



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

Department Of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Service

INCIDENTAL HARASSMENT AUTHORIZATION

The America's Cup Event Authority (ACEA) and the Port of San Francisco (Port) are 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 specified activities associated with the 34th America's Cup (AC34) in San Francisco Bay.

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 activities, helicopter operations, and fireworks displays associated with AC34 in San Francisco Bay.
3. General Conditions
 - (a) A copy of this IHA must be in the possession of ACEA/Port, their designees, and personnel operating under the authority of this IHA.
 - (b) The species authorized for taking are the harbor seal (*Phoca vitulina*), California sea lion (*Zalophus californianus*), harbor porpoise (*Phocoena phocoena*), and elephant seal (*Mirounga angustirostris*).
 - (c) The taking, by Level B harassment only, is limited to the species listed in condition 3(b). See Table 1 (attached) for numbers of take authorized.
 - (d) The taking by injury (Level A harassment), serious injury, or death of any of the species listed in item 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) The ACEA/Port shall conduct briefings between construction supervisors and crews, marine mammal monitoring team, acoustical monitoring team, and other relevant staff prior to the start of all pile driving activity, and when new personnel join the work, in order to explain responsibilities, communication procedures, marine mammal monitoring protocol, and operational procedures. Similar briefings shall be conducted with appropriate personnel prior to race events.
 - (f) The ACEA/Port shall comply with applicable equipment noise standards and ensure that all construction equipment has noise control devices no less effective than those provided on the original equipment.

4. Mitigation Measures

In order to ensure the least practicable impact on the species listed in condition 3(b), the holder of this Authorization is required to implement the following mitigation measures:

- (a) During impact pile driving, the ACEA/Port shall implement a minimum shutdown zone of 10 m radius around the pile, to be effective for all marine mammals. If a marine mammal comes within this zone or appears to be approaching this zone, such operations shall cease. No marine mammal should be exposed to sound pressure levels (SPL) equaling or exceeding 180/190 dB rms (re 1 μ Pa) for cetaceans and pinnipeds, respectively, in order to prevent unauthorized Level A harassment. Vibratory pile driving is expected to produce SPLs below 180 dB rms; however, if acoustical monitoring shows that SPLs do exceed this threshold then a minimum shutdown zone of 10 m shall similarly be implemented.
- (b) Monitoring of impact pile driving shall take place from 30 minutes prior to initiation of pile driving activity, throughout the time required to drive a pile, and through 30 minutes post-completion of pile driving activity. Pile driving may commence when, after 30 minutes of pre-activity monitoring, observers have declared the shutdown zone clear of marine mammals. The shutdown zone must be determined to be clear during periods of good visibility (i.e., the entire shutdown zone and surrounding waters within the disturbance zone must be visible to the naked eye). Monitoring of vibratory pile driving shall occur for the same duration although establishment of a shutdown zone is not applicable.
- (c) If a marine mammal approaches or enters the shutdown zone, all pile driving activities at that location shall be halted. If pile driving is halted or delayed at a specific location due to the presence of a marine mammal, the activity 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 re-detection of the animal.
- (d) Monitoring shall be conducted by qualified observers, as described in the Monitoring Plan. Trained observers shall be placed from the best vantage point(s) practicable to monitor for marine mammals and implement shutdown or delay procedures when applicable through communication with the equipment operator.
- (e) A cushion block shall be used for sound attenuation during impact pile driving operations.
- (f) The ACEA/Port shall use soft-start techniques recommended by NMFS for all pile driving. The soft-start requires contractors to initiate noise from vibratory hammers for 15 seconds at reduced energy followed by a 30-second waiting period. This procedure shall be repeated two additional times. For impact driving, contractors shall be required to provide an initial set of three strikes from the impact hammer at forty percent energy, followed by a 30-second waiting period, then two subsequent three-strike sets.
- (g) Impact pile driving shall only be conducted during daylight hours and shall only be initiated in periods of good visibility. Only one impact pile driver may be operated

simultaneously.

- (h) The ACEA/Port shall adjust shutdown zones as necessary to prevent Level A harassment of marine mammals, on the basis of the results of acoustic monitoring. Any necessary adjustments shall be made in coordination with NMFS no later than one week after completion of acoustic monitoring. The shutdown zone established for impact pile driving shall not be made smaller.
- (i) Helicopters shall maintain a buffer of at least 1,000 ft (vertically and horizontally) around Alcatraz Island and Crissy Beach Wildlife Protection Area, shall avoid direct overflights of the Pier 39 haul-out, and shall not fly lower than 100 ft above sea level.
- (j) Fireworks displays shall be limited to four events, with two up to 30 minutes and two up to 45 minutes in duration.

5. Monitoring

The holder of this Authorization is required to conduct acoustic and marine mammal monitoring. Acoustic monitoring and reporting shall be conducted in accordance with the Monitoring Plan and this IHA.

- (a) The ACEA/Port shall collect sighting data and behavioral responses to pile driving for marine mammal species observed in the region of activity 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) Initial disturbance zones for pile driving shall be established with 50 m radius for impact pile driving and 1,000 m radius for vibratory pile driving. These shall be established as points of reference for observers; however, observers shall record all observations of marine mammals and marine mammal behavior whether inside or outside of these zones.
- (c) Monitoring shall occur as follows:
 - i. All impact pile driving shall be monitored.
 - ii. For vibratory pile driving, a minimum of one-third of total pile driving days shall be monitored at each specific location, to include the first two days of activity at each location and any anticipated days of heightened activity. Monitored days shall otherwise be typical of pile driving activity (i.e., monitoring should not occur on partial work days).
 - iii. For helicopter operations, ACEA/Port shall monitor the pinniped haul-out at Pier 39 for the first five days when helicopter flight patterns are most likely to affect the haul-out. After these five days, if disturbance of pinnipeds is much less than anticipated, monitoring may be discontinued with NMFS' concurrence. If the degree of disturbance is as anticipated, monitoring shall occur for a minimum of one-third of total days of helicopter operations.

- iv. Monitoring of fireworks displays shall include pre- and post-event censuses in the acute fireworks impact area. The pre-event census shall occur as close to the event as possible and shall be conducted for no less than 30 minutes; the post-event census shall occur no later than the morning after the display and shall be conducted for no less than 30 minutes. Monitoring during the display shall also be conducted for the pinniped haul-out at Pier 39.
- (d) For all marine mammal monitoring, the information shall be recorded as described in the Monitoring Plan and shall include, at minimum, the following:
- i. The specific nature of the event during which the observation was made;
 - ii. The time of first sighting and duration of observation;
 - iii. The specific location of the observer and estimated distance and direction to the animal;
 - iv. For pile driving and fireworks, the specific location of the pile being driven or display; for helicopter operations, the estimated distance, elevation, and direction of travel of the aircraft in relation to the haul-out.
 - v. The species, number of animals, and sex/age class if possible;
 - vi. A description of any observed behavior;
 - vii. Description of environmental conditions correlated by condition type to observations; and
 - viii. A record of all mitigation measures implemented in response to marine mammal observations (e.g., shutdown of pile driving).
- (e) The ACEA/Port shall conduct acoustic monitoring sufficient to adequately characterize:
- i. Ambient sound at representative locations of the San Francisco waterfront;
 - ii. Source levels of underwater sound for impact and vibratory pile driving;
 - iii. Site-specific sound propagation.

6. Reporting

The holder of this Authorization is required to:

- (a) Submit a draft acoustic monitoring report to NMFS within 30 days of the completion of acoustic measurements. A final report shall be prepared and submitted within 30 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.

- (b) Submit a draft comprehensive report on all marine mammal monitoring conducted under the IHA 90 days prior to the desired date of validity for any subsequent IHA, or within 90 days of the expiration of the IHA, whichever comes first. A final report shall be prepared and submitted within 30 days following resolution of comments on the draft report. This report must contain the informational elements described in the Monitoring Plan and this IHA, at minimum.
- (c) Reporting shall address, at minimum, the following categories of information:
 - (i) Specifics of the activity: date, time, and location; observation conditions correlated to observer effort; pile driving activity specifications (e.g., size and type of piles, hammer and sound attenuation device specifications);
 - (ii) Discussion of incidental take, including (1) records of all marine mammal observations as well as observed incidental take events; (2) for vibratory pile driving, the total estimated amount of incidental take based on extrapolation of observed take; and (3) estimates of take for helicopter operations and fireworks displays. Marine mammal observations should be presented such that the reader can follow and understand multiple observations and/or a sequence of behavioral observations for the same animal.
 - (iii) Description of observed marine mammal behavior, including correlations of observed behavior to activity, including distance to pile being driven or other source of disturbance; and discussion of sensitivity of hauled-out pinnipeds to helicopter overflights and/or fireworks displays as described previously.
 - (iv) Discussion of mitigation, including description of any actions performed to minimize impacts to marine mammals; and times when pile driving is stopped or delayed due to presence of marine mammals within shutdown zones and time when pile driving resumes.
 - (v) Any recommendations for improving efficacy and efficiency of monitoring and/or mitigation.
 - (vi) Results of acoustic monitoring, including the following: (1) a description of monitoring equipment and protocols; (2) distance from hydrophones to source; (3) depth of hydrophones; (4) event-specific measurements as well as overall mean source levels (peak and rms SPLs) and distances to thresholds; (5) ambient sound measurements.
- (d) 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, ACEA/Port shall immediately cease the specified activities and report the incident to the Chief of the Permits and Conservation Division (301-427-8425), Office of Protected Resources, NMFS, and the Southwest Regional Stranding

Coordinator (562-980-3230), 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 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 ACEA/Port to determine what measures are necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. ACEA/Port may not resume their activities until notified by NMFS.

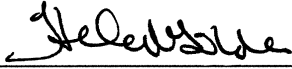
- (ii) In the event that ACEA/Port discovers an injured or dead marine mammal, and the lead observer determines that the cause of the injury or death is unknown and the death is relatively recent (e.g., in less than a moderate state of decomposition), ACEA/Port shall immediately report the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, and the Southwest Regional 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 ACEA/Port to determine whether additional mitigation measures or modifications to the activities are appropriate.

- (iii) In the event that ACEA/Port 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), ACEA/Port shall report the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, and the Southwest Regional Stranding Coordinator, NMFS, within 24 hours of the discovery. ACEA/Port 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 the authorized taking is having more than a negligible impact on the species or stock of affected marine mammals.

JUL 31 2012



Helen M. Golde,
Acting Director, Office of Protected Resources,
National Marine Fisheries Service.

Date

Table 1. Authorized take numbers, by species

Species	Authorized Take
California sea lion (<i>Zalophus californianus</i>)	14,063
Harbor seal (<i>Phoca vitulina</i>)	686
Harbor porpoise (<i>Phocoena phocoena</i>)	63
Elephant seal (<i>Mirounga angustirostris</i>)	2