

INCIDENTAL HARASSMENT AUTHORIZATION

The San Francisco Bay Area Water Emergency Transportation Authority (WETA) 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 conducting their Downtown San Francisco Ferry Terminal Expansion Project, South Basin Improvements Project in San Francisco, California (CA), when adhering to the following terms and conditions.

1. This Incidental Harassment Authorization (IHA) is valid for one year from the date of issuance.
2. This IHA is valid only for pile driving and removal activities associated with the Downtown San Francisco Ferry Terminal Expansion Project in San Francisco Bay, CA.
3. General Conditions
 - (a) A copy of this IHA must be in the possession of WETA, its designees, and work crew personnel operating under the authority of this IHA.
 - (b) The species authorized for taking are summarized in Table 1.
 - (c) The taking 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.
 - (e) WETA must conduct briefings between construction supervisors and crews, marine mammal monitoring team, acoustical monitoring team, and WETA staff prior to the start of all pile driving or removal, 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) For in-water heavy machinery work other than pile driving or removal (*e.g.*, standard barges, tug boats, barge-mounted excavators, or clamshell equipment

used to place or remove material), if a marine mammal comes within 10 meters (m), operations must cease and vessels must reduce speed to the minimum level required to maintain steerage and safe working conditions.

- (b) For all pile driving or removal, WETA must implement shutdown zones to minimize or prevent injury to marine mammals. Table 2 outlines the shutdown zones for each pile driving activity.
- (c) If a species for which authorization has not been granted (including, but not limited to, Guadalupe fur seals and humpback whales) or if a species for which authorization has been granted but the authorized takes are met, approaches or is observed within the Level B harassment zone, activities must shut down immediately and must not restart until the animal(s) have been confirmed to have left the area.
- (d) WETA must establish monitoring protocols as described below.
 - (i) For all vibratory pile driving activities, one Protected Species Observer (PSO) must be employed to achieve optimal monitoring of the shutdown zones and the surrounding waters of the ferry terminal and San Francisco Bay. For all impact pile driving activities, two PSOs must be employed
 - (ii) The observer(s) must record all observations of marine mammals, regardless of distance from the pile being driven, as well as behavior and potential behavioral reactions of the animals. Observations within the ferry terminal must be distinguished from those in the nearshore waters of San Francisco Bay.
 - (iii) The observer(s) must be equipped for communication of all marine mammal observations to relevant personnel (*e.g.*, those necessary to effect activity delay or shutdown).
 - (iv) Pre-activity monitoring must take place from 30 minutes prior to initiation of pile driving activity and post-activity monitoring must continue through 30 minutes post-completion of pile driving activity. Pile driving may commence at the end of the 30-minute pre-activity monitoring period, provided the observer has determined that the shutdown zone is clear of marine mammals, which includes delaying start of pile driving activities if a marine mammal is sighted in the zone.
 - (v) If a marine mammal approaches or enters the shutdown zone during activities or pre-activity monitoring, all pile driving activities must be halted or delayed, respectively. If pile driving is halted or delayed due to the presence of a marine mammal, the activity may not resume or commence until either the animal has voluntarily left and been visually confirmed beyond the shutdown zone or 15 minutes have passed without re-detection of the animal. Pile driving activities include the time to install

or remove a single pile or series of piles, as long as the time elapsed between uses of the pile driving equipment is no more than 30 minutes.

- (e) WETA 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 30-second waiting period, then two subsequent reduced energy strike sets. 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.
- (f) WETA must employ a bubble curtain and wood cushion during impact pile driving of steel piles and must implement the following bubble curtain performance standards:
 - (i) The bubble curtain must distribute air bubbles around 100 percent of the piling perimeter for the full depth of the water column.
 - (ii) The lowest bubble ring must be in contact with the mudline for the full circumference of the ring, and the weights attached to the bottom ring must ensure 100 percent mudline contact. No parts of the ring or other objects must prevent full mudline contact.
 - (iii) WETA must require that construction contractors train personnel in the proper balancing of air flow to the bubblers, and must require that construction contractors submit an inspection/performance report for approval by WETA within 72 hours following the performance test. Corrections to the attenuation device to meet the performance standards must occur prior to impact driving.

5. Monitoring

The holder of this Authorization is required to conduct marine mammal monitoring during pile driving and removal and to conduct acoustic monitoring of background sound and project activities. Monitoring and reporting must be conducted in accordance with the Monitoring Plan.

- (a) WETA must collect sighting data and behavioral responses to pile driving or removal for marine mammal species observed in the monitoring zones (Table 3) during the period of activity. All observers must be trained in marine mammal identification and behaviors, and must have no other construction-related tasks while conducting monitoring.
- (b) WETA must adhere to the following conditions when selecting observers:
 - (i) Independent PSOs must be used (*i.e.*, not construction personnel);
 - (ii) At least one PSO must have prior experience working as a marine mammal observer during construction activities;

- (iii) Other PSOs may substitute education (degree in biological science or related field) or training for experience; and
 - (iv) WETA must submit PSO CVs for approval by NMFS.
- (c) WETA must ensure that observers have the following additional 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, times, and reasons for implementation of mitigation measures (or why mitigation was not implemented when required); and marine mammal behavior; and
 - (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.
- (d) Hydroacoustic monitoring must be conducted in consultation with the California Department of Fish and Wildlife (CDFW) during a minimum of ten percent of all impact pile driving activities for each pile size.
- (e) For vibratory pile driving, one PSO must be required and must be stationed at the best vantage point in order to properly see the entire shutdown and monitoring zones. For impact pile driving, two PSOs must be required and must be stationed at the best vantage points to properly see the entire shutdown and monitoring zones.
- (f) During all observation periods, PSOs must use binoculars and the naked eye to search continuously for marine mammals.
- (g) If the shutdown zones are obscured by fog or poor lighting conditions, pile driving and removal must not be initiated until that zone is visible. Should such conditions arise while pile driving is underway, the activity must be halted.
- (h) The shutdown and monitoring zones must be monitored for the presence of marine mammals before, during, and after any pile driving or removal activity.

- (i) PSOs must survey the Level A and Level B harassment zones on two separate days (no earlier than seven days before the first day of construction) to establish baseline observations. Monitoring must be timed to occur during various tides during daylight hours from publically accessible locations. Information collected from baseline monitoring must be used for comparison with results of monitoring during pile driving activities.

6. 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, 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 contain the informational elements described in the Monitoring Plan, at minimum (see <https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-construction-activities>), and must also include:
 - (i) Date and time that monitored activity begins and ends for each day conducted (monitoring period);
 - (ii) Construction activities occurring each daily observation period, including how many and what type of piles driven;
 - (iii) Deviation from initial proposal in pile numbers, pile types, average driving times, etc.;
 - (iv) Weather parameters in each monitoring period (*e.g.*, wind speed, percent cloud cover, visibility);
 - (v) Water conditions in each monitoring period (*e.g.*, sea state, tide state);
 - (vi) For each marine mammal sighting:
 - 1. Species, numbers, and, if possible, sex and age class of marine mammals;
 - 2. Description of any observable marine mammal behavior patterns, including bearing and direction of travel and distance from pile driving activity;
 - 3. Location and distance from pile driving to marine mammals and distance from the marine mammals to the observation point;
 - 4. Estimated amount of time that the animals remained in the zone;

5. Description of implementation of mitigation measures within each monitoring period (*e.g.*, shutdown or delay); and
6. Other human activity in the area within each monitoring period.

(vii) A summary of the following:

1. Total number of individuals of each species detected within the Level B zone, and estimated as taken if correction factor appropriate;
2. Total number of individuals of each species detected within the Level A zone and the average amount of time that they remained in that zone;
3. Daily average number of individuals of each species detected within the Level B zone and estimated as taken, if appropriate; and
4. 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 an injury (Level A harassment), serious injury, or mortality, WETA must immediately cease the specified activities and report the incident to the Office of Protected Resources (301-427-8401), NMFS, and the West Coast Stranding Coordinator (866-767-6114), 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 must not resume until NMFS is able to review the circumstances of the prohibited take. NMFS will work with WETA to determine what measures are necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. WETA may not resume their activities until notified by NMFS.

- (ii) In the event that WETA 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), WETA must immediately report the incident to the Office of Protected Resources, NMFS, and the West Coast 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 WETA to determine whether additional mitigation measures or modifications to the activities are appropriate.

- (iii) In the event that WETA 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), WETA must report the incident to the Office of Protected Resources, NMFS, and the West Coast Stranding Coordinator, NMFS, within 24 hours of the discovery. WETA must 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.

Date

Table 1. Authorized take numbers, by species.

Species	Takes by Level A harassment	Takes by Level B harassment	Total Takes Authorized
Harbor seal	20	83	103
Northern fur seal	0	10	10
California sea lion	8	92	100
Northern elephant seal	0	13	13
Gray whale	0	4	4
Bottlenose dolphin	0	30	30
Harbor porpoise	0	32	32

Table 2. Minimum radial distance to shutdown zones.

Pile Size and Installation Method	Shutdown Zone (m)				
	Low-Frequency Cetaceans	Mid-Frequency Cetaceans	High-Frequency Cetaceans	Phocid Pinnipeds	Otariid Pinnipeds
24-in Vibratory	10	10	10	10	10
24-in Impact	420	15	500	30 for harbor seals, 224 for all other species	16
30-in Vibratory	10	10	10	10	10
30-in Impact	420	15	500	30 for harbor seals, 224 for all other species	16
36-in Vibratory	10	10	10	10	10
36-in Impact	800	30	955	30 for harbor seals, 430 for all other species	30

Table 3. Monitoring zones.

Pile Size and Installation Method	Monitoring Zone (m)
24-in Vibratory	651
24-in Impact	341
30-in Vibratory	450
30-in Impact	341
36-in Vibratory	940
36-in Impact	541