

INCIDENTAL HARASSMENT AUTHORIZATION

The City and Borough of Sitka (CBS) 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 during the Gary Paxton Industrial Park (GPIP) Dock Modification Project in Sawmill Cove, when adhering to the following terms and conditions.

1. This Incidental Harassment Authorization (IHA) is valid from October 1, 2017, through December 31, 2017.
2. This IHA is valid only for pile driving and pile removal associated with the GPIP Dock Modification Project in Sawmill Cove, Alaska.
3. General Conditions
 - (a) A copy of this IHA must be in the possession of the CBS, its designees, and 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*), Steller sea lion (*Eumatopia jubatus*), harbor seal (*Phoca vitulina richardii*), and California sea lion (*Zalophus californianus*).
 - (c) The taking, by Level A and B harassment, is limited to the species listed in condition 3(b). See Table 1 (attached) for numbers of take authorized.
 - (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. Any taking exceeding the authorized amounts and manner listed in Table 1 is prohibited and may result in the modification, suspension, or revocation of this IHA.
 - (e) The CBS shall conduct briefings between construction supervisors and crews, marine mammal monitoring team, and CBS staff 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.

4. Mitigation Measures

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

- (a) CBS shall begin marine mammal monitoring at least 30 minutes prior to pile activity onset at the beginning of the day or if one hour has elapsed in activity.

Pile driving or removal shall not begin until this 30-minute monitoring period is complete and a PSO has given a notice to proceed.

- (b) For timber pile removal, CBS shall first attempt to direct pull piles; if those efforts prove to be ineffective, they may proceed with a vibratory hammer.
- (c) CBS shall operate the vibratory hammer at a reduced energy setting (30 to 50 percent of its rated energy).
- (d) CBS shall use a pile cushion during impact hammering.
- (e) CBS shall use a “soft start” technique when impact pile driving. CBS shall 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.
- (f) If any marine mammal is sighted within a shut-down zone during the 30 minute survey prior to pile driving, or during the soft start, CBS shall delay pile-driving until the animal is confirmed to have moved outside and on a path away from the area or if 15 minutes (for pinnipeds or small cetaceans) or 30 minutes (for large cetaceans) have elapsed since the last sighting of the marine mammal within the shut-down zone. This soft-start shall be applied prior to beginning pile driving activities each day or after cessation of impact driving for more than 30 minutes.
- (g) CBS shall drive all piles with a vibratory hammer to the maximum extent possible prior to using an impact hammer. CBS shall also use the minimum impact hammer energy needed to safely install the piles.
- (h) CBS shall use delay and shut-down procedures, if a species for which authorization has not been granted or if a species for which authorization has been granted but the authorized takes are met, approaches or is observed within the Level A and/or B harassment zone (as appropriate).
- (i) CBS shall implement the shut-down zones identified in Table 2.

5. Monitoring

The holder of this Authorization is required to conduct marine mammal monitoring during pile driving and removal as follows:

- (a) One land-based protected species observer (PSO) shall be stationed at the GPIIP dock site to monitor for marine mammals during all pile driving and removal activity.
- (b) At least one boat-based PSO shall monitor for marine mammals during all pile activities other than timber pile removal. No less than 30 minutes prior to any pile

activity, the boat-based PSO shall begin monitoring the Level A and B harassment zones (Table 3a-b). This PSO shall transit to the head of Silver Bay and shall communicate with the construction foreman or superintendent before any pile driving activities can begin. The boat-based PSO shall then transit back to the construction site and spend the rest of the pile driving time monitoring from the boat.

- (c) The PSOs shall have no other primary duties than watching for and reporting on events related to marine mammals.
- (d) PSOs shall scan for the presence of marine mammals for 30 minutes before any pile driving or removal activities take place for the day or if more than one hour has elapsed in absence of pile activity.
- (e) Each PSO shall work in shifts lasting no longer than 4 hours with at least a 1-hour break between shifts, and shall not perform duties as an PSO for more than 12 hours in a 24-hr period.
- (f) The PSOs shall continue monitoring each day for 15 minutes after all in-water pile driving/removal is completed.
- (g) Each day prior to commencing in-water work, the PSO shall conduct a radio check with the construction foreman or superintendent.
- (h) Prior to the start of the project, the lead-PSO shall brief the foreman or supervisor as to the shutdown procedures if any marine mammals are observed likely to enter or within a shutdown zone, and shall have the foreman brief the crew, requesting that the crew notify the PSO when a marine mammal is spotted.
- (i) Monitoring shall be conducted by independent (*i.e.*, not construction personnel) qualified observers, who shall 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. At least one observer must have prior experience working as an observer. Other observers may substitute education (undergraduate degree in biological science or related field) or training for experience.
- (j) All PSOs must have:
 - (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.
- (k) CBS must submit to NMFS OPR (Jaclyn.daly@noaa.gov) the curriculum vitae (CV) of all observers prior to monitoring.

6. Reporting

The holder of this Authorization is required to:

- (a) Submit a draft report to NMFS (Jaclyn.daly@noaa.gov) on all monitoring conducted under the IHA within ninety calendar days of the completion of marine mammal monitoring. A final report shall be prepared and submitted within thirty days following resolution of comments on the draft report from NMFS. This report must contain the informational elements 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 (i.e., multiple exposures of the same animal).
- (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, CBS 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 (907-586-7235), 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).

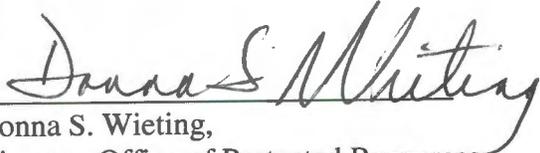
Activities shall not resume until NMFS is able to review the circumstances of the prohibited take. NMFS will work with CBS to determine what measures are necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. CBS may not resume their activities until notified by NMFS.

- (ii) In the event that CBS 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), CBS 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 CBS to determine whether additional mitigation measures or modifications to the activities are appropriate.

- (iii) In the event that CBS 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), CBS shall report the incident to the Office of Protected Resources, NMFS, and the Alaska Region Stranding Coordinator, NMFS, within 24 hours of the discovery. CBS 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.

SEP 29 2017

Date

Table 1. Authorized Take Numbers, by Species and Manner of Take.

Species	Level A	Level B
Humpback whale	0	60
	0	4
Killer whale	0	16
Harbor porpoise	10	10
Steller sea lion	0	5
	0	219
Harbor seal	6	32
California sea lion	0	16

Table 2. Shut-down Zones.

Shutdown Zones in Meters					
Source	Low-Frequency Cetaceans (humpback whale)	Mid-Frequency Cetaceans (killer whale)	High-Frequency Cetaceans (harbor porpoise)	Phocid Pinnipeds (harbor seal)	Otariid Pinnipeds (Steller sea lion)
Vibratory Pile Driving/Removal					
All	10 m				
Impact Pile Driving					
30-inch steel (installation)	380 ¹	25 ¹	200	150	25 ¹
48-inch steel (installation)	1,100 ¹	25 ¹	200	150	50 ¹

¹ Indicates a shutdown zone that encompasses the entire Level A zone; therefore, no Level A take of species within these hearing groups are authorized.

Table 3a-b. Distances (m) to Harassment Zones from Pile Activities.

3.a. Calculated Distances (m) to Level A Harassment Zones- Impact Pile Driving					
Pile Type	Low-Frequency Cetaceans¹	Mid-Frequency Cetaceans¹	High-Frequency Cetaceans	Phocid	Otariid¹
30-inch	380.9	13.5	453.7	203.8	14.8
48-inch	1,052.4	37.4	1,253.5	563.2	41.0

¹These hearing groups have shut-down zone that encompass the Level A harassment zone; therefore, no Level A harassment is authorized.

3.b. Calculated Distances to Level B harassment zones (m)	
Vibratory Hammer	
12 and 16-inch wood removal	2154
30-inch steel temporary installation	11,659
30-inch steel temporary removal	11,659
30-inch steel permanent installation	11,659
48-inch steel permanent installation	16,343
Impact Hammer	
30-inch steel permanent installation	2,512
48-inch steel permanent installation	3,744