



MARINE MAMMAL COMMISSION

20 July 2017

Ms. Jolie Harrison, Chief
Permits and Conservation Division
Office of Protected Resources
National Marine Fisheries Service
1315 East-West Highway
Silver Spring, MD 20910-3225

Dear Ms. Harrison:

The Marine Mammal Commission (the Commission), in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the application submitted by the San Francisco Bay Area Water Emergency Transportation Authority (SF WETA) 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 of SF WETA's Central Bay Operations and Maintenance Facility in Alameda, California. The Commission also has reviewed the National Marine Fisheries Service's (NMFS) 29 June 2017 notice (82 Fed. Reg. 29486) announcing receipt of the application and proposing to issue the authorization, subject to certain conditions.

SF WETA plans to remove and install piles during construction of its new operations and maintenance facility. Operators would install up to 29 24- to 42-in steel piles and 20 14-in H-piles using a vibratory and impact hammer. They would remove the 14-in H-piles using a vibratory hammer. SF WETA expects activities to take 22 days, weather permitting. It would limit pile-driving and -removal activities to daylight hours from 1 August to 30 November 2017.

NMFS preliminarily has determined that, at most, the proposed activities could cause Level A and/or B harassment of small numbers of seven marine mammal species. 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 measures. The mitigation, monitoring, and reporting measures include—

- conducting in-situ sound source measurements during impact and vibratory pile-driving activities¹ and adjusting the Level A and B harassment zones, if necessary;
- using a sound attenuation device (e.g., bubble curtain and pile cushion) during impact driving of piles;

¹ Measurements would be taken during impact installation of five each of the 24-, 36-, and 42-in piles and vibratory installation of two each of the 14- and 42-in piles. The Commission further clarified aspects of the hydroacoustic monitoring plan with NMFS, which will be included in the final authorization.

- ceasing pile-driving and -removal activities if any marine mammal comes within 10 m of the equipment;
- using two qualified land-based protected species observers to monitor the Level A and B harassment zones¹ for 30 minutes before, during, and for 30 minutes after the proposed activities;
- using standard soft-start, delay, and shut-down procedures;
- using delay and shut-down procedures, if a species for which authorization has not been granted (including but not limited to humpback whales or Guadalupe fur seals) or if a species for which authorization has been granted but the authorized takes are met, approaches or is observed within the Level B harassment zone;
- conducting marine mammal baseline observations on two separate days within one week of initiation of activities;
- reporting injured and dead marine mammals to the Office of Protected Resources and the West Coast Regional Stranding Coordinator using NMFS's phased approach and suspending activities, if appropriate; and
- submitting a final report.

Rounding of take estimates

The method NMFS used to estimate the numbers of takes during the proposed activities, which summed fractions of takes for each species across project days, does not account for and negates the intent of NMFS's 24-hour reset policy. As the Commission indicated in previous letters regarding this matter², the issue at hand involves policy rather than mathematical accuracy. The Commission understands NMFS has developed criteria associated with rounding that it had planned to share with the Commission a few months ago. Although NMFS has yet to provide those criteria, the Commission looks forward to receiving and reviewing them and resolving this matter expeditiously.

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

Sincerely,



Rebecca J. Lent, Ph.D.
Executive Director

² See the Commission's [29 November 2016 letter](#) detailing this issue.

To: Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources,
National Marine Fisheries Service

From: Cole Sito, James DelBene, Ellen Willis-Norton, Kaylee Griffith, and Nicole Yamase,
2017 MARINE Ocean Policy Course Participants via the Center for Ocean Solutions

Date: July 27, 2017

Re: Comment on Proposed Incidental Harassment Authorization for the Taking of Marine
Mammals Incidental to the Central Bay Operations and Maintenance Facility Project

Introduction

As participants of the Center for Ocean Solutions' graduate ocean policy course, we greatly appreciate the opportunity to comment on the San Francisco Bay Area Water Emergency Transportation Authority's (WETA) application for an incidental harassment authorization (IHA) for construction activities incidental to its Central Bay Operations and Maintenance Facility project. Sections 101(a)(5)(A) and D of the Marine Mammal Protection Act (MMPA) authorize the National Marine Fisheries Service (NMFS) to permit the incidental take of small numbers of marine mammals, subject to mitigation and monitoring requirements set forth in the IHA permit, so long as said takings will have a negligible impact on the species. After review of the IHA permits and mitigation measures authorized for the first phase of this WETA project (80 FR 10060-66), we are pleased with the attention to detail and forethought provided to the iconic marine mammal species which reside in the San Francisco Bay (SFB). The "soft start" techniques, expertise of observers and monitoring methodology, and use of noise attenuation devices are helpful mitigation additions, and we value the incorporation of public comment recommendations from the first phase of construction. This letter reflects our collective recognition of the good work done so far, as well as our belief that the integration of science and local knowledge can further contribute to the health of marine mammal populations within the Bay.

Summary of Issues

Ongoing science has demonstrated the sensitivity of marine mammals to acoustic disruptions in the water column. After reviewing the current project proposal, we would like to provide recommendations on three key areas:

- Our first key point focuses on the duration of the project, which is 22 days. We are concerned this timeline may be detrimental to the well-being of the marine mammals within the area due to the long exposure of construction activities.
- The second key point is to conduct further research on the permanent threshold shifts (PTS) and temporary threshold shifts (TTS) of the marine mammals. This will provide a better understanding on the mammal responses to sounds, which will allow the agency to take precaution during underwater activities.
- Finally, the third key point is to expand monitoring of the new harbor seal haul-out platform and evaluate if it is sufficient for the central SFB harbor seal population.

Specific Recommendations

1. Examine the number of pilings driven per day.

As noted in the proposed project, sound produced from in-water construction activities can have detrimental impacts (e.g. temporary or permanent hearing impairment, behavioral disturbance, or stress) on marine mammals within the vicinity of the construction (Nowacek et al 2007, Southall et al 2007). Furthermore, long durations of sound exposure decrease reproductive success and survival of marine mammals, suggesting that construction time should be limited (Harrington and Veitch, 1992; Daan et al., 1996; Bradshaw et al., 1998). **We recommend reviewing the construction process to ensure the maximum number of pilings is installed each day.** Previous permitted installation of similarly sized pilings in SFB (80 FR 10060, 75 FR 66065) estimated installation of one steel piling to take 30 minutes and then one hour to prepare for the next piling. Contrary to this proposed project's estimated two to three pilings driven each day, previous work installed up to five pilings a day (75 FR 66065). Increasing the number of pilings installed daily will decrease the number of workdays and limit potential harassment of

marine mammals. Additionally, a shorter work period increases the economic efficiency of the proposed project.

2. Conduct more TTS and PTS marine mammal research.

As the proposed project stated, marine mammals' most important sensory modality is hearing. Marine mammals rely on hearing for intraspecies communication and hearing is critical for both foraging success and predator avoidance. Marine mammals can experience both a temporary and permanent loss of hearing sensitivity from sound exposure, known as a temporary threshold shift (TTS) and permanent threshold shift (PTS), respectively. TTS can last from minutes to days. PTS is clearly more serious, but if TTS occurs during a critical time (e.g. mothers and calves rely on attraction calls to inform each other of their location) it can have significant negative effects. Additionally, repeated cases of TTS lead to permanent hearing loss at certain frequencies.

We appreciate that the comprehensive proposal includes many approaches to try and reduce potential cases of TTS and PTS in marine mammals near the construction site. However, we are concerned about the lack of research on TTS and PTS. Data on TTS and PTS thresholds are sorely lacking for marine mammals and we are unconvinced that the TTS and PTS thresholds presented in the plan are informative. Current research combines terrestrial and marine mammal TTS data to extrapolate marine species' TTS and PTS thresholds, which is not appropriate. There are drastic differences between terrestrial and marine mammal auditory systems. The majority of the marine mammal species that reside near the construction site are harbor seals (*Phoca vitulina*), and PTS data only exist for one harbor seal in a laboratory setting (Kastak et al. 1999). This fact is troubling because harbor seals have a lower TTS onset than other marine mammal species. Therefore, it is difficult to know whether a particular acoustic disturbance is Level A or Level B harassment if the thresholds for PTS and TTS are unknown. **We suggest that NMFS conduct more primary research on TTS and PTS thresholds in marine mammals using a study design that they find appropriate.** We understand that answering this type of question will be difficult.

3. Expand harbor seal monitoring activities.

The most prominent marine mammals of Alameda Point are harbor seals, who frequently haul out on the nearby platform installed during the first phase of this construction project. Harbor seals are particularly sensitive to human disturbance, and have limited haul-out sites in SFB. Since 2016, volunteers have reported that the seals have really taken to their new haul-out platform, reaching a record of 70 individuals in January 2017 (Alameda Point Harbor Seal Monitors). In the proposed IHA, a detailed observing and reporting protocol will confirm that the number of mammals taken is as permitted and that none are injured or killed during pile driving and removal. **We suggest that NMFS require enhanced and continued monitoring even after pier construction and into ferry operations.** This will ensure that the platform continues to be sufficient for harbor seals, who have very few haul-outs in the East SFB. Additionally, although the purpose of this monitoring is to document take, it is an excellent opportunity for citizen scientists to quantify ‘redcoat’ seals. SFB has a high proportion of seals with iron oxides in their fur, which may be anthropogenic, associated with other contaminants, and may detrimentally affect seal health (Allen et al. 1993, Neumann and Schmahl 1999, The Marine Mammal Center). This occurrence data can effortlessly augment the understanding of SFB harbor seals.

We attribute the East SFB harbor seal success to decades of conservation efforts by NMFS, local governmental entities, advocacy groups, and the public to improve harbor seal habitat and uphold the MMPA. Given the platform’s popularity, **NMFS may even encourage WETA to install a second floating platform.** We also applaud collaboration with local science experts to design and implement the replacement haul-out. This custom floating platform will continue to be viable amidst sea level rise, making it a long-term solution for the harbor seals. Such partnerships between federal and state agencies, the public, scientists, and practitioners set an optimistic precedent for adaptive management and stewardship in SFB.

We hope that our comments are helpful to NMFS in its decisionmaking process.

Sincerely,

Cole Sito, J.D./M.B.A. Candidate, University of Oregon

James DelBene, M.S. Candidate, VIMS, College of William and Mary

Ellen Willis-Norton, Ph.D. Student, Ecology and Evolutionary Biology, University of Santa Cruz

Kaylee Griffith, M.S. Candidate, Coastal and Marine Institute, San Diego State University

Nicole Yamase, Ph.D. Candidate, Marine Biology Graduate Program, University of
Hawaii-Manoa