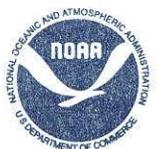




INCIDENTAL HARASSMENT AUTHORIZATION

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 the O'Connell Bridge Lightering Float Pile Replacement Project in Sitka, Alaska, when adhering to the following terms and conditions:

1. This Incidental Harassment Authorization (IHA) is valid from June 1, 2019 through May 31, 2020.
2. This IHA is valid only for pile removal, pile driving, and drilling associated with the O'Connell Bridge Lightering Float Pile Replacement Project in Sitka, Alaska.
3. General Conditions
 - (a) A copy of this IHA must be in the possession of CBS, its designees, work crew personnel, and Protected Species Observers (PSOs) operating under the authority of this IHA.
 - (b) The species authorized for taking are humpback whale (*Megaptera novaeangliae*), minke whale (*Balaenoptera acutorostrata*), killer whale (*Orcinus orca*), harbor porpoise (*Phocoena phocoena*), harbor seal (*Phoca vitulina*), and Steller sea lion (*Eumetopias jubatus*).
 - (c) The taking, by Level A and B harassment only, is limited to the species listed in condition 3(b). Table 1 provides the authorized number of takes per species and stock. The taking by serious injury or death of any of the species listed in condition 3(b) 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 listed in Table 1 is prohibited and may result in the modification, suspension, or revocation of this IHA.
 - (d) CBS is required to conduct briefings for construction supervisors and crews, the monitoring team, and CBS staff prior to the start of all pile removal and installation activity, and when new personnel join the work, in order to explain responsibilities, communication procedures, the marine mammal monitoring protocol, and operational procedures.



- (e) Pile removal and installation activities authorized under this IHA may only occur during daylight hours.

4. Mitigation Measures

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

- (a) For in-water construction, heavy machinery activities other than pile removal and installation (*e.g.*, use of barge-mounted excavators, or dredging), if a marine mammal comes within 10 meters, CBS is required to cease operations and reduce vessel speed to the minimum level required to maintain steerage and safe working conditions.
- (b) CBS is required to employ a minimum of two PSOs per the Marine Mammal Monitoring Plan.
- (c) Marine mammal monitoring must take place from 30 minutes prior to initiation of pile removal and installation activity through 30 minutes post-completion. Pile removal and installation may commence when observers have declared the shutdown zone clear of marine mammals. In the event of a delay or shutdown of activity resulting from marine mammals in the shutdown zone (Table 2), animals must be allowed to remain in the shutdown zone (*i.e.*, must leave of their own volition) and their behavior must be monitored and documented.
- (d) The established Level A harassment zone for harbor seals will extend to 35 meters.
- (e) If a marine mammal is entering or is observed within an established shutdown zone (Table 2), pile removal and installation must be halted or delayed. Pile removal and installation may not commence or resume until either the animal has voluntarily left and been visually confirmed beyond the shutdown zone or 15 minutes have passed without subsequent detections.
- (f) CBS must use soft start techniques when impact pile driving. Soft start requires contractors to provide an initial set of strikes at reduced energy, followed by a thirty-second waiting period, then two subsequent reduced energy strike sets. A soft start must be implemented at the start of each day's impact pile driving and at any time following cessation of impact pile driving for a period of thirty minutes or longer.
- (g) CBS must first attempt to remove old, abandoned piles by direct pull; if those efforts prove to be ineffective, CBS may proceed with use of a vibratory hammer for pile removal.

- (h) 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 B harassment monitoring zone (Table 3), pile removal and installation activities must shut down immediately using delay and shut-down procedures. Activities must not resume until the animal has been confirmed to have left the area or the 15 minute observation time period has elapsed.

5. Monitoring Measures

The holder of this IHA is required to abide by the following marine mammal monitoring measures:

- (a) Marine mammal monitoring must be conducted in accordance with the Marine Mammal Monitoring Plan.
- (b) Marine mammal monitoring during pile removal and installation activities must be conducted by NMFS-approved PSOs in a manner consistent with the following:
 - i. Independent PSOs (*i.e.*, not construction personnel) who have no other assigned tasks during monitoring periods must be used.
 - ii. At least one observer must have prior experience working as an observer.
 - iii. Other PSOs may substitute education (degree in biological science or related field) or training for experience.
 - iv. Where a team of three or more observers are required, one observer should be designated as lead observer or monitoring coordinator. The lead observer must have prior experience working as an observer.
 - v. CBS must submit PSO CVs for approval by NMFS prior to the onset of pile driving.
- (c) Two land-based PSOs must be used to monitor the area during all pile removal and installation activities and will be placed at the best vantage point(s) practicable to monitor for marine mammals and implement shutdown/delay procedures.

- (d) PSOs are required to scan the waters using binoculars, and/or spotting scopes, and must use a handheld GPS or range-finder device to verify the distance to each sighting from the project site.
- (e) If waters exceed a sea-state which restricts the observers' ability to make observations within the marine mammal shutdown zone, pile removal and installation shall cease. Pile removal and installation activities shall not be initiated or continue until the entire largest shutdown zone for the activity is visible.
- (f) If the Level B harassment zone has been observed for 30 minutes and non-permitted species are not present within the zone, pile driving activities (soft start procedures required during impact driving) can commence and work can continue even if visibility becomes impaired within the Level B harassment zone. When a marine mammal permitted for take by Level B harassment is present in the Level B harassment zone, activities may begin and take will be recorded.
- (g) If the entire Level B harassment zone is not visible at the start of construction, piling removal and installation activities can begin. If work ceases for more than 30 minutes, the pre-activity monitoring of both the Level B harassment and shutdown zone will commence.
- (h) PSOs are required to work in shifts lasting no longer than 4 hours with at least a 1-hour break between shifts, and will not perform duties as a PSO for more than 12 hours in a 24-hr period.

6. Reporting

The holder of this IHA is required to:

- (a) Submit a draft report 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 described in the Marine Mammal Monitoring Plan including, but not limited to:
 - i. Dates and times (begin and end) of all marine mammal monitoring.
 - ii. Construction activities occurring during each daily observation period, including how many and what type of piles were removed or driven and by what method (*i.e.*, impact, vibratory, drilling).
 - iii. Weather parameters and water conditions during each monitoring period (*e.g.*, wind speed, percent cover, visibility, sea state).

- iv. The number of marine mammals observed, by species, relative to the pile location and if pile removal or installation was occurring at time of sighting.
- v. Age and sex class, if possible, of all marine mammals observed.
- vi. PSO locations during marine mammal monitoring.
- vii. Distances and bearings of each marine mammal observed to the pile being removed or driven for each sighting (if pile removal or installation was occurring at time of sighting).
- viii. Description of any marine mammal behavior patterns during observation, including direction of travel.
- ix. Number of individuals of each species (differentiated by month as appropriate) detected within the monitoring zone, and estimates of number of marine mammals taken, by species.
- x. Detailed information about any implementation of any mitigation triggered (*e.g.*, shutdowns and delays), a description of specific actions that ensued, and resulting behavior of the animal, if any.
- xi. 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.
- xii. Level B harassment exposures recorded by PSOs must be extrapolated based upon the number of observed takes and the percentage of the Level B harassment zone that was not visible.

(b) Reporting injured or dead marine mammals:

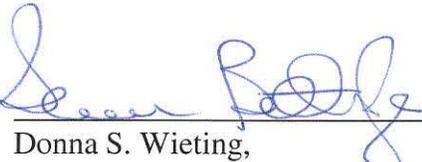
- i. In the unanticipated event that the specified activity clearly causes the take of a marine mammal in a manner prohibited by this IHA, such as serious injury, or mortality, CBS must immediately cease the specified activities and report the incident to the NMFS Office of Protected Resources (301-427-8401) and Alaska Regional Stranding Coordinator (877-925-7773). 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).

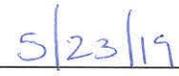
Activities must not resume until NMFS is able to review the circumstances of the prohibited take. NMFS will work with CBS to determine what measures are necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. CBS may not resume their activities until notified by NMFS.

- ii. In the event 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 must immediately report the incident to the Office of Protected Resources, NMFS, and the Alaska Regional 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 specified activities (*e.g.*, previously wounded animal, carcass with moderate to advanced decomposition, or scavenger damage), CBS must report the incident to the Office of Protected Resources, NMFS, and the Alaska Regional Stranding Coordinator, NMFS, within 24 hours of the discovery.
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.
8. Renewals - On a case-by-case basis, NMFS may issue a second one-year IHA without additional notice when 1) another year of identical or nearly identical activities as described in the Specified Activities section is planned or 2) the activities would not be completed by the time the IHA expires and a second IHA would allow for completion of the activities beyond that allowed for under this IHA, provided all of the following conditions are met:

- (a) A request for renewal is received no later than 60 days prior to expiration of the current IHA.
- (b) The request for renewal must include the following:
 - i. An explanation that the activities to be conducted beyond the initial dates either are identical to the previously analyzed activities or include changes so minor (e.g., reduction in pile size) that the changes do not affect the previous analyses, take estimates, or mitigation and monitoring requirements.
 - ii. A preliminary monitoring report showing the results of the required monitoring to date and an explanation showing that the monitoring results do not indicate impacts of a scale or nature not previously analyzed or authorized.
- (c) Upon review of the request for renewal, the status of the affected species or stocks, and any other pertinent information, NMFS determines that there are no more than minor changes in the activities, the mitigation and monitoring measures remain the same and appropriate, and the original findings remain valid.

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



Date

Table 1. Authorized Take by Level A and Level B Harassment.

Species	Level A Harassment	Level B Harassment
Humpback Whale	--	15
Minke Whale	--	3
Killer Whale	--	24
Harbor Porpoise	--	15
Harbor Seal	30	39
Steller Sea Lion	--	33

Table 2. Shut Down Zone for Each Project Activity (meters).

Noise Source	Low-Frequency Cetaceans (humpback whale)	Mid-Frequency Cetaceans (killer whale)	High-Frequency Cetaceans (harbor porpoise)	Phocid (harbor seal)	Otariid (sea lion)
Vibratory Pile Driving/Removal					
16-inch steel removal and installation (12 piles) (~1 hour on 1 day)	10	10	15	10	10
Drilling/Socketing Pile Installation					
16-inch steel installation (6 piles) (6 hours per day on 2 days)	55	10	75	10	10
Impact Pile Driving					
16-inch steel installation (6 piles) (~3 minutes on 1 day)	10	10	15	10	10

Table 3. Level B Harassment Monitoring Zones.

Noise Source	Monitoring Zones (meters)
Vibratory Pile Driving	
16-inch steel removal and installation	5,500
Socketing Pile Installation	
16-inch steel installation	7,700
Impact Pile Driving	
16-inch steel installation	265