

**DEPARTMENT OF TRANSPORTATION**

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April 29, 2009

Michael Payne  
NOAA Fisheries Service  
Office of Protected Resources  
1315 East-West Highway  
Silver Spring, MD 20910-3226

Dear Mr. Payne:

On April 15, 2009, the California Department of Transportation submitted a request for an Incidental Harassment Authorization to NOAA Fisheries Service for construction of the Dumbarton Bridge Seismic Retrofit project. Subsequent to that submittal, Caltrans received comments on the request from Monica DeAngelis, marine mammal biologist at the Southwest Regional Office. This letter addresses the comments received from Ms. DeAngelis and provides supplemental information and clarification to materials included in the original request document. Caltrans asks NOAA Fisheries Service to consider the following responses in its evaluation of the IHA request.

**Revision to Description of Pile Driving Methods.**

As described in the IHA request, Caltrans will install approximately 1,000 24-inch temporary steel shell piles in South San Francisco Bay to support temporary construction trestles for the Dumbarton Bridge Seismic Retrofit. The March 2009 IHA request describes the installation of the temporary piles in Section 1.2.5 of the request. This section describes using vibratory hammers within 800 feet of the shore to reduce in-air noise impacts to listed bird species such as the California clapper rail. Beyond 800 feet, Caltrans initially proposed to drive the piles using impact hammers with an underwater sound attenuating bubble curtain.

Following consultation with the Santa Rosa Field Office, Caltrans now proposes to use vibratory hammers to place all temporary trestle piles for the project. Impact hammers would still be necessary for spot verification of load capacity. The load capacity testing is conducted by "tapping" the pile with an impact hammer. Each pile to be tested would be "tapped" for 10-15 seconds with an impact hammer. Caltrans anticipates that approximately 1 of every 8 piles installed by vibratory method will need to be tested. Since it is likely that construction of the temporary construction trestles would occur simultaneously on both sides of the bay, no more than 2 piles per day would need testing at the proposed rate of pile installation. When a piling fails to meet the load-bearing requirement, additional piling is welded to it above the water surface. The pile is then vibrated deeper and retested.

Underwater noise generated by vibratory driving is discussed in Section 7.3.1.2 of the IHA request. The 190 dB RMS threshold for pinnipeds would not be exceeded with the vibratory hammer. Sound levels may exceed the 180 dB RMS criterion for cetaceans within 10 feet of the pile. The 120 dB level B harassment criterion would be exceeded at distances up to 3 miles from the project site (IHA request, Appendix A).

### **Description of Dumbarton Bridge Profile from the Water.**

The Dumbarton Bridge consists of 5 sections. The western and eastern trestle structures are on land at each end. The western approach is located over shallow water and extends 2,200 feet. The 3,150-foot long main channel crossing spans the South Bay channel, which is about 2,500 feet wide. The 1,950-foot long eastern approach is over the east side shallows (see attachment, Temporary Trestle Profile). Water depth in the South Bay channel averages 20 - 40 feet. Mudflats border the main channel on either side of the bay at low tide. At high tide, water depth on the flats ranges from 1 to 10 feet, depending on local conditions.

The individual piers on the Dumbarton Bridge are spaced at approximately 100 to 350-foot intervals. The rows of piles (bents) for the temporary construction trestles will be spaced at 25-foot intervals. The temporary trestle will reach bayward to the 10-foot depth contour. The top of the temporary trestles will be approximately 7 feet above mean sea level. The temporary trestles will not span the main channel, which remains open, allowing passage of marine mammals through the project area. The work will not present any physical barrier to harbor seals that may move between haul-out sites and foraging areas north and south of the bridge.

### **Mitigating Effects to Passage of Marine Mammals.**

When the piles are installed using vibratory hammers, the area of Level B harassment (greater than 120 dB) will extend several miles out and essentially from shore to shore. Sound levels using the vibratory hammer would not exceed 190 dB but may exceed 180 dB in a 10-foot radius around the pile (Please refer to the Underwater Noise Summary, Page 6 of Appendix A in the IHA request). It should be noted that pile-driving activities would only occur for a total of about 60 minutes per day, usually in 10-minute intervals for each pile. For the majority of the day and each night, no pile driving noise would occur. Effects to passage of marine mammals beneath the bridge will be minimized by the inherent limitations of the pile-driving schedule.

### **Anticipated Effects of Other Project Actions on Marine Mammal Behavior.**

The IHA request focused on pile driving activities because these activities have the greatest potential to result in level B harassment of marine mammals. Construction activities would not create physical barriers to passage. However, the project may have additional effects on marine mammal behaviors. These effects may result from general construction activities and human presence during construction. These effects can cause behavior modification in some



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individuals, such as greater occurrence of head alerts or flushing or even harbor seals swimming into active construction areas out of curiosity.

Caltrans hopes that this information will allow a more expedient review of the IHA request. Due to challenges presented by the project schedule, Caltrans requests that the NOAA Fisheries provide the required authorization for incidental harassment by July 1, 2009.

Should you have any questions regarding this submittal, please contact Branch Chief, Margaret Gabil, at (510) 286-6222.

Respectfully submitted,



JEFFREY G. JENSEN  
Office Chief  
Office of Biological Sciences and Permits

Cc: Rodney McInnis, Regional Administrator, Southwest Regional Office  
Monica DeAngelis, Marine Mammal Biologist, Southwest Regional Office

Attachment: Temporary Trestle Profile

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