



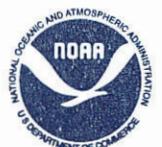
INCIDENTAL HARASSMENT AUTHORIZATION

The United States Department of the Navy (Navy) is hereby authorized under section 101(a)(5)(D) of the Marine Mammal Protection Act (MMPA; 16 U.S.C. 1371(a)(5)(D)), to harass marine mammals incidental to the Service Pier Extension (SPE) project at Naval Base Kitsap Bangor, Washington when adhering to the following terms and conditions.

1. This Incidental Harassment Authorization (IHA) is valid from July 16, 2019 through July 15, 2020. This IHA is valid only for pile driving and extraction activities associated with the Naval Base Kitsap Bangor SPE project.
2. General Conditions
 - (a) A copy of this IHA must be in the possession of the Navy, its designees, and work crew personnel operating under the authority of this IHA.
 - (b) The species authorized for taking are the killer whale (*Orcinus orca*; transient only), harbor porpoise (*Phocoena phocoena vomerina*), California sea lion (*Zalophus californianus*), Steller sea lion (*Eumetopias jubatus monteriensis*), and harbor seal (*Phoca vitulina richardii*).
 - (c) The taking, by Level A and Level B harassment, is limited to the species listed in Table 1 which also includes numbers of Level A and Level B take authorized.
 - (d) The take of any other species not listed in condition 2(b) of marine mammal is prohibited and may result in the modification, suspension, or revocation of this IHA.
 - (e) The Navy shall conduct briefings between construction supervisors and crews, marine mammal monitoring team, acoustical monitoring team prior to the start of all pile driving activities, and when new personnel join the work, in order to explain responsibilities, communication procedures, marine mammal monitoring protocol, and operational procedures.
3. Mitigation Measures

The holder of this Authorization is required to implement the following mitigation measures:

- (a) Time Restrictions - For all in-water pile driving activities, the Navy shall operate only during daylight hours.
- (b) Use of Bubble Curtain



- (i) The Navy shall employ a bubble curtain during impact pile driving of steel piles in water depths greater than 2 feet. In addition, the Navy shall implement the following performance standards.
 - (ii) The bubble curtain must distribute air bubbles around 100 percent of the piling perimeter for the full depth of the water column.
 - (iii) The lowest bubble ring shall be in contact with the mudline for the full circumference of the ring, and the weights attached to the bottom ring shall ensure 100 percent mudline contact. No parts of the ring or other objects shall prevent full mudline contact.
 - (iv) The Navy shall require that construction contractors train personnel in the proper balancing of air flow to the bubblers, and shall require that construction contractors submit an inspection/performance report for approval by the Navy within 72 hours following the performance test. Corrections to the attenuation device to meet the performance standards shall occur prior to impact driving.
- (c) Use of Soft-Start
- (i) The project shall utilize soft start techniques for impact pile driving.
 - (ii) The Navy shall conduct an initial set of strikes from the impact hammer at reduced energy, followed by a 30-second waiting period, then two subsequent reduced energy strike sets.
 - (iii) Soft start shall be required for any impact driving, including at the beginning of the day, and at any time following a cessation of impact pile driving of 30 minutes or longer.
- (d) Establishment of Shutdown Zones
- (i) The shutdown zones pertaining specific species during impact driving and vibratory driving are shown on Tables 2, 3, and 4.
 - (ii) If a marine mammal comes within or approaches the shutdown zone, pile driving operations shall cease.
 - (iii) Pile driving and removal operations shall restart once the marine mammal is visibly seen leaving the zone or after 15 minutes have passed with no sightings.

- (iv) A determination that the shutdown zone is clear shall be made only during a period of good visibility (*i.e.*, the entire shutdown zone and surrounding waters must be visible to the naked eye)
 - (v) For in-water heavy machinery work other than pile driving (using, *e.g.*, standard barges, tug boats), if a marine mammal comes within 10 m, operations shall cease and vessels shall reduce speed to the minimum level required to maintain steerage and safe working conditions.
 - (vi) Shutdown shall occur if a species for which authorization has not been granted or for which the authorized numbers of takes have been met approaches or is observed within the pertinent take zone. The Navy shall then contact NMFS within 24 hours.
- (d) Establishment of Level A and B Harassment Zones
- (i) The Level A and Level B zones pertaining to specific species during impact driving and vibratory driving are shown on Tables 2, 3, and 4.
- (e) Pile driving activities shall not be conducted when weather/observer conditions do not allow for adequate sighting of marine mammals within the disturbance zone (*e.g.* lack of daylight/fog).
- (i) In the event of conditions that prevent the visual detection of marine mammals, impact pile driving already underway shall be curtailed, but vibratory driving may continue if driving has already been initiated on a given pile.

4. Monitoring

The holder of this Authorization is required to conduct visual marine mammal monitoring during pile driving activities.

- (a) Visual Marine Mammal Observation—The Navy shall collect sighting data and behavioral responses to pile driving for marine mammal species observed in the region of activity during the period of activity. Visual monitoring shall include the following:
 - (i) Marine Mammal Observers (MMOs) shall be positioned at the best practicable vantage points, taking into consideration security, safety, and space limitations. The MMOs shall be stationed in a location that shall provide adequate visual coverage for the shutdown zones.
 - (ii) There shall be 3-5 MMOs working at all times depending on the activity and they shall be present during all pile driving activities.

- (iii) Monitoring shall be conducted by trained observers, who shall have no other assigned tasks during monitoring periods. Trained observers shall be placed at the best vantage point(s) practicable to monitor for marine mammals and implement shutdown or delay procedures when applicable through communication with the equipment operator. The Navy shall adhere to the following additional observer standards:
 - (1) Independent observers (*i.e.*, not construction personnel) are required.
 - (2) At least one observer must have prior experience working as an observer.
 - (3) Other observers may substitute education (degree in biological science or related field) or training for experience.
 - (4) Where a team of three or more observers are required, one observer shall be designated as lead observer or monitoring coordinator. The lead observer must have prior experience working as an observer.
 - (5) Monitoring shall take place from 15 minutes prior to initiation of pile driving activity through 30 minutes post-completion of pile driving activity.
- (iv) Monitoring shall be conducted by qualified observers with the following minimum qualifications:
 - (1) 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 may be necessary to correctly identify the target;
 - (2) Advanced education in biological science or related field (undergraduate degree or higher required);
 - (3) Experience and ability to conduct field observations and collect data according to assigned protocols (this may include academic experience);
 - (4) Experience or training in the field identification of marine mammals, including the identification of behaviors;
 - (5) Sufficient training, orientation, or experience with the construction operation to provide for personal safety during observations;

- (6) Writing skills sufficient to prepare a report of observations including but not limited to the number and species of marine mammals observed; dates and times when in-water construction activities were conducted; dates and times when in-water construction activities were suspended to avoid potential incidental injury from construction sound of marine mammals observed within a defined shutdown zone; and marine mammal behavior; and
- (7) 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.

(b) Hydroacoustic Monitoring

- (i) If the Navy elects to conduct in-situ acoustic monitoring to establish actual distances to the thresholds for a pile type and installation method, the radii of the pertaining zones may be adjusted according to collected data.
- (ii) Any proposed acoustical monitoring plan and any proposed revisions to zone radii must be pre-approved by NMFS.
- (iii) A final acoustic monitoring report shall be submitted to NMFS within 30 days of completing the monitoring.

5. Reporting

- (a) A draft marine mammal monitoring report shall be submitted to NMFS within 90 days after the completion of pile driving and removal activities or a minimum of 60 days prior to any subsequent IHAs. A final report shall be prepared and submitted to the NMFS within 30 days following receipt of comments on the draft report from the NMFS. A If no comments are received from NMFS within 30 days, the draft final report shall constitute the final report. If comments are received, a final report addressing NMFS comments must be submitted within 30 days after receipt of comments.
 - (i) The report shall include an overall description of work completed, a narrative regarding marine mammal sightings, and associated marine mammal observation data sheets.
 - (ii) The report shall include all items identified in information described in Section 4 of the Marine Mammal Monitoring Plan (Appendix D of the application.)
- (b) Reporting injured or dead marine mammals:

- (i) In the unanticipated event that the specified activity clearly causes the take of a marine mammal in a manner prohibited by this IHA, such as serious injury, or mortality, the Navy shall immediately cease the specified activities and report the incident to the Office of Protected Resources, NMFS, and the West Coast Regional Stranding Coordinator, NMFS. The report must include the following information:
 - (1) Time and date of the incident;
 - (2) Description of the incident;
 - (3) Environmental conditions (*e.g.*, wind speed and direction, Beaufort sea state, cloud cover, and visibility);
 - (4) Description of all marine mammal observations and active sound source use in the 24 hours preceding the incident;
 - (5) Species identification or description of the animal(s) involved;
 - (6) Fate of the animal(s); and
 - (7) Photographs or video footage of the animal(s). Activities shall not resume until NMFS is able to review the circumstances of the prohibited take. NMFS shall work with the Navy to determine what measures are necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. The Navy may not resume their activities until notified by NMFS.

- (ii) In the event that the Navy discovers an injured or dead marine mammal, and the lead observer determines that the cause of the injury or death is unknown and the death is relatively recent (*e.g.*, in less than a moderate state of decomposition), the Navy shall immediately report the incident to the Office of Protected Resources (301-427-8401), NMFS, and the West Coast Regional Stranding Coordinator (206-526-4747), NMFS. The report must include the same information identified in 5(b)(i) of this IHA. Activities may continue while NMFS reviews the circumstances of the incident. NMFS shall work with the Navy to determine whether additional mitigation measures or modifications to the activities are appropriate.

- (iii) In the event that the Navy discovers an injured or dead marine mammal, and the lead observer 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 Navy shall report the incident to the Office of Protected Resources, NMFS, and the West Coast Regional Stranding Coordinator, NMFS, within 24 hours of the discovery. The Navy shall

provide photographs or video footage or other documentation of the stranded animal sighting to NMFS.

- (iv) The Navy shall report any pinniped hauled out at unusual sites (*e.g.*, in work boats) to NMFS and the local stranding network (WDFW Marine Mammal Investigations; 253-589-7235) and follow any procedures or measures stipulated by the stranding network

- 6. 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.

for 

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

JUN 22 2018

Date

Table 1. Level A and Level B Authorized Take.

<i>Species</i>	<i>Authorized Take</i>	
	<i>Level A</i>	<i>Level B</i>
Killer whale (<i>Orcinus orca</i> ; transient only)	0	48
Harbor porpoise (<i>Phocoena phocoena vomerina</i>)	0	2,728
Steller sea lion (<i>Eumetopias jubatus monteriensis</i>)	0	503
California sea lion (<i>Zalophus californianus</i>)	0	7,816
Harbor seal (<i>Phoca vitulina richardii</i>)	125	5,600

Table 2. Shutdown, Level A, and Level B Isopleths during Impact Driving of Steel Piles.

<i>Marine Mammal Group</i>	<i>Level B Isopleth</i>	<i>Level A Isopleth</i>	<i>Shutdown Zone</i>
Cetaceans	541 meters	740 meters	750 meters
Harbor Seal	541 meters	217 meters	220 meters
Sea Lions	541 meters	12 meters	15 meters

Table 3. Shutdown, Level A, Level B Isopleths during Vibratory Driving of Steel Piles

<i>Marine Mammal Group</i>	<i>Level B Isopleth</i>	<i>Level A Isopleth</i>	<i>Shutdown Zone</i>
Cetaceans	11,700 meters	64 meters	100 meters
Harbor Seal	11,700 meters	26 meters	30 meters
Sea Lions	11,700 meters	12 meters	15 meters

Table 4. Shutdown, Level A, and Level B Isopleths during Impact Driving of Concrete Piles

<i>Marine Mammal Group</i>	<i>Level B Isopleth</i>	<i>Level A Isopleth</i>	<i>Shutdown Zone</i>
Cetaceans	46 meters	74 meters	100 meters
Harbor Seal	46 meters	19 meters	35 meters
Sea Lions	46 meters	1 meter	15 meters