Payne:

The Marine Mammal 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. The authorization would be in effect from September 2013 to September 2014. The Commission also has reviewed the National Marine Fisheries Service's 23 May 2013 notice (78 Fed. Reg. 30873) announcing receipt of the application and proposing to issue the authorization, subject to certain conditions.

RECOMMENDATIONS

The Marine Mammal Commission recommends that the National Marine Fisheries Service—

- require the Navy to use densities of 5.75 sea lions/km² for summer and fall and 2.51 sea lions/km² for winter and spring to re-estimate the number of sea lions that could be taken during the proposed activities;
- require the Navy to implement soft-start procedures after 15 minutes if pile driving or removal is delayed or shut down because of the presence of a marine mammal within or approaching the shut-down zone; and
- require the Navy to monitor the extent of the disturbance zone using additional shore- or vessel-based observers beyond the waterfront restricted area to (1) determine the numbers of marine mammals taken during pile-driving and -removal activities and (2) characterize the effects on them.

RATIONALE

The Navy plans to install and remove piles during demolition and replacement of the fuel pier at Pt. Loma Naval Base. The project also would include moving the Navy's Marine Mammal Program to a temporary holding facility 3 km from the pier to minimize impacts to those animals. The project would last for four years, but the requested incidental harassment authorization would be valid for one year only with the Navy required to seek renewal for subsequent years. During the first year, the Navy would install 78 24- to 48-in steel pipe piles using a vibratory and an impact

hammer. It also would install 50 18-in concrete piles using water jetting and an impact hammer—those piles then would be removed in future years. The Navy could remove up to 18 16- to 24-in concrete piles and 91 12-in timber piles when it demolishes the old fuel pier. It could remove the piles using dry pull, a clamshell's hydraulic jaws or underwater chainsaw, jet, or vibratory hammer. The Navy expects pile installation to take 66 days, with pile removal being contingent on the in-water work window from 15 September 2013 to 31 March 2014. It also would dredge sediment to deepen the existing turning basin. Activities would be limited to daylight hours only.

The Service preliminarily has determined that, at most, the proposed activities temporarily would modify the behavior of small numbers of harbor seals, California sea lions, bottlenose dolphins, and gray whales. It also anticipates that any impact on the affected species and stocks would be negligible. The Service 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 and monitoring measures. Those measures include—

- restricting in-water activities generally from 1 April to 14 September to protect least terns;
- conducting empirical in-water and in-air sound measurements of (1) installation of the various sizes and types of piles using a vibratory and impact hammer, (2) removal of the piles using a vibratory hammer and pneumatic chipping, and (3) ambient underwater sound;
- using soft-start, delay, and shut-down procedures;
- using qualified protected species observers to monitor the harassment zones for 15 minutes before, during, and for 15 minutes after pile driving and removal activities;
- ceasing other heavy machinery work (i.e., activities other than pile driving and removal) if any marine mammal comes within 10 m of the vessel or equipment;
- reporting injured and dead marine mammals to the Service and local stranding network using the Service's phased reporting approach and suspending activities, if appropriate; and
- submitting draft and final acoustic and marine mammal monitoring reports to the Service.

California sea lion densities

The Navy reported California sea lion densities of 5.75 sea lions/km² for summer and fall and 2.51 sea lions/km² for winter and spring within San Diego Bay. However, it reduced those densities to a mere 1.18 sea lions/km² based on the notion that bait barges attract sea lions and that the temporary relocation of those barges beyond the Level B harassment zone during the project (by the bait barge owners rather than the Navy) would lead to a reduction in the numbers of sea lions in the area where they might be taken. While sea lions may be attracted to a bait barge, removal of the barge is not likely to have such a dramatic effect because the proposed activities could last from 8 to 12 hours on any given day and sea lions could be transiting within the bay and going out to sea to forage during that timeframe. In addition, Figure 3-2 in the Navy's application showed that California sea lions occur in large numbers throughout the Level B harassment zones (both the 160 and 120 dB re 1 μPa thresholds) beyond the area of the bait barges. Further, the *Federal Register* notice stated that sea lions are by far the most-commonly sighted pinniped at sea or on land in the vicinity of the Pt. Loma Naval Base and northern San Diego Bay, where there is a resident non-breeding population. Moreover, it indicated that sea lions also regularly haul-out on rocks, buoys, and other structures that are found within the Level B harassment zones. Given these facts, it is

unclear why the Service allowed the Navy to reduce the density by a factor of nearly five for the summer and fall and two for the winter and spring. To address this concern, the Marine Mammal Commission recommends that the National Marine Fisheries Service require the Navy to use densities of 5.75 sea lions/km² for summer and fall and 2.51 sea lions/km² for winter and spring to re-estimate the number of sea lions that could be taken during the proposed activities.

Mitigation and monitoring measures

The Service would require the Navy to implement soft-start procedures only at the beginning of each work day and when pile-driving or -removal activities have ceased for more than 30 minutes. The Service also would require the Navy to cease pile driving or removal if a marine mammal is sighted within or on a path to enter a shut-down zone (based on Level A harassment). The Navy could resume activities when the marine mammal has cleared the zone and is on a path away from the zone or when 15 minutes has elapsed since the last sighting of that mammal. The authorization then would allow the Navy to resume pile driving and removal at full power. However, several factors indicate that a soft start is advisable at that point. First, although they probably rarely do so, seals and sea lions are capable of diving for periods approaching 15 minutes. In such cases they are considered not “available” to be observed and it is possible that they are still in the shut-down zone (this is often referred to as an availability bias). Second, even if their dive times are shorter, they may be visible at the surface for only a few seconds while they take a breath and thus observers may not always detect them when they are available to be seen (this is often referred to as a detection or perception bias). For example, the observer may not detect them at the surface if s/he is not watching the area where a sea lion surfaces at that given time. Third, sea lions are more difficult to detect when sighting conditions are poor (e.g., inclement weather, poor lighting, rough sea surface conditions). That is, poor conditions may increase detection (or perception) bias. In such cases, full starts would pose an excessive risk to marine mammals still in the shut-down zone but not detected there. For that reason, the Commission continues to believe that soft-start procedures should be used to avoid serious injury after a shutdown of 15 minutes for pinnipeds and small- to medium-sized cetaceans (for which the same issue of short surfacing times may exist). Therefore, the Marine Mammal Commission recommends that the National Marine Fisheries Service require the Navy to implement soft-start procedures after 15 minutes if pile driving or removal is delayed or shut down because of the presence of a marine mammal within or approaching the shut-down zone.

The Navy has indicated that it intends to use observers to monitor visually as much of the disturbance zone as possible (i.e., the Level B harassment zone that has a radius of 6.5 km for vibratory pile driving and removal). Neither the Navy nor the Service specified the number of observers that would be monitoring at a given time or the location of those observers. The Navy also has used both land- and vessel-based observers for other similar activities. However, the proposed monitoring requirements for the proposed incidental harassment authorization do not specify if the observers would be stationed on land, vessels, or both.

More than one observer would be needed to monitor out to 6.5 km from the proposed activities, but much of the disturbance zone is surrounded by land, which reduces the size of that zone. That being the case, a small number of land- or vessel-based observers could collect the data needed to assess changes in marine mammal behavior as a function of distance from the activities and to determine accurately the numbers of marine mammals taken during those activities.

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Therefore, the Marine Mammal Commission recommends that the National Marine Fisheries Service require the Navy to monitor the extent of the Level B harassment zones using additional shore- or vessel-based observers to (1) determine the numbers of marine mammals taken during pile-driving and -removal activities and (2) characterize the effects on them.

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

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".

Rebecca J. Lent, Ph.D.
Executive Director