



## 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 the Sand Point City Dock Replacement Project in Sand Point, Alaska, when adhering to the following terms and conditions.

1. This Authorization is valid from August 1, 2018, through July 31, 2019.
2. This Authorization is valid only for activities associated with in-water construction work at the Sand Point City Dock Replacement Project in Sand Point, Alaska.
3. General Conditions
  - (a) A copy of this IHA must be in the possession of ADOT&PF, its designees, and work crew personnel operating under the authority of this IHA.
  - (b) The species and number of animals authorized for taking by Level A and Level B harassment are shown in Table 1 and include: harbor seal (*Phoca vitulina*), Steller sea lion (*Eumetopias jubatus*), harbor porpoise (*Phocoena phocoena*), Dall's porpoise (*Phocoenoides dalli*), killer whale (*Orcinus orca*; Eastern North Pacific Alaska Resident stock, Eastern North Pacific Gulf of AK, Aleutian Islands, and Bering Sea Transient stock), gray whale (*Eschrichtius robustus*), humpback whale (*Megaptera novaeangliae*), fin whale (*Balaenoptera physalus*), and minke whale (*Balaenoptera acutorostrata*).
  - (c) ADOT&PF shall conduct briefings between construction supervisors and crews and the marine mammal monitoring team prior to the start of all pile driving activity.
  - (d) For in-water heavy machinery work other than pile driving (*e.g.*, standard barges, tug boats, barge-mounted excavators), 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.

- (e) In-water construction work shall occur only during daylight hours.

#### 4. Prohibitions

(a) The taking, by incidental harassment only, is limited to the species listed under condition 3(b) above and by the numbers and degree listed in Table 1 of this notice. Any taking other than as indicated in Table 1, including any taking of any other species of marine mammal is prohibited and may result in the modification, suspension, or revocation of this Authorization.

#### 5. Mitigation Measures

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

##### (a) Shutdown Measures

(i) ADOT&PF shall establish a 100-meter shutdown zone and shall implement shutdown of pile driving activity if a marine mammal is detected within or approaching the specified zone.

(ii) Shutdown shall occur if low-frequency cetaceans (LF; i.e. fin whale, gray whale, minke whale), mid-frequency cetaceans (MF; i.e. killer whale), or high-frequency cetaceans (HF; Dall's porpoise) approach relevant Level A take zones during impact driving, as shown in Table 2.

(iii) ADOT&PF shall implement shutdown measures if the number of any allotted marine mammal takes reaches the limit under the IHA and if such marine mammals are sighted within the vicinity of the project area and are approaching the Level B harassment zone, as shown in Table 4.

(iv) If an animal for which take is authorized is sighted within the 100-meter shutdown zone, operations shall immediately cease. The animal will be counted as a Level B take assuming it is outside of the Level A take zones as delineated in Table 2 and Table 3.

- (b) ADOT&PF shall establish Level A harassment zones during impact driving as shown in Table 2.
  - (i) For impact pile driving, the Level A harassment zone defaults to the isopleth corresponding to the number of piles planned for installation on a given day as shown in Table 2.
  - (ii) After the first pile is driven, if no marine mammals have been observed within the radius of the corresponding Level A zone, then the Level A radius for the next pile shall be decreased to the next largest Level A radius. This pattern shall continue unless an animal is observed within the most recent shutdown zone radius, at which that specific shutdown radius shall remain in effect for the rest of the workday.
  - (iii) If piles of varying sizes are installed in a single day, the radius of the Level A zone shall default to the isopleth for the largest pile being driven on that workday.
- (c) ADOT&PF shall establish Level B harassment zones for impact and vibratory driving as shown in Table 4.
- (d) Soft Start
  - (i) When there has been downtime of 30 minutes or more without impact pile driving, the contractor shall initiate the driving with ramp-up procedures described below.
  - (ii) Soft start for impact hammers requires contractors to provide an initial set of strikes from the impact hammer at 40 percent energy, followed by no less than a 30-second waiting period. This procedure shall be conducted a total of three times before impact pile driving begins.
- (e) Pre-Activity Monitoring
  - (i) Prior to the start of daily in-water construction activity, or whenever a break in pile driving of 30 minutes or longer occurs, the observer(s) shall observe the shutdown and monitoring zones for a period of 30 minutes.
  - (ii) The shutdown zone shall be cleared when a marine mammal has not been observed within that zone for that 30-minute period.

(iii) If a marine mammal is observed within the shutdown zone, a soft start can proceed if the animal is observed leaving the zone or has not been observed for 30 minutes for medium and large-sized odontocetes and mysticetes and 15 minutes for small cetaceans and pinnipeds even if visibility of Level B zone is impaired.

(iv) If the Level B zone is not visible while work continues, exposures shall be recorded at the estimated exposure rate for each permitted species.

## 6. Monitoring

(a) Monitoring shall be conducted by qualified marine mammal observers (MMOs), who are trained biologists with the following minimum qualifications:

(i) Ability to conduct field observations and collect data according to assigned protocols;

(ii) Experience or training in the field identification of marine mammals, including the identification of behaviors;

(iii) Sufficient training, orientation, or experience with the construction operation to provide for personal safety during observations;

(iv) 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;

(v) 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; and

(vi) NMFS will require submission and approval of observer CVs.

- (b) Two independent observers (i.e., not construction personnel) shall be on site and actively observing the shutdown and disturbance zones during all pile driving and extraction activities.
- (c) 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.
- (d) Observers shall use their naked eye with the aid of binoculars, big-eye binoculars or spotting scope during all pile driving and extraction activities.
- (e) Monitoring location(s) shall be identified with the following characteristics:
  - (i) Unobstructed view of pile being driven; and
  - (ii) Unobstructed view of all water within the Level A (if applicable) and Level B harassment zones for pile being driven.
- (f) If waters exceed a sea-state which restricts the observers' ability to make observations within the marine mammal shutdown zone of 100 m (e.g., excessive sea state or fog), pile installation and removal shall cease. Pile driving shall not be initiated until the entire shutdown zone is visible.
- (g) If a marine mammal authorized for Level A take is present within the Level A harassment zone, a Level A take would be recorded. If Level A take reaches the authorized limit, then pile installation would be stopped as these species approach the Level A harassment area to avoid additional take of these species. □
- (h) If a marine mammal authorized for Level B take is present in the Level B harassment zone, pile driving activities or soft start may begin and a Level B take would be recorded.
- (i) If any marine mammal species for which take is not authorized or if a species for which authorization has been granted but the number of authorized takes has been met enters or approaches the ZOI all activities shall be shut down until the animal is seen leaving the ZOI or it has not been seen in the shutdown zone for 30 minutes for medium and large-

sized odontocetes and mysticetes and 15 minutes for small cetaceans and pinnipeds.

- (j) Marine mammal location shall be determined using a rangefinder and a GPS or compass.
- (k) Ongoing in-water pile installation may be continued during periods when conditions such as a, high sea state, fog, ice, rain, glare, or other conditions prevent effective marine mammal monitoring of the entire Level B harassment zone. MMOs would continue to monitor the visible portion of the Level B harassment zone throughout the duration of driving activities.
- (l) Post-construction monitoring shall be conducted for 30 minutes beyond the cessation of pile driving at end of day.

## 7. Reporting

The holder of this Authorization 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 and acoustic monitoring. This report shall detail the monitoring protocol, summarize the data recorded during monitoring, and estimate the number of marine mammals that may have been harassed, including the total number extrapolated from observed animals across the entirety of relevant monitoring zones. 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 following:
  - (i) Date and time that monitored activity begins or ends;
  - (ii) Construction activities occurring during each observation period;
  - (iii) Record of implementation of shutdowns, including the distance of animals to the pile and description of specific actions that ensued and resulting behavior of the animal, if any;
  - (iv) Weather parameters (e.g., percent cover, visibility);
  - (v) Water conditions (e.g., sea state, tide state);

(vi) Species, numbers, and, if possible, sex and age class of marine mammals;

(vii) Description of any observable marine mammal behavior patterns;

(viii) Distance from pile driving activities to marine mammals and distance from the marine mammals to the observation point;

(ix) Locations of all marine mammal observations; and

(x) Other human activity in the area.

(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 an injury (Level A harassment), serious injury, or mortality, ADOT&PF shall immediately cease the specified activities and report the incident to Jolie Harrison ([Jolie.Harrison@noaa.gov](mailto:Jolie.Harrison@noaa.gov)) Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, and Mandy Migura ([Mandy.Migura@noaa.gov](mailto:Mandy.Migura@noaa.gov)), Alaska Regional Stranding Coordinator, NMFS. The report must 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. Water depth;
6. Environmental conditions (e.g., wind speed and direction, Beaufort sea state, cloud cover, and visibility);
7. Description of all marine mammal observations and active sound source use in the 24 hours preceding the incident;

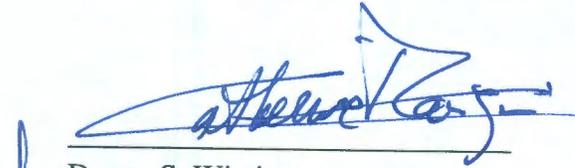
8. Species identification or description of the animal(s) involved;
9. Fate of the animal(s); and
10. Photographs or video footage of the animal(s).

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 Regional Stranding Coordinator, NMFS. The report must include the same information identified in 7(b)(i) of this IHA. Activities may continue while NMFS reviews the circumstances of the incident. NMFS shall 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 Regional Stranding Coordinator, NMFS, within 24 hours of the discovery. ADOT&PF shall provide photographs, 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

OCT 13 2017

Date

**Table 1. Authorized Take Numbers by Species**

Species (DPS/Stock)	Estimated Number of Individuals Potentially Exposed to the Level A Harassment Threshold	Estimated Number of Individuals Potentially Exposed to the Level B Harassment Threshold	Total Proposed Authorized Takes
Steller sea lion (wDPS)	0	960	960
Harbor seal (Cook Inlet/Shelikof Strait)	27	53	80
Harbor porpoise (Gulf of Alaska)	16	33	49
Dall's porpoise (Alaska)	0	4	4
Killer whale (Gulf of Alaska, Aleutian Islands, and Bering Sea transient or Alaska resident)	0	14	14
Humpback whale (Western North Pacific)	2	30	32
Fin whale (Northeast Pacific)	0	6	6
Gray whale (Eastern North Pacific)	0	2	2
Minke whale (Alaska)	0	3	3
<b>Total</b>	<b>45</b>	<b>1,105</b>	<b>1,150</b>

**Table 2. Level A Zone Isopleths During Impact Driving.**

Activity	Piles installed per day	Isopleths (m)				
		LF (Humpback whales)*	MF	HF (Harbor porpoises)*	PW (Harbor seals)*	OW
Impact Installation 30"	4	1,430	60	1,700	770	60
	3	1,180	50	1,410	630	50
	2	900	40	1,070	490	40
	1	570	20	680	310	30
Impact Installation 24" Dolphin	2	640	30	760	340	30
	1	400	20	480	220	30
Impact Installation 24" Fender	4	450	20	540	250	20
	3	380	20	450	200	20
	2	290	10	340	160	20
	1	180	10	220	100	10

\*Level A take is authorized for these species. Isopleths for these hearing groups have been rounded up to the nearest 10 m.

**Table 3. Level A Take Zones During Vibratory Pile Installation and Removal activities.**

Activity	Estimated Duration		Level A Harassment Zone (meters) (based on new Technical Guidance)				
	Hours per day	Days of effort	Cetaceans			Pinnipeds	
			LF	MF	HF	PW	OW
Vibratory Installation 30"	3	13	28.8	2.6	42.6	17.5	1.2
Vibratory Installation 24" Dolphin	2	2	6.8	0.6	10.1	4.2	0.3
Vibratory Installation 24" Fender	2	2	10.8	1	16	6.6	0.5
Vibratory Installation and/or removal <24" (18")	3	15	14.2	1.3	21	8.6	0.6
Vibratory Installation and/or removal < 24" (H-piles)	3	15	2.6	0.2	3.9	1.6	0.1

**Table 4. Level B Zone Isopleths during Impact and Vibratory Driving.**

<b>Activity</b>	<b>Level B Harassment Zone (meters)</b>
Vibratory Installation 30"	10,970
Vibratory Installation 24" Dolphin	5,420
Vibratory Installation 24" Fender	5,420
Vibratory Installation and/or removal < 24" (18" piles)	5,420
Vibratory Installation and/or removal < 24" (H-piles)	1,000
Impact Installation 30"	1,740
Impact Installation 24" Dolphin	1,590
Impact Installation 24" Fender	1,590