



INCIDENTAL HARASSMENT AUTHORIZATION

The Port of Anchorage (POA), including persons acting under its control and authority, 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 a Test Pile Program in Anchorage, Alaska.

1. This Incidental Harassment Authorization (IHA) is valid from April 1, 2016 through March 31, 2017.
2. This Authorization is valid only for in-water construction work associated with the POA Test Pile Program in Anchorage, Alaska.
3. General Conditions:
 - (a) A copy of this IHA must be in the possession of POA, its designees, and work crew personnel operating under the authority of this IHA.
 - (b) The species authorized for taking are Steller sea lion (*Eumetopias jubatus*), harbor seal (*Phoca vitulina*), harbor porpoise (*Phocoena phocoena*), killer whale (*Orcinus orca*), and beluga whale (*Delphinapterus leucas*). Authorized take levels are shown in Table 1.
 - (c) The taking, by Level B harassment only, is limited to the species listed in condition 3(b).
 - (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.
 - (e) POA shall conduct briefings between construction supervisors and crews, marine mammal monitoring team, acoustic monitoring team, and staff prior to the start of all in-water pile driving, and when new personnel join the work, in order to explain responsibilities, communication procedures, marine mammal monitoring protocol, and operational procedures.

4. Mitigation Measures

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



(a) Time Restriction: For all in-water pile driving activities, POA shall operate only during daylight hours.

(b) Establishment of Shutdown and Monitoring Zones

(i) For all pile driving, POA shall implement a minimum shutdown zone of 100 m radius around the pile for marine mammals other than beluga whales. POA shall implement separate shutdown zones for beluga whales. When driving piles with the use of sound attenuation systems, these beluga shutdown zones shall be a minimum of 300 m and 900 m for impact and vibratory driving, respectively. When driving piles without the use of sound attenuation systems, these shutdown zones shall be a minimum of 1,400 m and 4,000 m for impact and vibratory driving, respectively. If a marine mammal comes within or approaches the relevant shutdown zone, such operations will cease.

(ii) If shut down does occur, pile driving may not resume until the animal or group of animals is observed exiting the shut down zone or until 30 minutes have passed without re-sighting.

(iii) Minimum radial distances required for monitoring zones for all pile driving shall be a minimum of 1,400 and 4,000 m for impact and vibratory pile driving, respectively.

(c) Pile Driving Weather Delays: Pile driving shall only take place when the relevant shutdown zones can be adequately monitored.

(d) Use of Soft-start

(i) The project shall utilize soft start techniques for both impact and vibratory pile driving. POA shall initiate sound from vibratory hammers for fifteen seconds at reduced energy followed by a 1-minute waiting period, with the procedure repeated two additional times. For impact driving, POA shall conduct 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. Soft start shall be required at the beginning of each day's pile driving work and at any time following a cessation of pile driving of 30 minutes or longer (specific to either vibratory or impact driving).

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

(e) Non-Pile Driving Mitigation Measures

(i) 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.

(f) Visual Marine Mammal Monitoring and Observation

(i) Four MMOs shall work concurrently in rotating shifts to provide full coverage for marine mammal monitoring during in-water pile installation activities for the Test Pile Program. One MMO shall observe the 100 m shutdown zone and two MMOs shall scan the relevant beluga shutdown zone. For pile driving without the use of sound attenuation systems, one MMO shall observe the 100 m shutdown zone and two MMOs shall observe the 1,400 and 4,000 m zones for impact and vibratory pile driving, respectively. For pile driving with the use of sound attenuation systems, (1) during impact pile driving one MMO shall observe the 100- and 300-m shutdown zones and two MMOs shall observe the larger behavioral harassment zone and (2) during vibratory pile driving two MMOs shall observe the 100- and 900-m shutdown zones and one MMO shall observe the larger behavioral harassment zone. Four MMOs shall rotate through these three active positions every 30 minutes. The fourth MMO shall record data.

(ii) Before the Test Pile Program commences, MMOs and POA authorities shall meet to determine the most appropriate observation platform(s) for monitoring during pile driving.

(iii) MMOs shall begin observing for marine mammals 30 minutes before in-water pile driving begins. If a marine mammal(s) is present within the relevant shutdown zone prior to pile driving or during the “soft start” the start of pile driving shall be delayed until the animal(s) leaves the relevant shutdown zone. Pile driving shall resume only after the MMOs have determined, through sighting or by waiting 30 minutes, that the animal(s) has moved outside the relevant shutdown zone.

(iv) If a marine mammal other than beluga whale is traveling along a trajectory that could take it into the 1,400 and 4,000 m zones for impact and vibratory pile driving, respectively, the MMO shall record the marine mammal(s) as a “take” upon entering those zones. While the animal remains within the 1,400 and 4,000 m zones, that pile segment may be completed without cessation, unless the animal approaches the 100 m shutdown zone, at which point the MMO shall authorize the immediate shutdown of in-water pile driving before the marine mammal enters the 100 m shutdown zone. Pile driving shall resume only once the animal

has left the 100 m shutdown zone on its own or has not been re-sighted for a period of 30 minutes.

(v) If during the driving of attenuated piles, one or more beluga whales is traveling along a trajectory that could take it into the 1,400 and 4,000 m zones for impact and vibratory driving, respectively, the MMO shall record the beluga whale(s) as a “take” upon entering that zone. While the animal remains within those zones, that pile segment may be completed without cessation, unless the animal approaches the relevant shutdown zone, at which point the MMO shall authorize the immediate shutdown of in-water pile driving before the marine mammal enters the relevant shutdown zone.

(vi) Personnel stationed on the hydroacoustic vessels shall keep watch for marine mammals that may approach or enter disturbance zones and shall communicate all sightings to land-based MMOs and other appropriate shore staff.

(vii) The individuals shall scan the waters within each monitoring zone activity using binoculars (25x or equivalent), hand held binoculars (7x) and visual observation.

(viii) The waters shall 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 shutdown zone 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.

(ix) The waters shall continue to be scanned for at least 30 minutes after pile driving has completed each day.

5. Monitoring and Reporting

The holder of this Authorization is required to submit a draft report on all monitoring conducted under the IHA 90 calendar days after the completion of the marine mammal monitoring or 60 days prior to the issuance of a subsequent authorization, whichever comes first. A final report shall be prepared and submitted within thirty days following resolution of any comments from NMFS on the draft report. This report must contain the informational elements described in the Monitoring Plan, at minimum and shall also include:

(a) Acoustic Monitoring

(i) POA conduct acoustic monitoring for representative scenarios of pile driving activity, as described in the Monitoring Plan.

(b) Data Collection

(i) For all marine mammal and acoustic monitoring, information shall be recorded as described in the Monitoring Plan.

(c) Reporting Measures

(i) In the unanticipated event that the specified activity clearly causes the take of a marine mammal in a manner prohibited by the IHA, such as an injury (Level A harassment), serious injury or mortality (e.g., ship-strike, gear interaction, and/or entanglement), POA shall immediately cease the specified activities and immediately report the incident to Office of Protected Resources, NMFS (301-427-8401) and the Alaska Regional Stranding Coordinators (907-271-5006). The report would include the following information:

1. Time, date, and location (latitude/longitude) of the incident;
2. Name and type of vessel involved;
3. Vessel's speed during and leading up to the incident;
4. Description of the incident;
5. Status of all sound source use in the 24 hours preceding the incident;
6. Water depth;
7. Environmental conditions (e.g., wind speed and direction, Beaufort sea state, cloud cover, and visibility);
8. Description of all marine mammal observations in the 24 hours preceding the incident;
9. Species identification or description of the animal(s) involved;
10. Fate of the animal(s); and
11. Photographs or video footage of the animal(s) (if equipment is available).

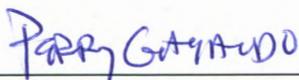
(ii) Activities would not resume until NMFS is able to review the circumstances of the prohibited take. NMFS shall work with POA to determine what is necessary to minimize the likelihood of further prohibited take and ensure MMPA

compliance. POA would not be able to resume their activities until notified by NMFS via letter, email, or telephone.

(iii) In the event that POA 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), POA shall immediately report the incident to the Office of Protected Resources, NMFS (301-427-8401) and the NMFS Alaska Strand Hotline (877-925-7773). The report shall 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 POA to determine whether modifications in the activities are appropriate.

(iv) In the event that POA 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), POA shall report the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS (301-427-8401) and the NMFS Alaska Stranding Hotline (877- 925-7773) within 24 hours of the discovery. POA would provide photographs or video footage (if available) or other documentation of the stranded animal sighting to NMFS and the Marine Mammal 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.



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

MAF 4 2016

Date

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Table 1. Authorized take numbers, by species.

DPS or Stock	Authorized Level B Take Harassment
Cook Inlet beluga whale	26
Killer whale	8
Harbor porpoise	31
Harbor seal	62
Western DPS, Steller sea lion	6