

INCIDENTAL HARASSMENT AUTHORIZATION

The California Department of Fish and Wildlife – Central Region (hereinafter referred to as CDFW), 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 construction activities for tidal marsh restoration within Elkhorn Slough (Monterey, CA) when adhering to the following terms and conditions.

1. This IHA is valid for one year from the date of issuance, with the project start date expected in January 2020, after all permits are secured.
2. This IHA is valid only for construction activities associated the Elkhorn Slough Tidal Marsh Restoration Project, Phase II, in in Elkhorn Slough (Monterey, CA).
3. *General Conditions*
 - (a) A copy of this IHA must be in the possession of, its designees, and work crew personnel operating under the authority of this IHA.
 - (b) The species authorized for taking is the California stock of Pacific harbor seals (*Phoca vitulina richardii*).
 - (c) The taking, by Level B harassment only, is limited to the species listed in condition 3(b). See Table 1 (below) for numbers of take authorized.
 - (d) The taking by injury (Level A harassment), serious injury, or death 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) The taking of any marine mammal in a manner prohibited under this IHA must be reported immediately to the Office of Protected Resources, NMFS.
 - (f) CDFW shall conduct briefings between construction supervisors and crews, marine mammal monitoring team, and CDFW staff prior to the start of all construction activities for tidal marsh restoration, 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) *Timing Restrictions:* Construction work shall occur only during daylight hours.
- (b) *Construction Activities:* For in-water, heavy machinery work, if a marine mammal comes within 10 m of such operations, operations must cease and vessels shall reduce speed to the minimum level required to maintain steerage and safe working conditions. In addition, the construction contractor shall begin

construction activities gradually each day (*e.g.*, by moving around the project area and starting equipment sequentially).

- (c) *Pupping Season:* Construction and isolated areas will be well established prior to pupping season (May to June, peaking in April/May) to allow seals plenty of time to seek alternative pupping locations. If a pup less than one week old (neonate) comes within 20 m of where heavy machinery is working, construction activities in that area will be delayed until the pup has left the area. In the event that a pup less than one week old remains within those 20 m, NMFS will be consulted to determine the appropriate course of action.

4. *Monitoring*

The holder of this Authorization is required to abide by the following monitoring conditions:

- (a) *Visual Monitoring*

Qualified Protected Species Observer (PSO) (a NMFS-approved biologist) shall be used to detect, document, and minimize impacts to marine mammals.

Qualifications for PSOs for visual monitoring include:

- (i) Visual acuity in both eyes (correction is permissible) sufficient for discernment of harbor seals on land or in the water with ability to estimate target size and distance; use of binoculars may be necessary to correctly identify the target;
- (ii) Advanced education in biological science or related field (undergraduate degree or higher required);
- (iii) Experience and ability to conduct field observations and collect data according to assigned protocols (this may include academic experience);
- (iv) Experience or training in the field identification of marine mammals, including the identification of behaviors;
- (v) Sufficient training, orientation, or experience with the construction operation to provide for personal safety during observations;
- (vi) 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 construction activities were conducted; dates and times when construction activities were suspended to avoid potential incidental injury from construction sound or visual disturbance of marine mammals observed; and marine mammal behavior; and
- (vii) 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.

- (b) *PSO Monitoring and Data Collection*

Monitoring shall be conducted before, during, and after construction activities (as described below). In addition, PSOs shall record all incidents of marine mammal occurrence, regardless of distance from activity, and shall document any

behavioral reactions in concert with distance from construction activities. PSOs will be placed at the best vantage point(s) practicable to monitor for marine mammals.

The PSO shall also conduct biological resources awareness training for construction personnel. The awareness training will be provided to brief construction personnel on identification of marine mammals (including neonates) and the need to avoid and minimize impacts to marine mammals. If new construction personnel are added to the project, the contractor shall ensure that the personnel receive the mandatory training before starting work. The PSO will have authority to stop construction if marine mammals appear distressed (evasive maneuvers, rapid breathing, inability to flush) or in danger of injury. Monitoring requirements also include:

- (i) The holder of this Authorization must designate at least one biologically-trained, on-site individual(s), approved in advance by NMFS, to monitor marine mammal species. The PSO will be trained in marine mammal identification and behaviors and are required to have no other construction-related tasks while conducting monitoring.
- (ii) PSOs shall be provided with the equipment necessary to effectively monitor for marine mammals in order to record species, behaviors, and responses to construction activities.
- (iii) *Pre-activity Monitoring:* At least 30 minutes prior to the start of all construction activities, the PSO(s) must conduct observations on the number, type(s), location(s), and behavior(s) of marine mammals.
- (iv) *Monitoring during Construction Activity:* To document disturbance and possible incidental take during construction activities, the monitoring protocols shall be implemented at *all times* when work is occurring, 1) in water or 2); within 100 m of tidal waters. The biological monitor will have the authority to stop project activities if marine mammals approach or enter the exclusion zone and/or at any time for the safety of any marine mammals. Work will commence only with approval of the biological monitor to ensure that no marine mammals are present in the exclusion zone.

Data collection during marine mammal monitoring shall consist of hourly counts of all marine mammals by species, number, sex, age class (including number of mom/pup pairs and neonates observed), a description of behavior (if possible), location, direction of movement, type of construction that is occurring, time construction activities starts and ends, any noise or visual disturbance, and time of the observation. When responses are observed, the type of take (*i.e.*, alert and flush, movement of more than one meter, or change in direction of movement) and the assumed cause (whether related to construction activities or not) shall be noted. Environmental conditions such as weather, visibility, temperature, tide level, current, and sea state shall also be recorded. A written log of dates and times of monitoring activity will be kept. The log shall report the following information:

- Time of PSO arrival on site;
- Time of the commencement of construction activities;
- Distances to all marine mammals relative to the disturbance;
- Observations, notes on marine mammal behavior during construction activities, as described above, and on the number and distribution observed in the project vicinity;
- For observations of all other marine mammals (if observed) the time and duration of each animal's presence in the project vicinity; the number of animals observed; the behavior of each animal, including any response to construction activities;
- Time of the cessation of construction activities;
- Time of PSO departure from site; and
- An estimate of the number (by species) of marine mammals that are known to have been disturbed by construction activities (based on visual observation) with a discussion of any specific behaviors those individuals exhibited. Disturbance must be recorded according to NMFS' three-point scale.

Individuals implementing the monitoring protocol will assess its effectiveness using an adaptive approach. PSOs will use their best professional judgment throughout implementation and seek improvements to these methods when deemed appropriate. Any modifications to protocol will be coordinated between NMFS and the CADFW.

- (v) *Post-activity Monitoring:* At least 30 minutes following the cessation of all construction activities, the PSO(s) must conduct observations on the number, type(s), location(s), and behavior(s) of marine mammals.

5. Reporting

- (a) The CADFW shall submit a draft report to NMFS within 90 days of the completion of marine mammal monitoring, or sixty days prior to the issuance of any subsequent IHA for this project (if required), whichever comes first. The report shall include marine mammal observations pre-activity, during-activity, and post-activity of construction, and shall also provide descriptions of any behavioral responses by marine mammals due to disturbance from construction activities and a complete description of total take estimate based on the number of marine mammals observed during the course of construction. If comments are received from the NMFS Office of Protected Resources on the draft report, a final report shall be submitted to NMFS within 30 days thereafter following resolution of comments on the draft report from NMFS. If no comments are received from NMFS, the draft report will be considered to be the final report. This report must contain the informational elements described above and in the monitoring plan of the application and at minimum shall also include:

(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, CADFw shall immediately cease the specified activities and report the incident to the NMFS' Office of Protected Resources and the West Coast Regional Stranding Coordinator. 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, tidal conditions, cloud cover, and visibility);
4. Description of all marine mammal observations and active sound
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 CADFw to determine what measures are necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. CADFw may not resume their activities until notified by NMFS.

(ii) In the event that CADFw discovers an injured or dead marine mammal, and the lead PSO 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), CADFw shall immediately report the incident to the NMFS' Office of Protected Resources and the West Coast Regional Stranding Coordinator.

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 the CADFw to determine whether additional mitigation measures or modifications to the activities are appropriate.

(iii) In the event that the CADFw discovers an injured or dead marine mammal, and the lead PSO 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), the CADFw shall report the incident to the NMFS' Office of Protected Resources and the West Coast Regional Stranding Coordinator within 24 hours of the discovery. CADFw shall provide photographs or video footage or other documentation of the stranded animal sighting to NMFS.

6. 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 Amount of Taking, by Level B harassment, by species and stock.

Species	Proposed Authorized Take		% population ⁴
	Level B	Level A	
A. Pacific Harbor Seal	417 ¹ max seals/day(2% ²)(180 days ³)= 1502	N/A	5%
1. Maximum number of seals observed/day between January 2018 and April 2019 by Reserve Otter Monitoring Project 2. % Take from Phase I 3. Number of construction days 4. Data from U.S. Pacific Marine Mammal Stock Assessments: 2015 (Carretta <i>et al.</i> 2015)			

Table 2. Authorized take numbers, by species

Species	Authorized Take
Harbor seal (<i>Phoca vitulina</i>)	471 seals, 1,502 instance of possible Level B harassment for 180 days during construction activities
Sea otter (<i>Enhydra lutris nereis</i>)	Refer to USFWS