



INCIDENTAL HARASSMENT AUTHORIZATION

The U.S. Navy (Navy) 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 Naval Base San Diego Pier 6 Replacement Project in San Diego, CA, when adhering to the following terms and conditions.

1. This Incidental Harassment Authorization (IHA) is valid from October 1, 2021 through September 30, 2022.
2. This IHA is valid only for in water construction activities associated with the Naval Base San Diego Pier 6 Replacement Project in San Diego, CA.
3. General Conditions
 - (a) A copy of this IHA must be in the possession of the Navy, its designees, work crew personnel, and Protected Species Observers (PSOs) operating under the authority of this IHA.
 - (b) The species authorized for taking are California sea lions (*Zalophus californianus*).
 - (c) The taking, by Level 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 injury (Level A harassment), 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, if a marine mammal comes within 10 m, the Navy must cease operations and reduce vessel speed to the minimum level required to maintain steerage and safe working conditions.



- (b) The Navy is required to conduct briefings for construction supervisors and crews, the monitoring team, and Navy 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) The Navy is required to employ up to 4 PSOs per the Marine Mammal Monitoring Plan, dated November 2020, and Monitoring Measures described in section 5 of this IHA.
- (d) Marine mammal monitoring within the zones identified in Table 2 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 (Table 3) clear of marine mammals. In the event of a delay or shutdown of activity resulting from marine mammals in the shutdown zone (Table 3), their behavior must be monitored and documented until they leave of their own volition, at which point the activity may begin.
- (e) If a marine mammal is entering or is observed within an established shutdown zone (Table 3), 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 of marine mammals.
- (f) Should environmental conditions deteriorate such that marine mammals within the entire shutdown zone would not be visible (e.g., fog, heavy rain), pile driving and removal must be delayed until the PSO is confident marine mammals within the shutdown zone could be detected.
- (g) The Navy 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.
- (h) 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 2), pile driving and removal activities must shut down immediately using delay and shut-down 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.

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 must be conducted in accordance with Marine Mammal Monitoring Plan, dated November 2020.
- (b) 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. The Navy must submit PSO CVs for approval by NMFS prior to the onset of pile driving.
 - v. PSO locations are at: (1) the pile driving site or best vantage point practicable to monitor the shutdown zones; (2) across from the project location along Incheon Road at Naval Amphibious Base Coronado, (3) For activities with Level B harassment zones larger than 400 m, two additional PSOs will be located in a small boat. The boat will conduct a pre-activity survey of the entire monitoring area prior to in-water construction. The boat will start from south of the project area (where potential marine mammal occurrence is lowest) and proceed to the north. When the boat arrives near the northern boundary of the Level B harassment zone (e.g., just north of the western side of the Coronado Bridge as depicted in the Figures in the monitoring plan) it will set up station so the PSOs are best situated to detect any marine mammals that may approach from the north. The two PSOs aboard will split monitoring duties in order to monitor a 360 degree sweep around the vessel with each PSO responsible for 180 degrees of observable area.
- (c) The Navy is required to conduct hydroacoustic monitoring of at least three piles for each installation or removal method.

6. Reporting

The holder of this IHA is required to:

(a) Submit a draft report on all marine mammal 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.

(b) The marine mammal report must contain the informational elements described in the Monitoring Measures described in Marine Mammal Monitoring Plan, dated November 2020, including, but not limited to:

- 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 and estimated time spent within the Level A and Level B harassment zones while the source was active.
- ix. Number of individuals of each species (differentiated by month as appropriate) detected within the monitoring zone.
- 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.

- xii. Submit all PSO datasheets and/or raw sighting data (in a separate file from the Final Report referenced immediately above).
- (c) The acoustic monitoring report must, at minimum, include the following:
- i. Hydrophone equipment and methods: recording device, sampling rate, distance (m) from the pile where recordings were made; depth of recording device(s).
 - ii. Type of pile being driven or removed, substrate type, method of driving or removal during recordings.
 - iii. For impact pile driving: Pulse duration and mean, median, and maximum sound levels (dB re: 1 μ Pa): cumulative sound exposure level (SELcum), peak sound pressure level (SPLpeak), and single-strike sound exposure level (SELS-s).
 - iv. For vibratory removal and other non-impulsive sources: Mean, median, and maximum sound levels (dB re: 1 μ Pa): root mean square sound pressure level (SPLrms), cumulative sound exposure level (SELcum).
 - v. Number of strikes (impact) or duration (vibratory or other non-impulsive sources) per pile measured, one-third octave band spectrum and power spectral density plot.
 - vi. Hydroacoustic monitoring results can be used to adjust the size of the Level B harassment and monitoring zones after a request is made and approved by NMFS.
- (d) Reporting Injured or Dead Marine Mammals

In the event that personnel involved in the construction activities discover an injured or dead marine mammal, the IHA-holder shall report the incident to the Office of Protected Resources (OPR) (301-427-8401), NMFS and to the West Coast regional stranding coordinator (562-980-3264) as soon as feasible. If the death or injury was clearly caused by the specified activity, the IHA-holder must immediately cease the specified activities until NMFS is able to review the circumstances of the incident and determine what, if any, additional measures are appropriate to ensure compliance with the terms of the IHA. The IHA-holder must not resume their activities until notified by NMFS.

The report must include the following information:

- i. Time, date, and location (latitude/longitude) of the first discovery (and updated location information if known and applicable);
 - ii. Species identification (if known) or description of the animal(s) involved;
 - iii. Condition of the animal(s) (including carcass condition if the animal is dead);
 - iv. Observed behaviors of the animal(s), if alive;
 - v. If available, photographs or video footage of the animal(s); and
 - vi. General circumstances under which the animal was discovered.
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-time one-year Renewal IHA following notice to the public providing an additional 15 days for public comments when (1) up to another year of identical or nearly 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 Renewal 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 the needed Renewal IHA effective date (recognizing that the Renewal IHA expiration date cannot extend beyond one year from expiration of the initial IHA).
 - (b) The request for renewal must include the following:
 - i. An explanation that the activities to be conducted under the requested Renewal IHA 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).
 - 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

Date

Table 1. Authorized Amount of Taking, by Level A harassment and Level B harassment, by species and stock.

Species	Authorized Take	
	Level B	Level A
California sea lion (<i>Zalophus californianus</i>) U.S. Stock	1000	0

Table 2. Level B Harassment Monitoring Zones by Pile Driving Scenario.

Pile Driving Activity		Radial Distance or Maximum Modeled Length x Width (m)
Method	Pile Type	Level B
Vibratory Extraction	12-inch timber/plastic	2167 x 1055
	20 and 24-inch concrete	6,990 x 1,173
	16-inch steel	7,140 x 1,595
Water Jetting	20-inch concrete	1359
Underwater Chainsaw	12 to 24-inch concrete	398
Small Pile Clipper	12-inch timber/plastic	736
Large Pile Clipper	20 to 24-inch concrete	2154
Two Large Pile Clippers	20 to 24-inch concrete	3415
Impact Hammer	20 and 24-inch concrete	192
	16-inch fiberglass	<10

Table 3. Shut-down Zones (in meters).

Pile Driving Activity	Otariid Pinnipeds
Any	20