



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Silver Spring, MD 20910

MAY 31 2018

Michael Gougherty
San Francisco Bay Area Water Emergency Transportation Authority
Pier 9, Suite #111, The Embarcadero
San Francisco, CA 94111

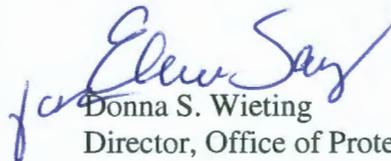
Dear Mr. Gougherty:

Enclosed is an Incidental Harassment Authorization (IHA) issued to the San Francisco Bay Water Emergency Transit Authority, under the authority of Section 101(a)(5)(D) of the Marine Mammal Protection Act (16 U.S.C. 1361 *et seq.*), to harass small numbers of marine mammals, by Level B harassment, incidental to the Ferry Terminal Expansion Project, Small Basin Improvements Project from June 1, 2018 through May 31, 2019.

You are required to comply with the conditions contained in the IHA. In addition, you must submit reports to the National Marine Fisheries Service's (NMFS) Office of Protected Resources within 90 days of its completion. The IHA requires monitoring of marine mammals by qualified individuals before, during, and after pile driving and vibratory removal activities and reporting of marine mammal observations, including species, numbers, and behavioral modifications potentially resulting from this activity.

If you have any questions concerning the IHA or its requirements, please contact Amy Fowler, Office of Protected Resources, NMFS, at 301-427-8461.

Sincerely,


Donna S. Wieting
Director, Office of Protected Resources

Enclosures



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NATIONAL MARINE FISHERIES SERVICE
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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 June 1, 2018 through May 31, 2019.
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 shall 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 shall cease and vessels shall reduce speed to the minimum level required to maintain steerage and safe working conditions.

- (b) For all pile driving or removal, WETA shall 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 shall shut down immediately and shall not restart until the animal(s) have been confirmed to have left the area.
- (d) WETA shall establish monitoring protocols as described below.
 - (i) For all vibratory pile driving activities, one Protected Species Observer (PSO) shall 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 shall be employed
 - (ii) The observer(s) shall 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 shall be distinguished from those in the nearshore waters of San Francisco Bay.
 - (iii) The observer(s) shall 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 shall take place from 30 minutes prior to initiation of pile driving activity and post-activity monitoring shall 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 shall 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 shall 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 shall 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 shall employ a bubble curtain and wood cushion during impact pile driving of steel piles and shall 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 shall be in contact with the mudline for the full circumference of the ring, and the weights attached to the bottom ring shall ensure 100 percent mudline contact. No parts of the ring or other objects shall prevent full mudline contact.
 - (iii) WETA shall require that construction contractors train personnel in the proper balancing of air flow to the bubblers, and shall 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 shall 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 shall be conducted in accordance with the Monitoring Plan.

- (a) WETA shall 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 shall be trained in marine mammal identification and behaviors, and shall have no other construction-related tasks while conducting monitoring.
- (b) WETA shall 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 shall submit PSO CVs for approval by NMFS.
- (c) WETA shall 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 shall 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 shall be required and shall be stationed at the best vantage point in order to properly see the entire shutdown and monitoring zones. For impact pile driving, two PSOs shall be required and shall be stationed at the best vantage points to properly see the entire shutdown and monitoring zones.
- (f) During all observation periods, PSOs shall 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 shall not be initiated until that zone is visible. Should such conditions arise while pile driving is underway, the activity shall be halted.
- (h) The shutdown and monitoring zones shall be monitored for the presence of marine mammals before, during, and after any pile driving or removal activity.

- (i) PSOs shall 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 shall be timed to occur during various tides during daylight hours from publically accessible locations. Information collected from baseline monitoring shall 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 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 Monitoring Plan, at minimum (see <https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-construction-activities>), and shall 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 shall 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 shall 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.

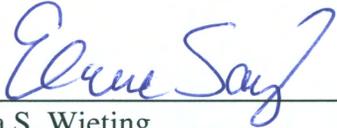
- (ii) In the event that WETA discovers an injured or dead marine mammal, and the lead observer determines that the cause of the injury or death is unknown and the death is relatively recent (e.g., in less than a moderate state of decomposition), WETA shall immediately report the incident to the Office 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 shall report the incident to the Office of Protected Resources, NMFS, and the West Coast Stranding Coordinator, NMFS, within 24 hours of the discovery. WETA shall 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.
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 described in the Dates and Duration section, 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.



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

MAY 31 2018

Date

Table 1. Authorized take numbers, by species

Species	Authorized Take	
	Level A	Level B
Harbor seal	63	236
California sea lion	14	286
Northern elephant seal	0	26
Northern fur seal	0	10
Harbor porpoise	0	32
Gray whale	0	4
Bottlenose dolphin	0	30

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