



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
1315 East-West Highway  
Silver Spring, Maryland 20910  
THE DIRECTOR

DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL MARINE FISHERIES SERVICE

Incidental Harassment Authorization

The US Army Corps of Engineers (Corps) 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 216.106, to take, incidentally by Level B harassment, small numbers of marine mammals incidental to the rehabilitation of Jetty A at the Mouth of the Columbia River (MCR):

1. This Authorization is valid from May 1, 2016 through April 30, 2017.
2. This Authorization is valid only for activities involving pile installation and removal related to the rehabilitation of Jetty A at the MCR Jetty system in Pacific County, Washington and Clatsop County, Oregon.
3. General Conditions
  - (a) A copy of this IHA must be in the possession of the Corps, its designees, and work crew personnel operating under the authority of this incidental harassment authorization (IHA).
  - (b) The species authorized for takings by incidental harassment include killer whale (*Orcinus orca*), Steller sea lion (*Eumatopius jubatus*), gray whale (*Eschrichtius robustus*), harbor porpoise (*Phocoena phocoena*), California sea lion (*Zalophus californianus*), and harbor seal (*Phoca vitulina richardii*).
  - (c) The taking, by Level B harassment only, is limited to the species listed in condition 3(b). See Table 2 (attached) for numbers of take authorized.
  - (d) The taking by injury (Level A harassment), serious injury, or death of any of the species listed in condition 3(b) of the Authorization or any taking of any other species of marine mammal is prohibited and may result in the modification, suspension, or revocation of this IHA.

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4. The holder of this Authorization is required to cooperate with the National Marine Fisheries Service and any other Federal, state or local agencies monitoring the impacts of the activity on marine mammals. The holder must notify Monica DeAngelis of the West Coast Regional Office (562-980-3232) at least 24 hours prior to starting activities.

5. Mitigation Requirements

(a) The Corps is authorized to utilize only vibratory driving under this IHA.

(b) Time Restriction: For all in-water pile driving activities, the Corps shall operate only during daylight hours when visual monitoring of marine mammals can be conducted.

(c) In order minimize impact to Southern resident killer whales, in-water work will not be conducted during their primary feeding season extending from October 1 until on or after May 1. Installation could occur from May 1 through September 30 each year.

(d) Establishment Level B Harassment Zones

(i) The Corps shall establish Level B behavioral harassment ZOI where received underwater sound pressure levels (SPLs) are higher than 120 dB (rms) re 1  $\mu$ Pa for and non-pulse sources (i.e. vibratory hammer). The ZOI delineates where Level B harassment would occur. For vibratory driving, the level B harassment area is comprised of a radius between 10 m and 7.3 km from driving operations.

(ii) The radii and area of the Level B harassment zone is provided in Table 1 below.

(e) Establishment of shutdown zone

(i) The Corps shall implement a minimum shutdown zone of 10 m from vibratory hammer during driving activities. If a marine mammal approaches or enters the shutdown zone during the course of vibratory pile driving operations, activity will be halted and delayed until the animal has voluntarily left and been visually confirmed beyond the shutdown zone. If a marine mammal is seen above water and then dives below, the contractor would wait 15 minutes for pinnipeds and 30 minutes for cetaceans. If no marine mammals are seen by the observer in that time it will be assumed that the animal has moved beyond the exclusion zone.

(f) Use of Soft-start

(i) The project will utilize soft start techniques for vibratory pile driving. We require the Corps to initiate sound from vibratory hammers for fifteen seconds at reduced energy followed by a thirty-second waiting period, with the

procedure repeated two additional times. Soft start will be required at the beginning of each day's pile driving work and at any time following a cessation of pile driving of thirty minutes or longer.

- (ii) Whenever there has been downtime of 30 minutes or more without vibratory driving, the contractor will initiate the driving with soft-start procedures described above.

(g) Standard Mitigation Measures

- (i) Briefings shall be conducted between construction supervisors and crews, marine mammal monitoring team, and Corps staff prior to the start of all pile driving activity, and when new personnel join the work, in order to explain responsibilities, communication procedures, marine mammal monitoring protocol, and operational procedures.
- (ii) For in-water heavy machinery work other than pile driving (e.g., standard barges, tug boats, barge-mounted excavators, or clamshell equipment used to place or remove material), if a marine mammal comes within 10 meters, operations shall cease and vessels shall reduce speed to the minimum level required to maintain steerage and safe working conditions. This type of work could include the following activities: (1) movement of the barge to the pile location or (2) positioning of the pile on the substrate via a crane (i.e., stabbing the pile).

7. Monitoring Requirements

(a) General.

- (i) The holder of this Authorization must designate a minimum of two qualified marine mammal observers (MMOs), as described in Section 13 of the Application, approved in advance by the National Marine Fisheries Service to monitor the area for marine mammals before, during, and after pile driving activities.
- (ii) For all marine mammal and acoustic monitoring, information shall be recorded as described in the Monitoring Plan

(b) Visual Monitoring

- (i) Monitoring will be conducted by qualified observers, who will be placed at the best vantage point(s) practicable to monitor for marine mammals and implement shutdown/delay procedures when applicable by calling for

the shutdown to the hammer operator. One observer will be placed on or near the drilling rig near Jetty A while a second observer will be stationed on the opposite side of the observable zone of influence on Clatsop Spit.

- (ii) During pile driving, the area within 10 meters of pile driving activity will be monitored and maintained as marine mammal buffer area in which pile installation will not commence or will be suspended temporarily if any marine mammals are observed within or approaching the area of potential disturbance.
- (iii) The area within the Level B harassment threshold for pile driving will be monitored MMOs positioned at locations described in 7(b)(i) to provide adequate view of the harassment zone. Marine mammal presence within this Level B harassment zone, if any, will be monitored. Pile driving activity will not be stopped if marine mammals are found to be present. Any marine mammal documented within the Level B harassment zone during impact driving would constitute a Level B take (harassment), and will be recorded and reported as such.
- (iv) The monitoring staff will record any presence of marine mammals by species, will document any behavioral responses noted, and record Level B takes when sightings overlap with pile installation activities.
- (v) If waters exceed a sea-state which restricts the observers' ability to make observations within the marine mammal buffer zone (the 10 meter radius) (e.g. excessive wind or fog), pile installation will cease until conditions allow the resumption of monitoring.
- (vi) The waters will be scanned 30 minutes prior to commencing pile driving at the beginning of each day, and prior to commencing pile driving after any stoppage of 30 minutes or greater. If marine mammals enter or are observed within the designated marine mammal buffer zone (the 10m radius) during or 30 minutes prior to impact pile driving, the monitors will notify the on-site construction manager to not begin until the animal has moved outside the designated radius
- (vii) The waters will continue to be scanned for at least 30 minutes after pile driving has completed each day.
- (viii) Observations shall be made using high-quality binoculars (e.g., Zeiss, 10 x 42 power). MMOs shall be equipped with radios or cell phones for maintaining contact with other observers and Corps' engineers, and range finders to determine distance to marine mammals, boats, buoys, and construction equipment

(c) Data Collection

- (i) Observers are required to use approved data forms. Among other pieces of information, the Corps will record detailed information about any implementation of shutdowns, including the distance of animals to the pile and description of specific actions that ensued and resulting behavior of the animal, if any. In addition, the Corps will attempt to distinguish between the number of individual animals taken and the number of incidents of take. At a minimum, the following information be collected on the sighting forms:
- i. Date and time that monitored activity begins or ends;
  - ii. Construction activities occurring during each observation period;
  - iii. Weather parameters (e.g., percent cover, visibility);
  - iv. Water conditions (e.g., sea state, tide state);
  - v. Species, numbers, and, if possible, sex and age class of marine mammals;
  - vi. Description of any observable marine mammal behavior patterns, including bearing and direction of travel and distance from pile driving activity;
  - vii. Distance from pile driving activities to marine mammals and distance from the marine mammals to the observation point;
  - viii. Locations of all marine mammal observations; and
  - ix. Other human activity in the area.

8. Reporting Requirements

- a) The Corps shall provide NMFS with a draft final report within 90 days after the expiration of the IHA. 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 due to pile driving. If no comments are received from NMFS within 30 days, the draft final report would be considered the final report. If comments are received, a final report must be submitted within 30 days after receipt of comments.
- b) Reporting of injured or dead animals
  - i. In the event that the Corps discovers an injured or dead marine mammal, and the lead MMO 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), the Corps would immediately report the incident to Jolie Harrison (Jolie.Harrison@NOAA.gov), Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, and Brent Norberg (Brent.Norberg@noaa.gov), the West Coast Regional Stranding .The report would include the following information:

- i. Time, date, and location (latitude/longitude) of the incident;
- ii. Name and type of vessel involved;
- iii. Vessel's speed during and leading up to the incident;
- iv. Description of the incident;
- v. Status of all sound source use in the 24 hours preceding the incident;
- vi. Water depth;
- vii. Environmental conditions (e.g., wind speed and direction, Beaufort sea state, cloud cover, and visibility);
- viii. Description of all marine mammal observations in the 24 hours preceding the incident;
- ix. Species identification or description of the animal(s) involved;
- x. Fate of the animal(s); and
- xi. Photographs or video footage of the animal(s) (if equipment is available).

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

- ii. In the event that the Corps discovers an injured or dead marine mammal, and the lead MMO 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), the Corps would immediately report the incident to Jolie Harrison (Jolie.Harrison@NOAA.gov), Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, and Brent Norberg (Brent.Norberg@noaa.gov), the West Coast Regional Stranding Coordinator. The report would include the same information identified in the paragraph above. Activities would be able to continue while NMFS reviews the circumstances of the incident. NMFS would work with the Corps to determine whether modifications in the activities are appropriate.
  - iii. In the event that the Corps discovers an injured or dead marine mammal, and the lead MMO 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), the Corps would immediately report the incident to Jolie Harrison (Jolie.Harrison@NOAA.gov), Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, and Brent Norberg (Brent.Norberg@noaa.gov), the West Coast Regional Stranding Coordinator within 24 hours of the discovery. The Corps would provide photographs or video footage (if available) or other documentation of the stranded animal sighting to NMFS and the Marine Mammal Stranding Network
9. A copy of this Authorization must be in the possession of all contractors and marine mammal monitors operating under the authority of this Incidental Harassment Authorization.

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

*Perry Grayson*

AUG 31 2015

*for*

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

Date

**Table 1. Calculated Distance and Area Encompassed Level B Harassment threshold at Jetty A**

Jetty	Underwater threshold	Distance— m (mi)	Area excluding land & jetty masses— km <sup>2</sup> (mi <sup>2</sup> )
Jetty A: ~ Station 78+50, River Side	Vibratory driving, pinniped injury (190 dB)	0	0
	Vibratory driving, cetacean injury (180 dB)	1 (3.3)	<0.000003 (0.000001)
	Vibratory driving, disturbance (120 dB)	7,356 (4.6 miles)	23.63 (9.12)

**Table 2. Estimated Numbers of Marine Mammals allowed to be taken by Level B Harassment under this IHA**

Species/Stocks	Authorized Takes
Killer whale (Western transient stock)	8
Gray whale (Eastern North Pacific Stock)	4
Harbor porpoise	850
Steller sea lion	12,750
California sea lion	2,788
Harbor seal	493

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