22 October 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 National Oceanic and Atmospheric Administration Restoration Center, Southwest Region, seeking authorization under section 101(a)(5)(D) of the Marine Mammal Protection Act to take small numbers of harbor seals by harassment. The taking would be incidental to construction activities during a tidal wetlands project at the Elkhorn Slough National Estuarine Research Reserve in northern Monterey County, California, from November 2010 through February 2011. The Commission also has reviewed the National Marine Fisheries Service's 5 October 2010 *Federal Register* notice (75 Fed. Reg. 61432) 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—

- approve the authorization request contingent on the requirement that the applicant first use location-specific environmental parameters to re-estimate safety zones and then use in-situ measurements to verify and, if need be, refine the safety zones prior to or at the beginning of sill construction; and
- pending the outcome of exploring options to assess the efficacy of soft-starts during pile driving and removal, require that observations be made during all soft-starts to gather the data needed to analyze and report on its effectiveness as a mitigation measure.

RATIONALE

The National Oceanic and Atmospheric Administration Restoration Center, Southwest Region, plans to construct a partially submerged tidal barrier (i.e., a sill) at the mouth of the Parson's Slough Channel to reduce tidal scour and decrease erosion within Elkhorn and Parson's Sloughs. The sill would be a fixed structure consisting of 14 steel end-bearing piles and a single row of sheetpile extending 82 m across the mouth of the channel, with the center portion submerged and a notch for water passage and fish and wildlife movement. The applicant would install an additional 45 temporary end-bearing piles in the main channel of Elkhorn Slough for temporary float docks and a boat ramp that will serve as a staging site to transport materials to and from the construction site. The applicant will set all piles using a vibratory hammer but, if necessary, may use an impact hammer with cushioning blocks to complete driving of the piles. Typical near-source sound pressure

levels at 10 m are 155–160 and 175–183 dB re 1 μPa (rms) for vibratory and impact pile driving, respectively. Construction work is expected to take 11 to 15 consecutive weeks with 20 days of pile driving and removal, which can occur during the day or night.

RATIONALE

The Service preliminarily has determined that, at most, the proposed activities would result in a temporary modification in the behavior of small numbers of harbor seals and that any impact is expected to be negligible. The Service does not anticipate any take of harbor seals by death or serious injury and expects that the potential for temporary or permanent hearing impairment will be at the lowest level practicable because of the proposed mitigation measures. Observers will be present 30 minutes before, during, and 30 minutes after all construction activities and will have the authority to stop construction if harbor seals are detected within or approaching the safety zones or if an animal appears to be injured. In addition, the observers will document baseline abundance and distribution of harbor seals beginning as early as two weeks before construction begins and ending no sooner than 24 hours before construction begins. Monitoring will continue for four weeks following construction and will focus on peak times of day and portions of the tidal cycle when harbor seals are present.

Safety Zones

The application uses empirical measurements of propagation loss from impact pile driving during the Caltrans Ten Mile Bridge Replacement and URS Port of Anchorage dock extension projects (Illingworth & Rodkin, Inc. 2007, Reyff 2007, URS Corporation 2007) as the basis for the safety zones. However, propagation of sound is dependent upon various location-specific environmental parameters including sound speed profiles, surface ducts, wind speed, substrate type and water depth, and hammer type and size. The Marine Mammal Commission therefore recommends that the National Marine Fisheries Service approve the authorization request contingent on the requirement that the applicant first use location-specific environmental parameters to re-estimate safety zones and then use in-situ measurements to verify and, if need be, refine the safety zones prior to or at the beginning of sill construction.

Mitigation

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, the effectiveness of soft-starts as a mitigation measure has yet to be empirically verified. Such verification may require not only 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 recommends that the National Marine Fisheries Service, pending the outcome of exploring options to assess the efficacy of soft-starts during pile driving and removal, require that observations be made during all soft-starts to gather the data needed to analyze and report on its effectiveness as a mitigation measure. Collecting such data and the resulting analyses would provide a scientific basis for this particular monitoring 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 shortcomings of soft-starts as an effective mitigation measure.

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

Sincerely,

Timothy J. Ragen, Ph.D.
Executive Director

Literature Cited

Illingworth & Rodkin, Inc. 2007. Ten Mile Bridge Replacement Project, Ten Mile River Summary of Underwater Sound Measurements for the Week of July 2–7, 2007. Unpublished data prepared for the California Department of Transportation, Sacramento, California.

Reyff, J. 2007. Compendium of Pile Driving Sound Data. Report prepared by Illingworth & Rodkin, Inc., and Greeneridge Sciences for the California Department of Transportation, Sacramento, California. 129 pp.

URS Corporation. 2007. Port of Anchorage Maritime Terminal Development Project Underwater Noise Survey Test Pile Driving Program Anchorage, Alaska. Report prepared for Integrated Concepts & Research Corporation, Anchorage, Alaska. 109 pp.