

INCIDENTAL HARASSMENT AUTHORIZATION

The Alaska Department of Transportation and Public Facilities (ADOT&PF) 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 pile driving and removal in Lutak Inlet, southeast Alaska, when adhering to the following terms and conditions.

1. This Incidental Harassment Authorization (IHA) is valid from October 1, 2018, through September 30, 2019.
2. This IHA is valid only for pile driving and removal associated with the Haines Ferry Terminal Modification Project, Haines, Alaska.
3. **General Conditions**
 - (a) A copy of this IHA must be in the possession of the ADOT&PF, its designees, or work crew personnel operating under the authority of this IHA.
 - (b) The species authorized for taking are the humpback whale (*Megaptera novaeangliae*), killer whale (*Orcinus orca*), harbor porpoise (*Phocoena phocoena*), Dall's porpoise (*Phocoenoides dalli*), Steller sea lion (*Eumetopias jubatus*), and harbor seal (*Phoca vitulina richardii*).
 - (c) The taking, by Level A and/or B harassment, is limited to the species listed in condition 3(b). See Table 1 for numbers of takes authorized, by species.
 - (d) The taking by 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.
 - (e) ADOT&PF shall conduct briefings with construction supervisors and crews, marine mammal monitoring team, acoustic monitoring team, and relevant ADOT&PF staff prior to the start of all pile driving and removal, and when new personnel join the work, in order to explain responsibilities, communication procedures, marine mammal monitoring protocol, and operational procedures.
 - (f) ADO&PF shall not conduct pile driving and removal activities from March 1, 2019, through May 31, 2019.

4. Mitigation Measures

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

(a) *Pile Driving and Removal Operations*

- (i) ADOT&PF shall drive all piles with a vibratory hammer to the maximum extent possible (*i.e.*, until a desired depth is achieved or to refusal) prior to using an impact hammer. ADOT&PF shall also use the minimum hammer energy needed to install the piles.
- (ii) ADOT&PF shall use a sound attenuation device (*e.g.*, pile cap, hammer cushion) during impact hammering.
- (iii) ADOT&PF shall use a “soft start” technique at the beginning of impact pile driving. The soft start requires ADOT&PF to provide an initial set of three strikes from the impact hammer at 40 percent energy, followed by a one-minute waiting period, then two subsequent 3–strike sets.
- (iv) ADOT&PF may use a vibratory hammer to remove piles if a direct pull method is not feasible.

(b) *Shut-down Procedures*

- (i) A minimum shut-down zone of 10 meters (m) shall be established during all pile driving and removal and during use of in-water heavy machinery (*e.g.*, dredge). If a marine mammal is observed within or approaching 10 m prior to pile driving, pile driving may not commence or resume until either the animal has voluntarily left and been visually confirmed beyond 10 m; 15 minutes have passed without subsequent detections of small cetaceans and pinnipeds; or 30 minutes have passed without subsequent detections of large cetaceans.
- (ii) If a marine mammal is sighted within or approaching a Level A harassment zone designated for that species (see Table 2) and pile driving has not started, pile driving shall not commence until either the animal has voluntarily left and been visually confirmed beyond the shutdown zone; 15 minutes have passed without subsequent detections of small cetaceans and pinnipeds; or 30 minutes have passed without subsequent detections of large cetaceans.

- (c) The daily construction window for pile removal and driving shall begin no sooner than 30 minutes after sunrise and shall end no later than 30 minutes prior to sunset.

- (d) If poor environmental conditions restrict visibility of the shut-down zones (*e.g.*, excessive wind or fog, high Beaufort state), the commencement of pile installation shall be delayed.
- (e) Monitoring shall be conducted by NMFS-approved protected species observers (PSOs). Trained observers shall be placed from the best vantage point(s) practicable. Observer training must be provided prior to project start, and shall include instruction on species identification (sufficient to distinguish the species listed in condition 3(b), description and categorization of observed behaviors and interpretation of behaviors that may be construed as being reactions to the specified activity, proper completion of data forms, and other basic components of biological monitoring, including tracking of observed animals or groups of animals such that repeat sound exposures may be attributed to individuals (to the extent possible).
- (f) Monitoring shall take place 30 minutes prior to initiation of pile driving and removal activity through 30 minutes post-completion of pile driving and removal activity. In the event of a delay or shutdown of activity resulting from marine mammals in a shut-down zone, animals shall be allowed to remain in the shut-down zone (*i.e.*, must leave of their own volition) and their behavior shall be monitored and documented.
- (g) If a species for which authorization has not been granted, or a species for which authorization has been granted but the authorized takes are met, is observed approaching or within the Level A or B harassment zones, pile driving and removal activities shall shut down. Activities shall not resume until the animal has been confirmed to have left the area or the observation time period, as indicated in 4(b) above, has elapsed.

5. Monitoring

ADOT&PF is required to conduct marine mammal and acoustic monitoring during pile driving and removal.

- (a) At least one PSO shall be placed at the terminal and another PSO shall be placed at Tanani Point during all pile driving and removal.
- (b) Qualified PSOs shall be trained biologists, with the following minimum qualifications:
 - (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 may be necessary to correctly identify the target;
 - (ii) Advanced education in biological science or related field (undergraduate degree or higher required);
 - (iii) Experience and ability to conduct field observations and collect data according to assigned protocols (this may include academic experience);

- (iv) Experience or training in the field identification of marine mammals, including the identification of behaviors;
 - (v) Sufficient training, orientation, or experience with the construction operation to provide for personal safety during observations;
 - (vi) 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
 - (vii) 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.
- (c) ADOT&PF shall conduct sound source verification (SSV) measurements during impact and vibratory pile driving of at least one 30-in. and 36-in. pile as described in the Acoustic Monitoring Plan, dated October 19, 2017.

6. Reporting

The holder of this Authorization is required to:

- (a) Submit a draft report on all marine mammal monitoring conducted under the IHA within ninety calendar days of the completion of all pile driving and removal. If NMFS has comments on the draft report, ADOT&PF shall submit a final report to NMFS within thirty days following resolution of NMFS comments on the draft report. This report must contain the informational elements described below:
 - (i) Detailed information about any implementation of shutdowns, including the distance of animals to pile driving and removal and description of specific actions that ensued and resulting behavior of the animal, if any.
 - (ii) Description of attempts to distinguish between the number of individual animals taken and the number of incidences of take, such as ability to track groups or individuals.
- (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, ADOT&PF shall immediately cease the specified activities and report the incident to the Office of Protected Resources (301-427-8401), NMFS, and the Alaska Region Stranding Coordinator (907-271-1332), 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).

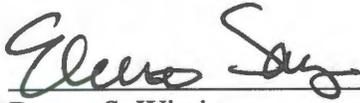
Activities shall not resume until NMFS is able to review the circumstances of the prohibited take. NMFS will work with ADOT&PF to determine what measures are necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. ADOT&PF may not resume their activities until notified by NMFS.

- (ii) In the event that ADOT&PF 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), ADOT&PF shall immediately report the incident to the Office of Protected Resources, NMFS, and the Alaska Region Stranding Coordinator, NMFS.

The report must include the same information identified in 6(b)(i) of this IHA. Activities may continue while NMFS reviews the circumstances of the incident. NMFS will work with ADOT&PF to determine whether additional mitigation measures or modifications to the activities are appropriate.

- (iii) In the event that ADOT&PF 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), ADOT&PF shall report the incident to the Office of Protected Resources, NMFS, and the Alaska Region Stranding Coordinator, NMFS, within 24 hours of the discovery. ADOT&PF shall provide photographs or video footage or other documentation of the stranded animal sighting to NMFS.

7. 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.



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



Date

Table 1. Authorized take numbers, by species

Species	Level A	Level B
Humpback whale (<i>Megaptera novaeangliae</i>)	4	24
Killer whale (<i>Orcinus orca</i>)	0	60
Dall's porpoise (<i>Phocoenoides dalli</i>)	20	48
Harbor porpoise (<i>Phocoena phocoena</i>)	6	24
Steller sea lion (<i>Eumetopias jubatus</i>)	0	3307
		83
Harbor seal (<i>Phoca vitulina richardii</i>)	21	483

Table 2. Level A harassment zone for impact pile driving.

Hearing Group	Level A harassment distance (km) ¹
30-in. pile	
Low-frequency cetacean	1.65
Mid-frequency cetacean	-
High-frequency cetacean	1.45
Phocid pinniped	0.26
Otarrid pinniped	-
36-in. pile	
Low-frequency cetacean	2.04
Mid-frequency cetacean	-
High-frequency cetacean	1.49
Phocid pinniped	0.33
Otarrid pinniped	-

¹These distances are based on exposure to impact pile driving two piles per day. These distances may be modified based on sound source verification test results.

Table 3. Level B harassment zones for impact and vibratory pile driving.

Activity	Pile Size	Level B harassment distance (km)
Impact Pile Driving	30-inch	4.52
	36-inch	6.79
Vibratory Pile Driving and Removal	30-inch	21.14
	36-inch	21.17

