



INCIDENTAL HARASSMENT AUTHORIZATION

Jim Erickson 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 installation and removal in Juneau, Alaska, when adhering to the following terms and conditions.

1. This Incidental Harassment Authorization (IHA) is valid from January 1, 2020 through December 31, 2020.
2. This IHA is valid only for vibratory pile removal, vibratory pile installation, impact pile installation, and drilling associated with the Erickson Residence Marine Access Project in Auke Bay.
3. General Conditions
 - (a) A copy of this IHA must be in the possession of Mr. Erickson, his designees, work crew personnel, and Protected Species Observers (PSOs) operating under the authority of this IHA.
 - (b) The species authorized for taking are the humpback whale (*Megaptera novaeangliae*), minke whale (*Balaenoptera acutorostrata*), killer whale (*Orcinus orca*), harbor porpoise (*Phocoena phocoena*), Dall's porpoise (*Phocoenoides dalli*), Steller sea lion (*Eumetopias jubatus*), California sea lion (*Zalophus californianus*) and harbor seal (*Phoca vitulina*).
 - (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 species listed in condition 3(b) of this IHA is prohibited.
 - (e) The taking, by Level A harassment, Level B harassment, serious injury, or death, of marine mammal species not identified in condition 3(b) is prohibited.

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 driving (e.g., use of barge-mounted excavators, or dredging), if a marine mammal comes within



10 m, Mr. Erickson must cease operations and reduce vessel speed to the minimum level required to maintain steerage and safe working conditions.

- (b) Mr. Erickson is required to conduct briefings for construction supervisors and crews, the monitoring team, and Mr. Erickson's 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.
- (c) Mr. Erickson is required to employ PSOs per the Monitoring Measures described in section 5 of this IHA.
- (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), 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.
- (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.
- (f) Mr. Erickson 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) 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 monitoring zone (Table 3), pile driving and removal activities must shut down immediately using delay and shutdown procedures. Activities must not resume until the animal has been confirmed to have left the area or the observation time period, as indicated in condition 4(b) above, has elapsed.
- (h) All work must be conducted during daylight hours. If poor environmental conditions restrict full visibility of the shutdown zone(s), pile driving must be delayed until the entire shutdown zone is visible

5. Monitoring Measures

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

- (a) Marine mammal monitoring during pile driving and removal 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. Other PSOs may substitute education (degree in biological science or related field) or training for experience.
 - iii. Where a team of three 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. Mr. Erickson must submit PSO CVs for approval by NMFS prior to the onset of pile driving.

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 or sixty 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. This report must include an overall description of work completed, a narrative regarding marine mammal sightings, and associated PSO data sheets. Specifically, the report must include:
 - 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).
 - 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.

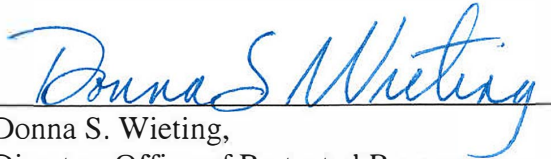
- vii. Distances and bearings of each marine mammal observed to the pile being driven or removed for each sighting (if pile driving or removal was occurring at time of sighting).
 - viii. Description of any marine mammal behavior patterns during observation, including direction of travel.
 - ix. Number 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 (a correction factor may be applied to total take numbers, as appropriate).
 - 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.
- (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, Mr. Erickson must immediately cease the specified activities and report the incident to the NMFS Office of Protected Resources (301-427-8401) and Alaska Region Stranding Coordinator (907-586-7209). 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 Mr. Erickson to determine what measures are necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. Mr. Erickson may not resume pile driving activities until notified by NMFS.
 - ii. In the event Mr. Erickson 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), Mr. Erickson must 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 Mr. Erickson to determine whether additional mitigation measures or modifications to the activities are appropriate.

- iii. In the event that Mr. Erickson 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), Mr. Erickson must report the incident to the Office of Protected Resources, NMFS, and the Alaska Region 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 one-year IHA renewal with an additional 15 days for public comments when (1) another year of identical or nearly identical activities as described in the Specified Activities section of this notice is planned or (2) the activities as described in the Specified Activities section of this notice would not be completed by the time the IHA expires and a second IHA would allow for completion of the activities beyond that described in the Dates and Duration section of this notice, 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:
 - i. An explanation that the activities to be conducted under the requested Renewal 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 because only a subset of the initially analyzed activities remain to be completed under the Renewal).
 - 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.



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

NOV 21 2019

Date

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

Species	Level A	Level B	Total Authorized take
Humpback whale	0	32	32
Minke whale	0	1	1
Killer whale	0	25	25
Harbor porpoise	8	40	48
Dall's porpoise	0	10	10
Steller sea lion	0	968	968
California sea lion	0	8	8
Harbor seal	16	400	416

Table 2. Shutdown Zones by Marine Mammal Hearing Group, Pile Size, and Pile Driving Method.

Activity	Shutdown Zone (m)				
	LF Cetaceans	MF Cetaceans	HF Cetaceans	Phocid Pinnipeds	Otariid Pinnipeds
Vibratory Timber Pile Removal	10	10	10	10	10
Vibratory Pile Driving (12.75-in)	10	10	15	10	10
Vibratory Pile Driving (20-in)	20	10	30	15	10
Drilling	75	10	105	45	10
Impact Pile Driving (12.75-in)	65	10	75	35	10
Impact Pile Driving (20-in)	135	10	160	75	10

Table 3. Monitoring Zones.

Activity	Monitoring zone (m)
Impact installation of 12.75-in piles	140
Impact installation of 20-in piles	1,000
Vibratory timber pile removal	1,360
Vibratory installation of 21.75-in piles	2,155
Vibratory installation of 20-in piles	5,415
Drilling	12,100