



Incidental Harassment Authorization

Washington State Department of Transportation (WSDOT) Ferries Division (WSF), 2901 3rd Avenue, Suite 500, Seattle, Washington 98121-3014, 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 216.107 to take harass marine mammals incidental to conducting in-water construction work for the Coupeville Ferry Terminal Timber Tower Preservation Project, contingent upon the following conditions:

1. This Authorization is valid from July 15, 2016, through July 14, 2017.
2. This Authorization is valid only for activities associated with in-water construction work for the Coupeville Ferry Terminal Timber Tower Preservation Project in the State of Washington.
3. (a) The species authorized for taking are: Pacific harbor seal (*Phoca vitulina richardsi*), California sea lion (*Zalophus californianus*), Steller sea lion (*Eumetopias jubatus*), northern elephant seals (*Mirounga angustirostris*), transient killer whales (*Orcinus orca*), Pacific white-sided dolphin (*Lagenorhynchus obliquidens*), gray whale (*Eschrichtius robustus*), minke whale (*Balaenoptera acutorostrata*), harbor porpoise (*Phocoena phocoena*), and Dall's porpoise (*Phocoena dali*).

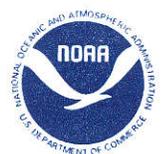
(b) The authorization for taking by harassment is limited to the following acoustic sources and from the following activities:

- (i) Impact pile driving; and
- (ii) Vibratory pile removal

(c) The taking of any marine mammal in a manner prohibited under this Authorization must be reported within 24 hours of the taking to the West Coast Regional Administrator (206-526-4489), National Marine Fisheries Service (NMFS), and the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, at (301) 427-8401.

4. The holder of this Authorization must notify the Chief of the Permits and Conservation Division, Office of Protected Resources, at least 48 hours prior to the start of activities identified in 3(b) (unless constrained by the date of issuance of this Authorization in which case notification shall be made as soon as possible).

5. Prohibitions



(a) The taking, by Level B harassment only, is limited to the species listed under condition 3(a) above and by the numbers listed in Table 1 (attached). The taking by Level A harassment or death of the species identified in Table 1 or any taking of any other species of marine mammal is prohibited and may result in the modification, suspension, or revocation of this Authorization.

(b) The taking of any marine mammal is prohibited whenever the required protected species observers (PSOs), required by condition 7(a), are not present in conformance with condition 7(a) of this Authorization.

6. Mitigation

(a) Time Restriction: In-water construction work shall occur only during daylight hours.

(b) Underwater Noise Attenuation Device

(i) An air bubble curtain system or other noise attenuation device shall be employed during impact installation or proofing of steel piles unless the piles are driven on dry areas.

(c) Establishment of Exclusion Zone and Level B Harassment Zones of Influence

Before the commencement of in-water pile driving activities and construction activities using heavy machinery, WSDOT would establish Level A exclusion zones and Level B zones of influence (ZOIs).

(i) The exclusion zone for impact pile driving should be established out to a distance 29 m from the pile.

(ii) The exclusion zone for vibratory pile removal and other in-water construction work involving heavy machinery should be established out to a distance 10 m from the equipment.

(iii) The acoustic exclusion zones and ZOIs shall be established based on radial distances listed in Table 2, and may be adjusted based on sound source verification (SSV) measurements during test pile driving.

(d) Monitoring of marine mammals shall take place starting 30 minutes before pile driving begins until 30 minutes after pile driving ends.

(e) Soft Start

(i) When there has been downtime of 30 minutes or more without pile driving, the contractor will initiate the driving with ramp-up procedures described below.

(ii) For vibratory hammers, the contractor shall initiate the driving for 15 seconds at reduced energy, followed by a 1 minute waiting period. This procedure shall be repeated two additional times before continuous driving is started. This procedure shall also apply to vibratory pile removal.

(iii) For impact driving, an initial set of three strikes would be made by the hammer at 40-percent energy, followed by a 1-minute waiting period, then two subsequent three-strike sets at 40-percent energy, with 1-minute waiting periods, before initiating continuous driving.

(f) Shutdown Measures

(i) WSDOT shall implement shutdown measures if a marine mammal is sighted within or approaching the Level A exclusion zone. In-water construction activities shall be suspended until the marine mammal is sighted moving away from the exclusion zone, or if a large cetacean is not sighted for 30 minutes or if a small cetacean or pinniped is not sighted for 15 minutes after the shutdown.

(ii) In addition, WSDOT must implement shutdown measures when Southern Resident killer whales (as identified by Orca Network, NMFS, or other qualified source) or when humpback whales are detected as approaching the Level B ZOIs during pile removal and pile driving.

(iii) If a killer whale approaches the ZOI during pile driving or removal, and it is unknown whether it is a Southern Resident killer whale or a transient killer whale, it shall be assumed to be a Southern Resident killer whale and WSDOT shall implement the shutdown measure.

(iv) WSDOT shall implement shutdown measures to prevent Level B takes when the take of any other species or stock of marine mammal is approaching the take authorized under this authorization.

(v) WSDOT shall implement shutdown measures if marine mammals within the ZOI appear disturbed by the work activity.

(g) Coordination with Local Marine Mammal Research Network

Prior to the start of pile driving, WSDOT shall contact the Orca Network, Center for Whale Research, or other local marine mammal research network to find out the location of the nearest marine mammal sightings

7. Monitoring:

(a) Protected Species Observers

WSDOT shall employ NMFS-approved PSOs to conduct marine mammal monitoring for its construction project.

- (i) Visual acuity in both eyes (correction is permissible) sufficient for discernment of moving targets at the water's surface with ability to estimate target size and distance. Use of binoculars will be required to correctly identify the target.
- (ii) Experience or training in the field identification of marine mammals (cetaceans and pinnipeds).
- (iii) Sufficient training, orientation or experience with the construction operation to provide for personal safety during observations.
- (iv) Ability to communicate orally, by radio or in person, with project personnel to provide real time information on marine mammals observed in the area as necessary.
- (v) Experience and ability to conduct field observations and collect data according to assigned protocols (this may include academic experience).
- (vi) Writing skills sufficient to prepare a report of observations that would include such information as the number and type of marine mammals observed; the behavior of marine mammals in the project area during construction, dates and times when observations were conducted; dates and times when in-water construction activities were conducted; and dates and times when marine mammals were present at or within the defined ZOI.

(b) Monitoring Protocols: PSOs shall be present on site at all times during pile removal and driving.

- (i) A range finder or hand-held global positioning system device will be used to ensure that the Level A exclusion zones and Level B behavioral harassment ZOIs are monitored.
- (ii) A 30-minute pre-construction marine mammal monitoring will be required before the first pile driving or pile removal of the day. A 30-minute post-construction marine mammal monitoring will be required after the last pile driving or pile removal of the day. If the constructors take a break between subsequent pile driving or pile removal for more than 30 minutes, then additional pre-construction marine mammal monitoring specified in 6(d) will be required before the next start-up of pile driving or pile removal.
- (iii) Marine mammal visual monitoring will be conducted for different ZOIs based on different sizes of piles being driven or removed.

- (A) During 24-inch steel impact pile driving, two land-based PSOs monitors will monitor the ZOE and ZOI. Pile driving will be paused if any marine mammal approaches the exclusion zone.
 - (B) During vibratory timber pile removal, two land-based PSOs will monitor the ZOI.
 - (C) During 24-inch vibratory pile removal, 7 land-based PSOs and one monitoring boat with a PSO and boat operator will monitor the ZOI.
 - (D) If weather prevents safe use of the boat in the main channel of the ZOI, the boat will be used in other areas of the ZOI that are safe, such as the southwest corner of the ZOI, where lack of public access prevents stationing a land-based PSO.
- (iv) If marine mammals are observed, the following information will be documented:
- (A) Species of observed marine mammals;
 - (B) Number of observed marine mammal individuals;
 - (C) Behavior of observed marine mammals;
 - (D) Location within the ZOI; and
 - (E) Animals' reaction (if any) to pile-driving activities

8. Reporting:

(a) WSDOT shall provide NMFS with a draft monitoring report within 90 days of the conclusion of the construction work or within 90 days of the expiration of the IHA, whichever comes first. This report shall detail the monitoring protocol, summarize the data recorded during monitoring, and estimate the number of marine mammals that may have been harassed.

(b) If comments are received from the NMFS West Coast Regional Administrator or NMFS Office of Protected Resources on the draft report, a final report shall be submitted to NMFS within 30 days thereafter. If no comments are received from NMFS, the draft report will be considered to be the final report.

(c) In the unanticipated event that the construction activities clearly cause the take of a marine mammal in a manner prohibited by this Authorization, such as an injury, serious injury, or mortality, WSDOT shall immediately cease all operations and immediately report the incident to the Chief, Permits and Conservation Division, Office of Protected Resources, NMFS, and the West Coast Regional Stranding Coordinators. The report must include the following information:

- (i) Time, date, and location (latitude/longitude) of the incident;

- (ii) Description of the incident;
- (iii) Status of all sound source use in the 48 hours preceding the incident;
- (iv) Environmental conditions (e.g., wind speed and direction, sea state, cloud cover, visibility, and water depth);
- (v) Description of marine mammal observations in the 48 hours preceding the incident;
- (vi) Species identification or description of the animal(s) involved;
- (vii) The fate of the animal(s); and
- (viii) Photographs or video footage of the animal (if equipment is available).

Activities shall not resume until NMFS is able to review the circumstances of the prohibited take. NMFS shall work with WSDOT to determine what is necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. WSDOT may not resume their activities until notified by NMFS via letter, email, or telephone.

(d) In the event that WSDOT discovers an injured or dead marine mammal, and the lead PSO determines that the cause of the injury or death is unknown and the death is relatively recent (i.e., in less than a moderate state of decomposition as described in the next paragraph), WSDOT will immediately report the incident to the Chief, Permits and Conservation Division, Office of Protected Resources, NMFS, and the West Coast Regional Stranding Coordinators. The report must include the same information identified above. Activities may continue while NMFS reviews the circumstances of the incident. NMFS will work with WSDOT to determine whether modifications in the activities are appropriate.

(e) In the event that WSDOT discovers an injured or dead marine mammal, and the lead PSO determines that the injury or death is not associated with or related to the activities authorized in the IHA (e.g., previously wounded animal, carcass with moderate to advanced decomposition, or scavenger damage), WSDOT shall report the incident to the Chief, Permits and Conservation Division, Office of Protected Resources, NMFS, and the West Coast Regional Stranding Coordinators, within 24 hours of the discovery. WSDOT shall provide photographs or video footage (if available) or other documentation of the stranded animal sighting to NMFS and the Marine Mammal Stranding Network. WSDOT can continue its operations under such a case.

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

10. A copy of this Authorization must be in the possession of each contractor who performs the construction work at the Coupeville Ferry Terminal.

PAPPY GARAUJO

MAR 22 2016

Date

for

Donna S. Wieting, Director
Office of Protected Resources
National Marine Fisheries Service

Table 1. Species/stocks and numbers of marine mammals allowed under this IHA.

Species	Authorized takes
Pacific harbor seal	256
California sea lion	16
Steller sea lion	328
Northern elephant seal	16
Harbor porpoise	440
Dall's porpoise	24
Killer whale, transient	48
Pacific white-sided dolphin	16
Gray whale	8
Minke whale	16

Table 2. Modeled maximum Level A and Level B harassment zones for various pile driving activities

Vibratory Pile Type/Method	Threshold	ZOI (m)
Vibratory pile removal (12-in timber)	120 dB _{RMS} re 1 μPa	2,300
Vibratory pile removal (24-inch steel) removal/driving	120 dB _{RMS} re 1 μPa	32,000
Impact pile driving (24-in steel pile)	190 dB _{RMS} re 1 μPa	6.3
Impact pile driving (24-in steel pile)	180 dB _{RMS} re 1 μPa	29
Impact pile driving (24-in steel pile)	160 dB _{RMS} re 1 μPa	631