

## 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 Incidental Harassment Authorization (IHA) is valid from the date of issuance through May 31, 2022.
2. This IHA is valid only for construction activities associated the Elkhorn Slough Tidal Marsh Restoration Project, Phase II Minhoto-Hester Restoration Area, in Elkhorn Slough (Monterey, CA).
3. General Conditions
  - (a) A copy of this IHA must be in the possession of CDFW, its designees, work crew personnel, and Protected Species Observers (PSOs) 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) CDFW must 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.
  - (f) The taking of any marine mammal in a manner prohibited under this IHA must be reported immediately to the Office of Protected Resources, NMFS.

### 4. Mitigation Measures

The holder of this Authorization is required to implement the following mitigation measures:

- (a) Timing Restrictions
  - (i) Construction work must occur only during daylight hours.

- (ii) Should environmental conditions deteriorate such that marine mammals within the entire shutdown zone would not be visible (e.g., fog, heavy rain), construction must be delayed until the Protected Species Observer (PSO) is confident marine mammals within the shutdown zone could be detected.
- (b) Visual Monitoring
  - (i) CDFW must fulfill monitoring requirements as described below. Required monitoring must be conducted by dedicated, trained, NMFS-approved PSO(s).
  - (ii) Level B Harassment Zone – PSOs shall establish a Level B harassment zone within 300 m of all construction activities.
  - (iii) When construction activities occur either, (1) in water or (2); within the boundaries of the two tidal restoration areas, Minhoto-Hester and Seal Bend identified in Figure 1, monitoring must occur every other day when work is occurring.
  - (iv) When construction activities occur near the “borrow” areas where marsh fill material is gathered, monitoring must occur every fifth day when work is occurring, unless the borrow area is more than 300 m from any area where marine mammals have been observed. Occurrence of marine mammals within the Level B harassment zone must be communicated to the construction lead to prepare for the potential shutdown when required.
- (c) Pre-construction clearance and Ramp-up – A 30-minute pre-clearance observation period must occur prior to the start of ramp-up and construction activities. CDFW must adhere to the following pre-clearance and ramp-up requirements:
  - (i) Construction activities must not be initiated if any marine mammal is within 10 m of planned operations. If a marine mammal is observed within 10 m of planned operations during the 30-minute pre-clearance period, ramp-up must not begin until the animal(s) has been observed exiting the zones or until an additional time period has elapsed with no further sightings (15 minutes for small odontocetes and pinnipeds and 30 minutes for all other species).
  - (ii) The construction contractor must begin construction activities gradually each day (e.g., ramp up by moving around the project area and starting equipment sequentially).
- (d) Shutdown Requirements
  - (i) For 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.

(ii) Pupping Season (March – July) –

1. Construction activities may not be initiated: (1) within 300 m of a mom/pup pair that is hauled out, or (2) within 100 m of a mom/pup pair in the water. If there is a gap in construction activities of more than an hour or if construction moves to a different area, this initiation protocol must again be implemented.
2. During site containment activities that are underway, heavy machinery must not approach closer than 100 m of where mothers and pups are actively hauled out.
3. If a pup less than one week old (neonate) comes within 20 m of where heavy machinery is working, construction activities in that area must be shutdown or 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.

- (f) Activities must cease if a marine mammal species for which take was not authorized, or a species for which authorization was granted but the authorized number of takes have been met, is observed by PSOs approaching or within the Level B harassment zone. Activities must not resume until the animal is confirmed to have left the area.

5. Monitoring

The holder of this Authorization is required to conduct marine mammal monitoring during construction activities. Monitoring must be conducted in accordance with the following requirements:

- (a) PSOs shall be used to detect, document, and minimize impacts to marine mammals, as well as communicate with and instruct relevant construction crew with regard to the presence of marine mammals and mitigation requirements. Independent PSOs (*i.e.*, not construction personnel) who have no other assigned tasks during monitoring periods must be used.
- (b) The PSOs will have the authority to stop project activities if marine mammals approach or enter the Level B harassment zone, the shutdown zones (described in 4.d. above), or at any time for the safety of any marine mammals. Work will commence only with approval of the PSOs to ensure that no marine mammals are within the shutdown zones, or in potential harm.
- (c) PSOs will be placed at the best vantage point(s) practicable to monitor for marine mammals within the Level B harassment zone defined above. If multiple construction activities occur simultaneously, enough PSOs must be on duty to monitor all Level B harassment zones.

- (d) 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) Successfully attained a bachelor's degree from an accredited college or university with a major in one of the natural sciences and a minimum of 30 semester hours or equivalent in the biological sciences and at least one undergraduate course in math or statistics. The educational requirements may be waived if the PSO has acquired the relevant skills through alternate experience. Requests for such a waiver must include written justification. Alternate experience that may be considered includes, but is not limited to (1) secondary education and/or experience comparable to PSO duties; (2) previous work experience conducting academic, commercial, or government-sponsored marine mammal surveys; or (3) previous work experience as a PSO; the PSO should demonstrate good standing and consistently good performance of PSO duties.
  - (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.
  - (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.
- (e) PSOs must be provided with the equipment necessary to effectively monitor for marine mammals in order to record species, the distance from species' location to the construction activities, behaviors, and responses to construction activities.
- (f) The PSO must 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. Monitoring requirements also include:

- (g) Data Collection- Monitoring shall be conducted before, during, and after construction activities (as described below). In addition, PSOs shall record any behavioral reactions in concert with distance from construction activities. PSOs must use standardized data forms, whether hard copy or electronic. We require that, at a minimum, the following information be reported:
  - (i) PSO names and affiliations
  - (ii) Time of PSO arrival on site
  - (iii) Time of the commencement of construction activities
  - (iv) Pre and post-activity Monitoring- A census of marine mammals in the project area and the area surrounding the project must be conducted at least 30 minutes prior to the beginning of construction on monitoring days, and again 30 minutes after the completion of construction activities. The following data will be collected:
    - 1. Environmental conditions (weather condition, tidal conditions, visibility, cloud cover, air temperature and wind speed).
    - 2. Numbers of each marine mammal species spotted
    - 3. Location of each species spotted, including distance from construction activity
    - 4. Status (in water or hauled out)
    - 5. Behavior
  - (v) Hourly counts - Conduct hourly counts of animals hauled out and in the water within at least the Level B harassment zone. The following data must be collected:
    - 1. Numbers of each species
    - 2. Location, including whether inside the Level B harassment zone; whether hauled out or in the water; and distance from construction activities (+/- 10 m)
    - 3. Time
    - 4. Tidal conditions
    - 5. Time construction activities start and end

6. Primary construction activities occurring during the past hour
  7. Any noise or visual disturbance
  8. Number of mom/pup pairs and neonates observed
  9. Notable behaviors, including foraging, grooming, resting, aggression, mating activity, and others
  10. Notes may include any of the following information to the extent it is feasible to record:
    - Age-class
    - Sex
    - Unusual activity or signs of stress
    - Any other information worth noting
- (vi) Construction related reactions - Record reaction observed in relation to construction activities including:
1. Tally of each reaction
  2. Time of reaction
  3. Concurrent construction activity and the assumed cause (whether related to construction activities or not) shall be noted
  4. Disturbance must be recorded according to NMFS' three-point pinniped disturbance scale (see Table 2)
  5. Location of animal during initial reaction and distance from the noted disturbance
  6. Direction of movement
  7. Activity before and after disturbance
  8. Status (in water or hauled out) before and after disturbance
- (vii) Post-activity Monitoring - At least 30 minutes following the cessation of all construction activities, the PSO(s) must conduct the same observations as listed above, in addition to the following:
1. Time of the cessation of construction activities
  2. Time of PSO departure from site

- (viii) For observations of all other marine mammals (if observed) the time, distance from construction activities (+/- 10 m), and duration of each animal's presence in the Level B Harassment Zone; the number of animals observed; the behavior of each animal, including any response to construction activities.
- (ix) 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 CDFW.

## 6. Reporting

The holder of this IHA is required to:

- (a) Submit a draft report on all monitoring conducted under the IHA 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:
  - (i) Summary of all activities conducted and sightings of protected species near the activities;
  - (ii) Full documentation of methods, results, and interpretation pertaining to all monitoring;
  - (iii) Summary of dates and locations of survey operations and all protected species sightings (dates, times, locations, activities, associated construction activities);
  - (iv) An extrapolation of the estimated takes by Level B harassment based on the number of observed disturbances within the Level B harassment zone and the percentage of time the Level B harassment zone was not monitored; and
  - (v) Submit all PSO datasheets and/or raw sighting data (in a separate file from

the Final Report referenced immediately above).

(b) Reporting injured or dead marine mammals:

(i) Discovery of injured or dead marine mammal – In the event that personnel involved in the survey activities covered by the authorization 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 California Stranding Coordinator (562-980-3230) as soon as feasible. The report must include the following information:

1. Time, date, and location (latitude/longitude) of the first discovery (and updated location information if known and applicable);
2. Species identification (if known) or description of the animal(s) involved;
3. Condition of the animal(s) (including carcass condition if the animal is dead);
4. Observed behaviors of the animal(s), if alive;
5. If available, photographs or video footage of the animal(s); and
6. 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.

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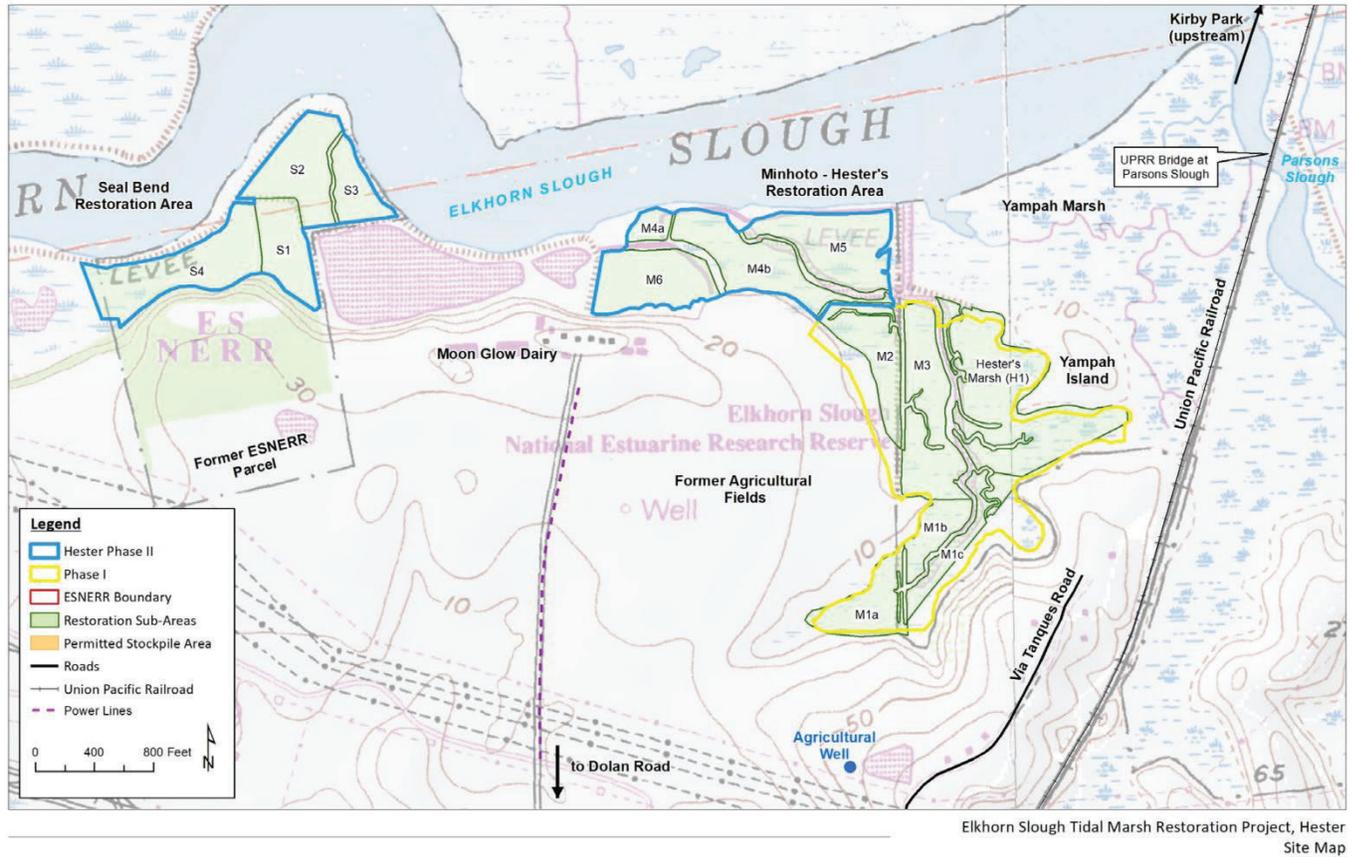
Acting Director, Office of Protected Resources,

National Marine Fisheries Service.

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Date

**Figure 1. Overview of Elkhorn Slough Tidal Marsh Restoration Project**



**Table 1. Authorized take numbers, by species**

Species	Authorized Take
Harbor seal ( <i>Phoca vitulina</i> )	2327 instances

**Table 2. Levels of Pinniped Behavioral Disturbance.**

Level	Type of response	Definition
1	Alert	Seal head orientation or brief movement in response to disturbance, which may include turning head towards the disturbance, craning head and neck while holding the body

		rigid in a u-shaped position, changing from a lying to a sitting position, or brief movement of less than twice the animal's body length.
2	Movement	Movements in response to the source of disturbance, ranging from short withdrawals at least twice the animal's body length to longer retreats over the beach, or if already moving a change of direction of greater than 90 degrees.
3	Flush	All retreats (flushes) to the water.