



MARINE MAMMAL COMMISSION

28 October 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 (the MMC), in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the application submitted by the California Department of Transportation (CALTRANS) 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 construction activities associated with replacement of the east span of the San Francisco-Oakland Bay Bridge in California. The incidental harassment authorization would be valid for a one-year period. The MMC also has reviewed the National Marine Fisheries Service's (NMFS) 2 October 2013 notice (78 Fed. Reg. 60852) announcing receipt of the application and proposing to issue the authorization, subject to certain conditions. Since 2002 the MMC has commented on multiple incidental harassment authorization requests related to replacement of the bridge.

RECOMMENDATIONS

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

- require CALTRANS to conduct in-situ sound propagation measurements if multiple vibratory hammers are used at any given time and adjust the Level A and B harassment zones as necessary;
- require CALTRANS to implement full-time monitoring of Level A and B harassment zones during all in-water sound-producing activities (i.e., pile-driving and -removal and bridge dismantling activities); and
- include in each proposed incidental harassment authorization that the Service publishes in the *Federal Register* a detailed description of the proposed activities rather than referring to previous documents.

BACKGROUND

The planned project to dismantle the bridge would require initial construction activities followed by dismantling activities. The project would last for three years, but the requested incidental harassment authorization would be valid for one year only with CALTRANS seeking renewal for subsequent years. This is the second incidental harassment authorization request for the proposed activities; however, no in-water activities occurred under the previous authorization.

Construction would include the installation of up to 635 temporary falsework piles to support various superstructures and trestles. Those piles would include 18- to 36-in steel pipe piles and 10- to 14-in H-piles. CALTRANS also could install up to 1,925 steel sheet piles as part of up to 22 cofferdams that would be used to dismantle the bridge's foundation. The Department would drive pipe sheet piles with a vibratory hammer and H-piles with an impact hammer. Both vibratory and impact hammers could be used to drive pipe piles depending on the substrate. All temporary piles would be removed using a vibratory hammer. CALTRANS may operate multiple hammers at the same time, although that situation is unlikely. It would conduct all activities during daylight hours.

CALTRANS would remove various bridge superstructures including trusses, road decks, and steel and concrete support towers. CALTRANS does not expect those removal activities to harass marine mammals. However, several other activities have the potential to harass marine mammals, including removal of the concrete foundation of the bridge using various mechanical means including saw cutting, flame cutting, mechanical splitting, drilling, pulverizing, and/or hydrocutting. CALTRANS would dismantle the concrete foundations after it has removed the superstructure and towers.

NMFS preliminarily has determined that, at most, the proposed activities temporarily would modify the behavior of small numbers of harbor seals, California sea lions, harbor porpoises, and gray whales. 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 and monitoring measures. Those measures include—

- using sound attenuation devices for driving all pipe piles and proofing 90 percent of them;
- limiting impact driving of pipe piles to a maximum of 20 piles per day and limiting proofing of the pipe piles to a maximum of 2 piles per day—each pile would be driven with no more than 20 blows during a one-minute period;
- restricting impact driving of H-piles during the period from 1 June to 30 November to protect migrating salmonids and spawning green sturgeon;
- conducting in-situ sound propagation measurements to verify or adjust the respective Level A harassment zones for impact pile driving and dismantling activities, as necessary;
- establishing and monitoring a 500-m exclusion zone around each foundation to be dismantled until in-situ sound measurements have been conducted to determine the extent of the Level A harassment zones;
- using delay procedures for all monitored activities and shut-down procedures during dismantling activities only;
- using ramp-up procedures before vibratory and impact pile driving of each pile;
- using a NMFS-approved protected species observer to monitor the (1) Level A harassment zones 30 minutes prior to, during, and 30 minutes after activities during at least (a) 100 percent of unattenuated impact driving of H-piles, (b) 100 percent of attenuated impact driving of pipe piles, and (d) 100 percent of dismantling activities and (2) Level B harassment zones 30 minutes prior to, during, and 30 minutes after activities during at least (a) 100 percent of unattenuated impact driving of H-piles, (b) 20 percent of attenuated impact driving of pipe piles, (c) 20 percent of vibratory pile driving, and (d) 20 percent of dismantling activities;

- reporting injured and dead marine mammals to NMFS and the local stranding network using NMFS's phased approach and suspending activities, if appropriate; and
- submitting weekly monitoring reports and a final report.

RATIONALE

Mitigation and monitoring measures

CALTRANS proposed to conduct in-situ sound propagation measurements to verify or adjust the respective Level A harassment zones for impact pile driving and dismantling activities, as necessary. Although unlikely, CALTRANS also indicated that it may use multiple hammers at a given time. However, it is unclear if CALTRANS would use more than one vibratory hammer at once or would collect empirical sound measurement data during their use. Empirical sound measurement data are limited or lacking during use of multiple vibratory hammers, but one can assume that the estimated source level would increase if two vibratory hammers were used to install or remove the same type and size of piles at any given time. To verify the source level and associated sound propagation during multiple vibratory hammer use, the MMC recommends that NMFS require CALTRANS to conduct in-situ sound propagation measurements if multiple vibratory hammers are used at any given time and adjust the Level A and B harassment zones as necessary.

The proposed authorization would require monitoring by protected species observers to implement delay procedures for all in-water sound-producing activities and shut-down procedures for dismantling activities, validate take estimates, and document marine mammal responses to a portion of the activities. The authorization also would require monitoring of the Level A harassment zone, if applicable, during 100 percent of dismantling activities and the Level B harassment zone during 20 percent of dismantling activities. In addition, it would require monitoring of the Level A and B harassment zones for (1) 100 percent of unattenuated impact driving of H-piles, (2) at least 20 percent of attenuated impact driving of pipe piles, and (3) at least 20 percent of vibratory pile driving. However, the authorization would not require monitoring during pile removal. Previous incidental harassment authorizations for this bridge project required CALTRANS to monitor the Level A harassment zone for all in-water pile-driving activities (76 Fed. Reg. 7156) and to estimate the number of marine mammals harassed during pile-driving activities. However, it is unclear whether those previous authorizations required CALTRANS to monitor the entire extent of the Level B harassment zone.

NMFS indicated in the issuance of the current incidental harassment authorization (78 Fed. Reg. 2371) that the extent of proposed work made it infeasible and costly for CALTRANS to implement marine mammal monitoring for Level A and B harassment zones at all times, particularly since the Level B harassment zone for vibratory pile driving extends to a radius of 2 km. For a number of reasons, the MMC believes that protected species observers should be monitoring the construction during all in-water sound-producing activities (i.e., vibratory and impact pile driving and dismantling activities). Marine mammal responses to dismantling activities have yet to be studied and responses to vibratory pile driving and removal are not well studied. Therefore, continuous monitoring is the only way to ensure that unexpected responses of marine mammals (primarily within the Level B harassment zones) are detected, documented, and evaluated. Intermittent or infrequent observations may be sufficient for characterizing what might be called "normal" or

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“common” responses, but NMFS also needs to know if, on occasion, the activities cause stronger and more significant responses. In addition, monitoring during all in-water sound-producing activities is the only way for CALTRANS and NMFS to be confident that the least practicable impact would occur. For all of these reasons, the MMC recommends that NMFS require CALTRANS to implement full-time monitoring of Level A and B harassment zones during all in-water sound-producing activities (i.e., pile-driving and -removal and bridge dismantlement activities).

Description of proposed activities

In the *Federal Register* notice, NMFS indicated that there has been no change in the scope of work for the project from what was outlined in CALTRANS’s 23 April 2012 IHA application, the *Federal Register* notice for that proposed incidental harassment authorization (77 Fed. Reg. 50473), and the *Federal Register* notice for issuance of that authorization (78 Fed. Reg. 2371). Because there were no changes, NMFS did not include a description of the proposed activities in the current notice and instead referred the reader to the previous documents for a detailed description of proposed activities. Although the proposed activities have not changed, the MMC notes that each authorization under section 101(a)(5)(D) is a separate undertaking and should contain sufficient information to allow for meaningful public review and comment. Accordingly, the notice should include a detailed description of the proposed activities, such that the public is not required to locate and refer to previous documents to obtain the information necessary to comment on the proposed authorization. To ensure the transparency of the process, the MMC recommends that NMFS include in each proposed incidental harassment authorization that the Service publishes in the *Federal Register* a detailed description of the proposed activities rather than referring to previous documents.

Thank you for the opportunity to provide comments on CALTRANS’s application. Please contact me if you have questions regarding the MMC’s recommendations and rationale.

Sincerely,

A handwritten signature in blue ink that reads "Rebecca J. Lent". The signature is written in a cursive style.

Rebecca J. Lent, Ph.D.
Executive Director