



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Pacific Southwest Region
2800 Cottage Way, Room W-2606
Sacramento, California 95825-1846

In Reply Refer To:

Incidental Harassment Authorization (IHA-18-01)

The U.S. Coast Guard (USCG) Civil Engineering Unit Oakland, 1301 Clay Street, Suite 700N, Oakland, California, 94612, is hereby authorized under section 101(a)(5)(D) of the Marine Mammal Protection Act (16 U.S.C. 1371(a)(5)(D)) and 50 CFR 18.27 to take, by Level B harassment only, small numbers of southern sea otters (*Enhydra lutris nereis*) incidental to conducting waterfront repairs and maintenance at USCG Station Monterey. This authorization is contingent upon the following conditions:

1. This Authorization is valid for one year from the date of signature.
2. This Authorization is valid only for activities associated with conducting waterfront repairs and maintenance at USCG Station Monterey, Monterey County, California, which are specified at 83 FR 18077 (April 25, 2018). Repair and maintenance activities may occur at any time during the 1-year authorization window.
3. The only species authorized for taking, by Level B harassment, is the southern sea otter. Anticipated take levels are as follows: 88 takes (a maximum of 11 sea otters exposed to pile-driving noise per day over 8 days). The taking of any sea otter in a manner prohibited under this Authorization must be reported within 24 hours of the taking to the U.S. Fish and Wildlife Service (Service) Southern Sea Otter Recovery Coordinator (805-677-3325).
4. The holder of this Authorization must notify the Southern Sea Otter Recovery Coordinator by email (Lilian_Carswell@fws.gov) at least 24 hours in advance of any day on which pile-driving activities will occur to allow for supplemental behavioral monitoring of sea otters.
5. Prohibitions
 - (a) The taking, by incidental Level B harassment only, is limited to southern sea otters. The taking by Level A harassment, injury, or death is prohibited and may result in the modification, suspension or revocation of this Authorization.
 - (b) The taking of any southern sea otter whenever the required marine mammal mitigation, monitoring, and reporting measures specified at 83 FR 18077 and within this Authorization have not been fully implemented is prohibited.

- (c) The taking of any southern sea otter after anticipated take levels are reached is prohibited unless written permission is obtained from the Ventura Fish and Wildlife Office, 2493 Portola Road, Suite B, Ventura, California, 93003.

6. Mitigation

- (a) *Timing restrictions.* All work shall be conducted during daylight hours to facilitate visual observation of the Level A and Level B zones.
- (b) *Noise attenuation.* A bubble curtain and cushion pads shall be used during all impact pile driving to reduce underwater sound levels. Prior to impact driving, pre-drilling will be used to create a hole for the new pile to a depth of approximately 5 ft (1.5 m) above the required pile tip elevation to reduce friction, noise, and turbidity during installation.
- (c) *Exclusion zones and shutdown measures.* Exclusion zones based on the area exposed to sound levels equal to or exceeding those expected to cause a permanent threshold shift (PTS) shall be implemented to protect marine mammals from Level A harassment. If a sea otter is observed in the exclusion zone, pile extraction or driving shall not commence until the individual has been observed outside of the zone or has not been observed for at least 15 minutes. If a sea otter enters the exclusion zone, a stop-work order shall be issued. Work shall not re-commence until the sea otter is sighted well outside of the exclusion zone or is not observed for at least 15 minutes. The modeled PTS isopleths relevant to sea otters are only 3 ft (0.9 m) for vibratory driving and extraction and 6.6 ft (2 m) for impact driving (Table 1); these shall be verified based on in-situ source level and sound propagation measurements. However, the radius of the Level A exclusion zone for sea otters shall be extended to at least 33 ft (10 m) to prevent injury from machinery. USCG shall implement shutdown measures if the number of authorized takes reached the limit under the IHA and if sea otters are sighted within the vicinity of the project area and are approaching the Level B harassment zone during in-water construction activities.

	Threshold, underwater (dB re 1 μ Pa)	Modeled extent of underwater SPLs (distance to threshold) (m)	Minimum radius of zone, to be corrected as necessary based on in-situ measurements
Level A non-impulsive	219	0.9	33 ft (10 m)
Level A impulsive	203	2.0	
Level B non-impulsive	160	14	249 ft (76 m)* 961 ft (293 m)**
Level B impulsive	160	76* 293**	

*North and northeast through breakwater
 **All other directions

- (d) *Level B harassment zone.* USCG shall monitor the Level B harassment zone. Because impact hammering and vibratory driving will both be used in the project, the Level B harassment zone for all pile-driving activities shall be set based on the greatest extent of

sound pressure levels equal to or exceeding the thresholds summarized in Table 1. Because the distance to the threshold is greatest for underwater noise produced by impact hammering, the Level B harassment zone shall have a minimum radius of 249 ft (76 m) to the north and northeast (through the breakwater) and 961 ft (293 m) in all other directions based on the modeled extent of underwater SPLs. This zone shall be adjusted, as necessary, based in-situ source level and sound propagation measurements.

- (e) *Soft-start for impact pile driving.* For impact pile installation, contractors shall provide an initial set of three strikes from the impact hammer at 40 percent energy, followed by a 1-minute waiting period, then two subsequent three-strike sets. Each day, USCG shall use the soft-start technique at the beginning of impact pile driving and before resuming work if impact pile driving has ceased for more than 30 minutes.

7. Monitoring and Reporting

- (a) The USCG shall implement the acoustic monitoring plan to ensure that measurements are recorded to provide data on actual noise levels during construction and to ensure that the marine mammal exclusion zone and Level B harassment zone are sized appropriately relative to acoustic thresholds. Specifically, USCG shall conduct in-situ monitoring during the installation of five piles and removal of five piles (see acoustic monitoring plan for additional details).
- (b) Sea otter monitoring shall be conducted by Service-approved observers who are familiar with sea otters and their behavior. The observers shall conduct baseline monitoring for 2 days during the week prior to pile removal and driving. During pile removal and driving activities, three observers shall monitor the exclusion zone and Level B harassment zone from the best vantage point possible (the Pier itself, the jetty, or adjacent boat docks in the harbor) to determine if sea otters are approaching the exclusion zone and to record behavioral responses to airborne noise, underwater noise, or other sources of disturbance within the Level B harassment zone. The exclusion zone shall be monitored for 30 minutes prior to, during, and after pile removal and driving. If a sea otter is within the exclusion zone, the start of extraction or driving shall be delayed until no sea otters are sighted within the zone for a minimum of 15 minutes. If a sea otter approaches the exclusion zone, the observation shall be reported to the construction manager, and the individual should be watched closely. If the sea otter enters the exclusion zone, a stop-work order shall be issued. The lead monitor shall not allow work to re-commence until the sea otter is sighted well outside of the exclusion zone or is not observed for at least 15 minutes.
- (c) The following information shall be documented for each sea otter observed at any range while pile driving or extraction activities are occurring:
- Date and time that monitored activity begins and ends;
 - Construction activities occurring during each observation period;
 - Weather parameters (e.g., percent cover, visibility);
 - Water conditions (e.g., sea state, tide state);

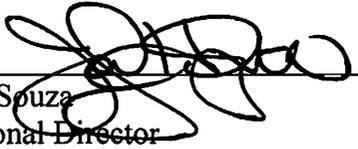
- Numbers of individuals, sex, and age class (if possible), and flipper tag color and location;
 - Description of behavioral patterns, including bearing and direction of travel, distance from pile-driving activity, and specific activity (swimming at surface, swimming below surface, spyhopping, foraging, grooming, interacting with another sea otter, resting on water, resting while hauled out, etc.);
 - Distance from pile-driving activities to sea otters and distance from the sea otters to the observation point;
 - Locations of all marine mammal observations; and
 - Other human activity in the area.
- (d) Daily observation sheets shall be compiled on a weekly basis and submitted with a weekly monitoring report that summarizes the monitoring results, construction activities, and environmental conditions. USCG shall submit a draft marine mammal monitoring report within 90 days after completion of the in-water construction work or the expiration of the IHA, whichever comes earlier. The report shall include data from marine mammal sightings as described above, along with corresponding levels of airborne and underwater noise for each sighting. The marine mammal monitoring report shall also include total takes, takes by day, and stop-work orders for each species. The Service shall have an opportunity to provide comments on the report, and if the Service has comments, USCG shall address the comments and submit a final report to the Service within 30 days.
- (e) In the unanticipated event that the specified activity clearly causes the take of a sea otter in a manner prohibited by the IHA, such as an injury (Level A harassment), serious injury, or mortality, USCG shall immediately cease the specified activities and immediately report the incident to the Service's Southern Sea Otter Recovery Coordinator and Monterey Bay Aquarium's sea otter 24-hour emergency line. The report shall include the following information:
- Time, date, and location (latitude/longitude) of the incident;
 - Description of the incident;
 - Status of all sound source use in the 24 hours preceding the incident;
 - Water depth;
 - Environmental conditions (e.g., wind speed and direction, sea state, cloud cover, and visibility);
 - Description of all marine mammal observations in the 24 hours preceding the incident;
 - Description of the animal(s) involved;
 - Fate of the animal(s); and
 - Photographs or video footage of the animal(s).
- (f) Activities shall not resume until the Service reviews the circumstances of the prohibited take. The Service will work with USCG to determine what is necessary to minimize the likelihood of additional prohibited take and ensure MMPA compliance. USCG will not be permitted to resume activities until it implements any necessary measures to minimize the likelihood of additional prohibited take and receives notification by the Service via

letter, email, or telephone.

- (g) In the event that the USCG discovers an injured or dead sea otter, and the lead monitor determines that the cause of the injury or death was unknown or unrelated to the specified activities, USCG shall immediately report the incident to the Service's Southern Sea Otter Recovery Coordinator and Monterey Bay Aquarium's sea otter 24-hour emergency line. The report shall include the same information identified in the paragraph above. Activities will be permitted to continue while the Service reviews the circumstances of the incident. The Service will work with USCG to provide for the implementation of measures, if appropriate, to minimize the likelihood of prohibited take.

8. This Authorization may be modified, suspended or withdrawn if the holder fails to abide by the conditions prescribed herein or if the authorized taking is having more than a negligible impact on the species or stock of affected marine mammals.

9. Copies of this Authorization must be in the possession of the biological monitor(s) and on-site construction supervisor(s) when activities authorized by this Incidental Harassment Authorization are underway.



Paul Souza
Regional Director
Pacific Southwest Region
U.S. Fish and Wildlife Service

6/15/18
Date