



# MARINE MAMMAL COMMISSION

30 December 2010

Mr. P. Michael Payne, Chief  
Permits, Conservation, and Education 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 application submitted by the California Department of Transportation seeking authorization under section 101(a)(5)(D) of the Marine Mammal Protection Act to take small numbers of marine mammals by harassment. The taking would be incidental to pile driving and removal during the construction of a replacement bridge for the east span of the San Francisco–Oakland Bay Bridge during a one-year period. The Commission also has reviewed the National Marine Fisheries Service’s 13 December 2010 *Federal Register* notice (75 Fed. Reg. 77617) announcing receipt of the application and proposing to issue the authorization, subject to certain conditions. Construction activities associated with the San Francisco–Oakland Bay Bridge have been ongoing for several years, and the Marine Mammal Commission previously commented on similar incidental harassment authorizations for this project.

## RECOMMENDATION

The Marine Mammal Commission recommends that the National Marine Fisheries Service issue the requested incidental harassment authorization subject to a condition requiring the applicant to make observations before, during, and after all soft-starts of pile-driving activities to gather the data needed to analyze and report on its effectiveness as a mitigation measure.

## RATIONALE

The California Department of Transportation plans to continue construction of the replacement bridge for the east span of the San Francisco–Oakland Bay Bridge in San Francisco, California. Although in-water pile driving currently is not scheduled, the applicant would like to renew its current incidental harassment authorization to allow incidental taking in the event of unforeseen construction changes. If construction changes necessitate the installation and removal of in-water piles, the applicant would use temporary piles with diameters of 0.3 to 1.2 m. Those piles are smaller in diameter than the 1.8 to 2.5 m permanent piles that previously were installed; therefore, the sound from driving and removing temporary piles is expected to be less intense than that of previous pile-driving activities. Installation of each temporary pile would take approximately 25 minutes using vibratory and impact hammers and would occur only during daylight hours.

The Service preliminarily has determined that the proposed activities, at most, would result in a temporary modification in the behavior of small numbers of up to four species of marine mammals (harbor seal, harbor porpoise, California sea lion, and gray whale) and that any impact on

Mr. P. Michael Payne  
30 December 2010  
Page 2

the affected species would be negligible. The Service also does not anticipate any take of marine mammals by death or serious injury and believes that the potential for temporary or permanent hearing impairment will be at the least practicable level because of the proposed mitigation measures. In addition, a minimum of three protected species observers would monitor the safety zones 30 minutes before, during, and 30 minutes after all in-water pile-driving activities. A control site also would be designated and monitored twice a week for comparison, if and when in-water pile driving occurs.

The Marine Mammal Commission has reviewed the proposed mitigation measures and believes that, for the most part, they are appropriate. However, as the Commission has noted in previous correspondence, often in the context of seismic surveys, the effectiveness of ramp-up as a mitigation measure has yet to be empirically verified. As with the ramp-up of airguns, the Service should not assume, absent empirical verification, that using soft-starts when pile driving constitutes an effective mitigation method. Such verification not only may require collecting opportunistic data but also designing and conducting studies to test specific hypotheses regarding the utility of soft-starts and analysis of responses of the various species encountered. For those reasons, the Marine Mammal Commission reiterates its recommendation that the National Marine Fisheries Service require that observations be made before, during, and after all soft-starts of pile-driving activities to gather the data needed to analyze the effectiveness of this technique as a mitigation measure. The Service further should require that an analysis of these results and subsequent reports be submitted upon completion of the activities. Collection and analysis of such data should be relatively straightforward and would provide a scientific basis for continued use of this particular mitigation measure. The Commission would be pleased to discuss with the Service the collection and analysis of such data and the design of experiments to promote a better understanding of the utility and potential shortcomings of soft-starts and ramp-up as mitigation measures. If the Service decides not to require collection of such data, please provide a written response to the Commission explaining why the Service does not believe that it is necessary to verify the effectiveness of soft-starts as a mitigation measure.

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

Sincerely,

A handwritten signature in blue ink that reads "Suzanne Montgomery for". The signature is written in a cursive, flowing style.

Timothy J. Ragen, Ph.D.  
Executive Director