

## INCIDENTAL HARASSMENT AUTHORIZATION

The California Department of Fish and Wildlife – Central Region (hereinafter referred to as CDFW), and their designees are authorized under section 101(a)(5)(D) of the Marine Mammal Protection Act (MMPA; 16 U.S.C. 1371(a)(5)(D)), to incidentally harass marine mammals under the following conditions:

1. This Incidental Harassment Authorization (IHA) is valid for one year from the date of issuance.
2. This IHA authorizes take incidental to marsh restoration, as specified in CDFW's July 2021 IHA application, associated with the Elkhorn Slough Tidal Marsh Restoration Project, Phase III Seal Bend 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, Protected Species Observers (PSOs), and any other relevant designees of the Holder operating under the authority of this IHA at all times that activities subject to this IHA are being conducted..
  - (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 ensure that construction supervisors and crews, the monitoring team, and relevant CDFW staff are trained prior to the start of activities subject to this IHA, so that responsibilities, communication procedures, monitoring protocols, and operational procedures are clearly understood. New personnel joining during the project must be trained prior to commencing work.
  - (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, smoke), 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). CDFW must monitor the project area to the maximum extent possible based on the required number of PSOs, required monitoring locations, and environmental conditions.
  - (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 Seal Bend Restoration Area (Phase III) identified in Figure 1, monitoring must occur every other day when work is occurring.
  - (iv) When construction activities occur near the “borrow” area where marsh fill material is gathered, monitoring must occur every fifth day when work is occurring within 300m from seal haulouts or, if outside this area, when work is occurring less than 200m from the water. 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 should include any of the following information to the extent it is feasible to record:
    - Age-class
    - Sex
    - Unusual activity or signs of stress
    - Activity of seals observed within hour timeframe (*e.g.*, resting, swimming, etc.) and approximate number of seal that have arrived or left since last hourly count
    - 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) The Holder must submit its draft report(s) on all monitoring conducted under this IHA within 90 calendar days of the completion of monitoring or 60 calendar days prior to the requested issuance of any subsequent IHA for construction activity at the same location, whichever comes first. A final report must be prepared and submitted within 30 calendar days following receipt of any NMFS comments on the draft report. If no comments are received from NMFS within 30 calendar days of receipt of the draft report, the report shall be considered final.
- (b) 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. 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) Submit all PSO datasheets and/or raw sighting data (in a separate file from the Final Report referenced immediately above).

(c) Reporting injured or dead marine mammals:

In the event that personnel involved in the construction activities discover an injured or dead marine mammal, the Holder must report the incident to the Office of Protected Resources (OPR), NMFS (PR.ITP.MonitoringReports@noaa.gov and ITP.Corcoran@noaa.gov) and to the West Coast regional stranding network (1-866-767-6114) as soon as feasible. If the death or injury was clearly caused by the specified activity, the Holder must immediately cease the activities until NMFS OPR 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 this IHA. The 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);
- (i) Species identification (if known) or description of the animal(s) involved;
- (i) Condition of the animal(s) (including carcass condition if the animal is dead);
- (i) Observed behaviors of the animal(s), if alive;
- (i) If available, photographs or video footage of the animal(s); and
- (i) General circumstances under which the animal was discovered.

7. This Authorization may be modified, suspended or revoked if the Holder fails to abide by the conditions prescribed herein (including, but not limited to, failure to comply with monitoring or reporting requirements), or if NMFS determines: (1) the authorized taking is likely to have or is having more than a negligible impact on the species or stocks of affected marine mammals, (2) the authorized taking is likely to have or is having an unmitigable adverse impact on the availability of the affected species or stocks for subsistence uses, or (3) the prescribed measures are likely not or are not effecting the least practicable adverse impact on the affected species or stocks and their habitat.

## 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, activities (or a subset of those activities) are planned or (2) the specified activities will not be completed by the time the IHA expires and a Renewal would allow for completion of the activities, 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 (note a Renewal IHA expiration date cannot extend beyond one year from expiration of this IHA).

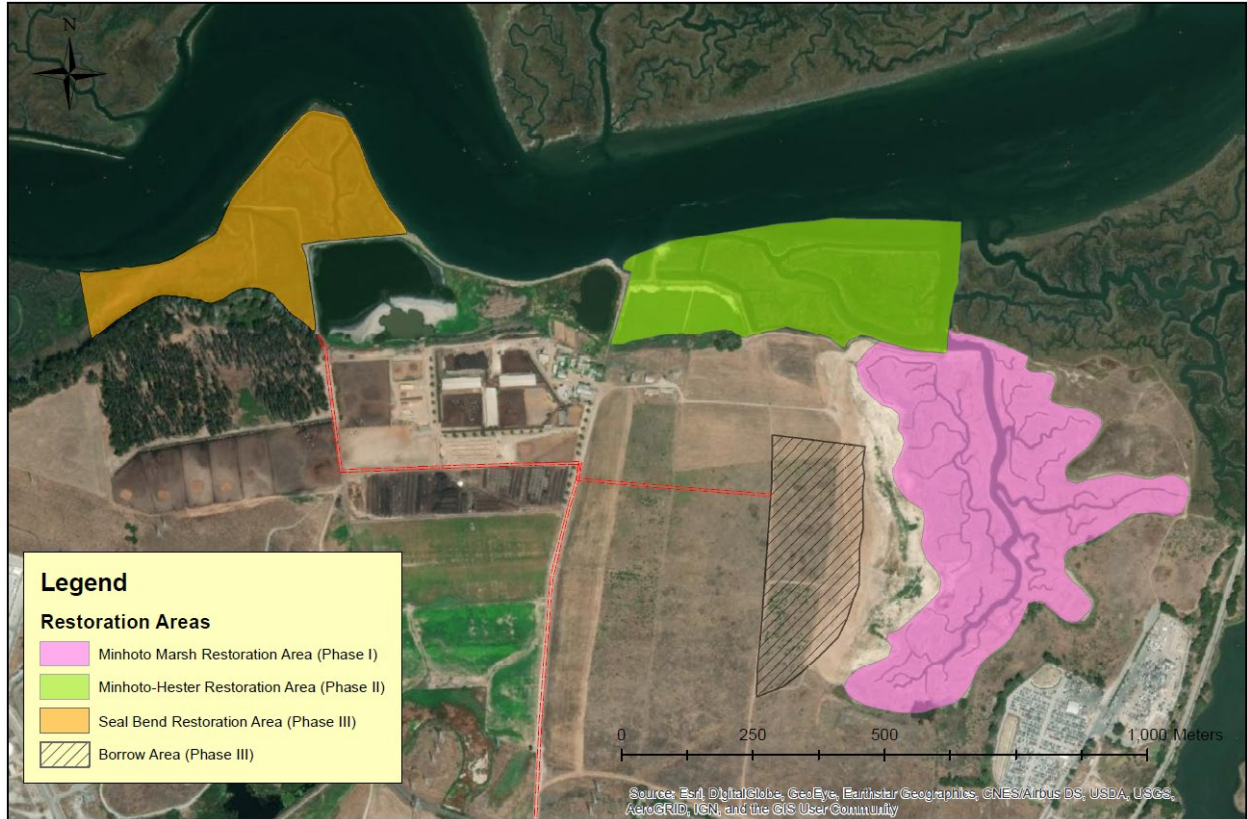


- (b) The request for renewal must include the following:
- (i) An explanation that the activities to be conducted under the requested Renewal IHA are identical to the activities analyzed for this IHA, are a subset of the activities, or include changes so minor (e.g., reduction in pile size) that the 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).
  - (i) 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 made in support of this IHA remain valid.

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



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

Species	Authorized Take
Harbor seal ( <i>Phoca vitulina</i> )	1920 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.