



# MARINE MAMMAL COMMISSION

2 September 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 Washington State Department of Natural Resources 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 removal of derelict piling and associated structures at two sites in Puget Sound, Washington. Removal activities are planned for November 2010 through February 2011. The Commission also has reviewed the National Marine Fisheries Service's 12 August 2010 *Federal Register* notice (75 Fed. Reg. 48941) announcing receipt of the application and proposing to issue the authorization, subject to certain conditions.

## RECOMMENDATIONS

The Marine Mammal Commission recommends that, before issuing the harassment authorization, the National Marine Fisheries Service—

- require the applicant to provide constant monitoring beginning 30 minutes before all daily activities are initiated and ending 30 minutes after all daily activities cease;
- require the applicant to measure sound pressure levels during vibratory extraction to verify that these levels do not have the potential to cause injury and, if the in-situ sound pressure levels may cause injury, require the applicant to determine a safety zone based on the in-situ levels and to shut down activities if a harbor seal enters the zone;
- condition the authorization to give the protected species observer the authority to shut down the proposed activities if he or she believes that a seal is at risk of direct strike; and
- continue to require ramp-up or soft-starts pending the outcome of a meeting between Service and Commission staff.

## RATIONALE

The Washington State Department of Natural Resources plans to remove approximately 615 creosote timber pilings and trestles in Woodard Bay and a portion of a creosote pier superstructure at the mouth of Chapman Bay. The applicant would use a vibratory hammer, direct pull, and/or diver cutting techniques to remove the 12-in to 24-in piles and other overwater structures. An average of 30 piles would be removed daily, resulting in 30 minutes of hammer vibration per day. Vibratory extraction could occur for approximately 21 days throughout the entire removal period. In

addition, the applicant would use a small boat to relocate approximately 25 nest boxes for purple martins to pilings that will be left intact to protect areas where seals haul out.

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 to them is expected to be negligible. The Service also does not anticipate any take of harbor seals 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. The applicant would approach the action area slowly from a distance to alert seals to human presence and would begin removing the piles at the farthest location from the seal haul-out sites. The area would be surveyed before initiating any activity, and activities would be suspended until seals are at a sufficient distance from the activity so as to minimize the risk of direct injury from a piling or portion of a structure striking an animal. The applicant also would use a muffler to reduce in-air sound levels from the vibratory hammer. In addition, at least one protected species observer would monitor the seal haul-out sites prior to and during proposed activities for 15 days during the 40-day work period.

Based on the application and the Service's notice, the proposed activities appear to pose three types of risk to the harbor seals: (1) disruption of behavior, (2) hearing impairment, and (3) physical injury from the proposed activities.

### **Disruption of Behavior**

The most likely behavioral change during the proposed activities would be displacement of harbor seals from their haul-out areas. Harbor seal behavior is variable and difficult to predict. It also is not possible to determine beforehand whether displacement will occur and, if so, whether it will be temporary or permanent. Because scientists know relatively little about harbor seal responses to the specific activities proposed, the Marine Mammal Commission recommends that the National Marine Fisheries Service require the applicant to provide constant monitoring beginning 30 minutes before all daily activities are initiated and ending 30 minutes after all daily activities cease. Such monitoring will provide an opportunity to document any changes in behavior and assess total takes resulting from the activities.

### **Hearing Impairment**

The application and the *Federal Register* notice note the lack of hydro-acoustic data from vibratory extraction and driving of wood piles. In lieu of such data, both the applicant and the Service assume that vibratory extraction does not result in sound pressure levels greater than vibratory hammering. On that basis, the applicant and the Service do not expect sound pressure levels to have the potential to cause injury (i.e., Level A harassment). However, because the applicant and the Service cannot provide data to verify this assumption and expectation and because this type of activity has not been studied, it would be useful to measure the sound pressure levels that are produced by this activity. With that in mind, the Marine Mammal Commission recommends that the National Marine Fisheries Service require the applicant to measure sound pressure levels during vibratory extraction to verify that these levels do not have the potential to cause injury. The Marine

Mammal Commission also recommends that if the in-situ sound pressure levels may cause injury, then the National Marine Fisheries Service require the applicant to determine a safety zone based on these in-situ levels and to shut down activities if a harbor seal enters the zone.

### **Physical Injury**

Some of the proposed activity may occur when harbor seals are close to the piles or the structure being removed and the workers involved in the removal activities may be pre-occupied with their task. For those reasons, harbor seals may be at risk of physical injury if they are struck or get in the way of the proposed activities. To avoid the potential for such injury, at least one protected species observer should be present during all work periods to monitor the seals and ensure that they are not at risk from the proposed activities. The first recommendation stated previously in this letter should be sufficient to address this need. However, to allow the observer to fulfill his or her responsibility, the Marine Mammal Commission also recommends that the National Marine Fisheries Service condition the authorization to give the protected species observer the authority to shut down the proposed activities if he or she believes that a seal is at risk of direct strike.

### **Ramp-ups or Soft-Starts**

In recent years, the Marine Mammal Commission has recommended to the National Marine Fisheries Service that it require parties that plan to introduce sound into the marine environment to use and collect data on the utility of ramp-up procedures or soft-starts. Although the rationale behind such procedures seems reasonable, the Commission has argued that the utility of these procedures should be verified on the basis of scientific data. Commission and Service staffs are arranging a meeting to discuss various monitoring and mitigation measures, including verification of the utility of ramp-up procedures. In the meantime, the Marine Mammal Commission recommends that the National Marine Fisheries Service continue to require ramp-ups or soft-starts as a mitigation measure pending the results of this meeting.

### **Frequency of Monitoring**

The application indicates that at least one protected species observer will monitor the seal haul-out sites for 15 days during the 40-day work period. The observers will be onsite at the beginning of the project, whenever the project changes location, and intermittently during the remainder of the project. The Service has indicated that it will not require continuous observations during vibratory pile driving because it believes that the sound levels from this activity will not cause Level A harassment.

For a number of reasons, a protected species observer should be present to monitor behavior during all periods of vibratory hammer use and deconstruction activities. First and foremost, the purpose of having observers present is to ensure someone is monitoring the proposed activities and any seals in the vicinity of these activities and is ready to intervene if a situation arises that poses a threat to a seal. Such monitoring and potential for intervention are needed during all proposed activities. Second, the response of marine mammals to removal of pilings using a vibratory

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hammer is difficult to predict and, in the event that the seals respond in unexpected ways, continuous monitoring would ensure those responses are documented. Third, given the short period of time for this project and the various activities proposed, an intermittent sampling regime likely will not yield representative results. For example, if monitoring does not occur during all pile-removal activities or when marine mammals are most likely present, then the resulting observations may not be indicative of actual effects and the estimated number of takes may be underreported. Fourth, because the total amount of time during which pile removal will occur (21 days during approximately four months), monitoring should be relatively inexpensive. And finally, by monitoring during all pile-removal activities, the applicant and the Service can be more confident that they are causing the least practicable impact. Again, the Commission's first recommendation in this letter should be sufficient to address this need.

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

Sincerely,



Timothy J. Ragen, Ph.D.  
Executive Director