



## INCIDENTAL HARASSMENT AUTHORIZATION

The City of Ketchikan, Alaska (COK) 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 incidentally harass marine mammals, when adhering to the following terms and conditions.

1. This Incidental Harassment Authorization (IHA) is valid from October 1, 2021 to September 30, 2022.
2. This IHA is valid only for vibratory pile driving, vibratory pile removal, impact pile driving and down-the-hole (DTH) pile installation associated with Berth III New Mooring Dolphins Project in Ketchikan, Alaska.
3. General Conditions
  - (a) A copy of this IHA must be in the possession of COK, its designees, work crew personnel, and Protected Species Observers (PSOs) operating under the authority of this IHA.
  - (b) The species authorized for taking are gray whale (*Eschrichtius robustus*), humpback whale (*Megaptera novaeangliae*), minke whale (*Balaenoptera acutorostrata*), killer whale (*Orcinus orca*), Pacific white-sided dolphin (*Lagenorhynchus obliquidens*), harbor porpoise (*Phocoena phocoena*), Dall's porpoise (*Phocoenoides dalli*), harbor seal (*Phoca vitulina*), and Steller sea lion (*Eumetopias jubatus*).
  - (c) The taking, by Level A and B harassment, is limited to the species listed in condition 3(b). Table 1 provides the authorized number of takes per species and stock.
  - (d) 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.



- (e) COK must conduct briefings for construction supervisors and crews, the monitoring team, and COK staff prior to the start of all pile driving activity, and when new personnel join the work, in order to explain responsibilities, communication procedures, the marine mammal monitoring protocol, and operational procedures.

#### 4. Mitigation Measures

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

- (a) COK must avoid direct interaction with marine mammals during in-water heavy machinery work other than pile driving that may occur in association with the construction activity. If a marine mammal comes within 10 meters (m) of such activity, operations must cease and vessels must reduce speed to the minimum level required to maintain steerage and safe working conditions, as appropriate.
- (b) COK must establish and implement shutdown zones as indicated in Table 2.
  - i. During vibratory driving/removal and DTH pile installation, initial shutdown zone sizes must be monitored at the lowest tier (*i.e.* least amount of active installation/removal time). Shutdown zones must be expanded to the next largest zone after the Tier 1 time period has elapsed. For activities with three specified tiers (*i.e.*, impact driving, DTH socketing), the shutdown zone must be expanded to the largest zones as identified in Tier 3 if the activity continues beyond the Tier 2 active time period.
  - ii. During impact driving, the shutdown zones associated with 0-500 strikes must be monitored until 500 strikes are attained. Between 501-1000 strikes the next largest shutdown zones shall be monitored. After 1,000 strikes the largest shutdown zones will be monitored.
- (c) COK must employ PSOs and Monitoring Measures as described in section 5 of this IHA. COK must monitor harassment zones (Table 2) to the extent possible based on the required number of PSOs, required monitoring locations, and conditions.
- (d) Marine mammal monitoring must take place from 30 minutes prior to initiation of pile driving activity through 30 minutes post-completion of pile driving activity. Pile driving 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), their behavior must be monitored and documented until they leave of their own volition, at which point the activity may begin.

- (e) If a marine mammal is entering or is observed within an established shutdown zone (Table 2), pile driving must be halted or delayed. Pile driving 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 of small cetaceans and pinnipeds; or 30 minutes have passed without subsequent detections of large cetaceans.
- (f) COK must use soft start techniques when impact pile driving. Soft start requires 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 30 minutes or longer.
- (g) If poor environmental conditions restrict visibility of the shutdown zones (e.g., from excessive wind or fog, high Beaufort state), pile installation may not be initiated. Work that has begun with a fully cleared Level B harassment zone may continue during inclement weather (e.g., fog, heavy rain) or periods of limited visibility.
- (h) Pile driving activity must be halted upon observation of either a species for which incidental take is not authorized or a species for which incidental take has been authorized but the authorized number of takes has been met, entering or within the Level A or Level B harassment zones.
- (i) COK is required to implement all mitigation measures described in the biological opinion (issued on February 10, 2021).

## 5. Monitoring Measures

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

- (a) At least three PSOs must monitor for marine mammals during pile driving activities. PSOs must be located along Tongass Narrows at areas that afford full visual view of the Level B zone. Locations have been identified in the Marine Mammal Monitoring Plan.
- (b) Marine mammal monitoring during pile driving 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 PSO must have prior experience performing the duties of a PSO during construction activity pursuant to a NMFS-issued incidental take authorization.
  - iii. Where a team of two or more PSOs are required, a lead observer or monitoring coordinator must be designated. The lead observer must have prior experience working as a marine mammal observer during construction.
  - iv. Other PSOs may substitute education (degree in biological science or related field) or training for experience.
  - v. COK must submit PSO CVs for approval by NMFS prior to the onset of pile driving.
- (c) PSOs must work in rotating shifts of 4 hours and individual PSOs must not perform duties for more than 12 hours in a 24-hour period.
  - (d) PSOs must use elevated platforms at observation points to the extent practicable.

## 6. Reporting

The holder of this IHA 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 marine mammal monitoring OR sixty calendar days prior to the issuance of any subsequent IHA for this project, whichever comes first. A final report must be prepared and submitted within thirty days following resolution of comments on the draft report from NMFS.
- (b) The marine mammal 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 driven or removed and by what method (*i.e.*, impact or vibratory).
  - iii. Weather parameters and water conditions during each monitoring period (*e.g.*, wind speed, percent cover, visibility, sea state), and estimated observable distance (if less than the harassment zone distance).
  - iv. The number of marine mammals observed, by species, relative to the pile location and if pile driving or removal 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 driven or removed for each sighting (if pile driving or removal was occurring at time of sighting).
- viii. Description of any marine mammal behavior patterns during observation, including direction of travel and estimated time spent within the Level A and Level B harassment zones while the source was active.
- ix. Number of individuals of each species (differentiated by month as appropriate) detected within the Level A and B harassment zones.
- 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. Submit all PSO datasheets and/or raw sighting data (in a separate file from the Final Report referenced immediately above).

(c) Reporting Injured or Dead Marine Mammals

In the event that personnel involved in the construction activities discover an injured or dead marine mammal, the IHA-holder must report the incident to the Office of Protected Resources (OPR) (301-427-8401), NMFS and to the Alaska regional stranding coordinator (907-586-7209) as soon as feasible. If the death or injury was clearly caused by the specified activity, the IHA-holder must immediately cease the specified activities until NMFS is able to review the circumstances of the incident and determine what, if any, additional measures are appropriate to ensure compliance with the terms of the IHA. The IHA-holder must not resume their activities until notified by NMFS.

The report must include the following information:

- i. Time, date, and location (latitude/longitude) of the first discovery (and updated location information if known and applicable);
- ii. Species identification (if known) or description of the animal(s) involved;
- iii. Condition of the animal(s) (including carcass condition if the animal is dead);

- iv. Observed behaviors of the animal(s), if alive;
  - v. If available, photographs or video footage of the animal(s); and
  - vi. General circumstances under which the animal was discovered.
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 one-time, one-year Renewal IHA following notice to the public providing an additional 15 days for public comments when (1) up to another year of identical, or nearly identical, activities are planned or (2) the specified activities would not be completed by the time this IHA expires and a Renewal would allow for completion of the activities, provided all of the following conditions are met:
- (a) A request for renewal is received no later than 60 days prior to the needed Renewal IHA effective date (recognizing that the Renewal IHA expiration date cannot extend beyond one year from expiration of the initial IHA).
  - (b) The request for renewal must include the following:
    - i. An explanation that the activities to be conducted under the requested Renewal IHA are identical to the activities analyzed under the initial IHA, are a subset of the activities, or include changes so minor (e.g., reduction in pile size) that the changes do not affect the previous analyses, mitigation and monitoring requirements, or take estimates (with the exception of reducing the type or amount of take).
    - 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 will remain the same and appropriate, and the findings in the initial IHA remain valid.

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

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Date

**Table 1. Authorized Amount of Taking, by Level A Harassment and Level B Harassment, by Species and Stock.**

Species		Level A Harassment Takes	Level B Harassment Takes	Total Takes
Humpback whale		--	119	119
Steller sea lion eDPS		--	1,200	1,200
Harbor seal		360	720	1,080
Dall's porpoise		20	60	80
Harbor porpoise		20	60	80
Killer whale	AK resident	--	40	40
	West coast transient			
	Northern resident			
	Gulf of Alaska, Aleutian Islands, and Bering Sea transient			
Gray whale		--	8	8
Pacific white-sided Dolphin		--	360	360
Minke whale		--	8	8

**Table 2. Shut-down and Monitoring Zones by Marine Mammal Hearing Group, Pile Size, and Pile Driving Method.**

<b>Pile Size</b>	<b>Low Frequency Cetacean Shutdown Isopleth (m)</b>	<b>Mid Frequency Cetacean Shutdown Isopleth (m)</b>	<b>High Frequency Shutdown Isopleth (m)</b>	<b>Phocid Pinniped Shutdown Isopleth (m)</b>	<b>Otariid Pinniped Shutdown Isopleth (m)</b>	<b>Level B Monitoring Zone (m)</b>
<b>Vibratory Pile Driving/Removal</b>						
30-inch piles up to 8 hrs	40	10	50	10		6,300
36- and 48-inch piles up to 8 hrs	90	10	50	10		12,500
<b>Impact Pile Driving</b>						
30-inch piles up to 500 strikes	500	40	50	10	40	2,200
30-inch piles 501 to 1,000 strikes	700					
30-inch piles 1,001 to 1,500 strikes	1,000					
36- and 48-inch piles up to 500 strikes	1,300	50	50	10	50	3,800
36- and 48-inch piles 501 to 1,000 strikes	2,000	70			80	

36- and 48- inch piles 1,001 to 1,500 strikes	2,600	90			100	
<b>DTH Socket</b>						
30-, 36-inch piles up to 3 hrs	1,300	50	50	10	50	12,500
30-, 36-inch piles 3 hrs – 6 hrs	2,000	70			70	
48-inch piles up to 2 hours	1,750	65			100	
48-inch piles >2 to 3 hrs	2,300	85			110	
48-inch piles >3 to 4 hours.	2,750	100				
<b>DTH Anchor</b>						
12-inch hole up to 6 hours	150	10	50	10		6,350