CALIFORNIA COASTAL COMMISSION

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CD-0002-21 (USACE)

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EXHIBITS

- Exhibit 1 Map of Project Area
- Exhibit 2 Map of Marine Habitat
- Exhibit 3 Map of Mitigation/Reference sites
- Exhibit 4 Time-based Success Criteria for Eelgrass Mitigation
- Exhibit 5 Marine Mammal Mitigation Measures



Figure 4 Breakwater Repair Areas





Figure 10. Eelgrass, Surfgrass, and Kelp Canopy Distribution in Port San Luis (Merkel & Associates)

- Merkel & Associates, Inc.

M&A #05-024-42

Exhibit 3



Existing Eelgrass Beds with Port San Luis Moorings Port San Luis Breakwater Repair Sections San Luis Obispo County, California

Figure 9

Merkel & Associates, Inc.

significant observations. Finally, the monitoring report will provide a prognosis for the future of the eelgrass bed and will identify the timing for the next monitoring period.

MITIGATION SUCCESS CRITERIA

Mitigation will be deemed successful when it has met the success criteria outlined in the CEMP. Criteria for determination of transplant success will be based upon a comparison of bed areal extent, percent vegetated cover and density (turions per square meter) between the reference sites and the transplant sites. Specific performance metrics include the areal extent as defined where eelgrass is present and where gaps in coverage are less than one meter between individual turion clusters. Density of turions (shoots) is identified as the number of turions per square meter, as measured from representative areas within the control or transplanted beds.

Key success criteria are as follows:

- Month 0 Monitoring should confirm the full coverage distribution of planting units over the initial mitigation site as appropriate to the geographic region.
- Month 6 Persistence and growth of eelgrass within the initial mitigation area should be confirmed, and there should be a survival of at least 50 percent of the initial planting units with well-distributed coverage over the initial mitigation site. For seed buoys, there should be demonstrated recruitment of seedlings at a density of not less than one seedling per four (4) square meters with a distribution over the extent of the initial planting area. The timing of this monitoring event should be flexible to ensure work is completed during the active growth period.
- Month 12– The mitigation site should achieve a minimum of 40 percent coverage of eelgrass and 20 percent density of reference site(s) over not less than 1.2 times the area of the impact site.
- Month 24– The mitigation site should achieve a minimum of 85 percent coverage of eelgrass and 70 percent density of reference site(s) over not less than 1.2 times the area of the impact site.
- Month 36– The mitigation site should achieve a minimum of 100 percent coverage of eelgrass and 85 percent density of reference site(s) over not less than 1.2 times the area of the impact site.
- Month 48– The mitigation site should achieve a minimum of 100 percent coverage of eelgrass and 85 percent density of reference site(s) over not less than 1.2 times the area of the impact site.
- Month 60- The mitigation site should achieve a minimum of 100 percent coverage of eelgrass and 85 percent density of reference site(s) over not less than 1.2 times the area of the impact site.

Areas that do not meet the above success criteria may be revegetated and again monitored until the final goal is achieved. Should replanting of the areas at the project site fail to meet the success criteria, reconstruction of portions of one or more transplant sites may be required to carry out this revegetation. Should the reference areas fail or decline alongside the transplant mitigation areas for reasons outside the control of the City, the City will not be held responsible for similar declines in the excavation or transplant mitigation areas.

MITIGATION PROGRAM SCHEDULE

Based on the presently planned transplant window, the preliminary schedule of work is as follows:

ACTIVITIES	TIME PERIOD	REPORTING
		PERIOD
Pre-construction Surveys	April-May –YR 1	30 Days
Phase I (Planting Prior to Access Channel Excavating)	April-May –YR 1	-
Phase II (Access Channel Excavating)	June – YR 1	30 Days-
Phase III (Overall Construction)	June-December – YR 1	
Phase IV (Post Construction Restoration)	April-June –YR 2	
Complete 0-Month Survey	June – YR 2	July – YR 2
Complete 6-Month Survey	October – YR 2	December – YR 2
Complete 12-Month Survey	June – YR 3	July – YR 3
Complete 24-Month Survey	June – YR 4	July – YR 4
Complete 36-Month Survey	June – YR 5	July – YR 5
Complete 48-Month Survey	June – YR 6	July – YR 6
Complete 60-Month Survey	June – YR 7	July – YR 7

XI. Mitigation Measures to Protect Marine Mammals and Their Habitat: The availability and feasibility (economic and technological) of equipment, methods, and manner of conducting such activity or other means of effecting the least practicable adverse impact upon the affected species or stocks, their habitat, and their availability for subsistence uses, paying particular attention to rookeries, mating grounds, and areas of similar significance.

Provided below is a summary of the avoidance and minimization measures and best management practices (BMPs) that will be implemented.

- A marine mammal monitor (a trained biologist with experience identifying and monitoring marine mammal species expected to be present in PSL) pre-approved by the Corps and NMFS will monitor for marine mammals 30 minutes prior to the start of construction activities (including prior to construction related vessels and barges mobilizing/starting up for the day), during construction activities, and 30 minutes after the completion of construction activities. A monitoring plan will be implemented as described in Section 13. This plan includes specific procedures in the event a mammal is encountered and reporting requirements.
- The Corps will conduct Marine Mammal Training for all construction personnel and the marine mammal monitors that will cover the following: marine mammal identification, clear explanation of responsibilities, communication procedures, marine mammal monitoring protocol, and operational procedures.
- The Corps will implement a soft-start procedure at the beginning of the work day. The objective of a soft-start is to provide a warning and/or give animals in close proximity to construction activities a chance to leave the area prior to operating at full capacity thereby, exposing fewer animals to visual disturbances, and underwater and airborne sounds that may elicit a startle response. A soft start procedure will be used at the beginning of each day, crews will slowly approach the work site creating a visual disturbance allowing animals in close proximity to construction activities a chance to leave the area prior to stone resetting or new stone placement.
- The marine mammal monitor will scan the waters for 30 minutes before and during all construction activities. If any species for which take is not authorized are observed within the immediate work area during or 30 minutes before work commences, the observer(s) will immediately notify the on-site supervisor, and require that work either not initiate or temporarily cease until the animals have moved outside of the area of potential effect (breakwater area immediately adjacent to crane-equipped barge and buffer area 300 feet along breakwater on either side of the crane-equipped barge).
- Direct physical interaction with marine mammals will be avoided during construction activities. If a marine mammal comes within 10 meters of such activity, operations must cease and vessels must reduce speed to the minimum level required to maintain steerage and safe working conditions, as necessary to avoid direct physical interaction.
- If rock setting is delayed or halted due to the presence of a marine mammal, the activity may not commence or resume until either the animal has voluntarily exited and been visually confirmed beyond the shutdown zone or 15 minutes have passed without redetection of the animal.
- Breakwater construction associated equipment and vessels will not travel at speeds greater than 8 knots within PSL Harbor.

XIII. Monitoring and Reporting: The suggested means of accomplishing the necessary monitoring and reporting that will result in increased knowledge of the species, the level of taking or impacts on populations of marine mammals that are expected to be present while conducting activities and suggested means of minimizing burdens by coordinating such reporting requirements with other schemes already applicable to persons conducting such activity. Monitoring plans should include a description of the survey techniques that would be used to determine the movement and activity of marine mammals near the activity site(s) including migration and other habitat uses, such as feeding.

- The Corps will designate a NMFs-approved biologically trained on-site marine mammal monitor to carry out the monitoring and reporting. The Corps will include the following minimum qualifications for marine mammal monitors:
 - Advanced education in biological science, wildlife management, mammalogy or related fields (Bachelor's degree or higher is preferred).
 - Visual acuity in both eyes (correction is permissible) sufficient to discern moving targets at the water's surface with ability to estimate target size and distance. Use of binoculars or spotting scope may be necessary to correctly identify the target.
 - Experience and ability to conduct field observations and collect data according to assigned protocols (this may include academic experience).
 - Experience or training in the field identification of marine mammal species expected to occur in PSL and identification of behaviors.
 - Writing skills sufficient to prepare a report of observations. Reports should include such information as number, type, and location of marine mammals observed; their behavior in the area of potential sound effects during construction; dates and times when observations and in-water construction activities were conducted; dates and times when in-water construction activities were suspended because of marine mammals, etc.
 - 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 needed.
- A marine mammal monitor will be placed at the best vantage points practicable (from the construction barges, breakwater, or independent monitoring vessel).
- The Corps will conduct one pinniped monitoring survey, and any other observed marine mammal species (by species and age class if possible) present on the PSL breakwater and immediate surrounding area within 1 week prior to commencing work (including mobilization activities) at the PSL breakwater (see below for minimum requirements and data to be collected during survey and monitoring efforts).
- During construction the marine mammal monitor will scan the waters for 30 minutes prior, during, and 30 minutes after construction activities (excavation of sediment, stone resetting and placement of new stone) have completed.
- If weather or sea conditions restrict the marine mammal monitor's ability to observe, or become unsafe for monitoring, construction will cease until conditions allow for monitoring to resume.
- Stone resetting and new stone placement will only occur during daylight hours from sunrise to sunset when it is possible to visually monitor marine mammals.
- If the Corps or its contractors discover an injured or dead marine mammal species in the action area, regardless of known cause:

- The Corps will immediate report the incident to the Office of Protected Resources (OPR) (PR.ITP.MonitoringReports@noaa.gov), NMFS and to the NMFS West Coast California Regional Stranding Network (Justin Viezbicke/Justin Greenman) as soon as feasible. If the death or injury was clearly caused by the specified activity, the Corps must immediately cease the specified 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 Corps must not resume their activities until notified by NMFS.
- Reporting of the incident must include the following:
 - Time, date, and location (latitude/longitude) of the first discovery (and updated location information if known and applicable)
 - Species identification (if known) or description of the animal(s) involved
 - Condition of the animal(s) (including carcass condition if the animal is dead)
 - Observed behaviors of the animal(s), if alive
 - If available, photographs or video footage of the animal(s)
 - General circumstances under which the animal was discovered
- If any species for which take is not authorized are observed within the area of potential effects during or 30 minutes prior to excavation of sediment, stone resetting, or new stone placement, the marine mammal monitor will immediately notify the on-site supervisor, and require that these construction activities either not initiate or temporarily cease until the animals for which take is not authorized have moved outside of the area of potential effect.
- The marine mammal monitor will monitor for marine mammals and have the authority to implement shutdown/delay procedures when applicable (in the unlikely and unexpected event an animal is in a location that would result in a Level A take, or a species not covered for Level B incidental take under this IHA is present within the vicinity that could result in take).
- During construction at the PSL breakwater, a final report will be provided to the NMFS.
 - These reports will provide dates, time, tidal height, maximum number of pinnipeds on the breakwater and any observed disturbances (detailing marine mammal species and behavior(s)). The Corps also will provide a description of construction activities at the time of observation, any mitigation actions that were implemented, and an assessment of the implementation and effectiveness of the mitigation measures.
- At a minimum, the following information will be collected on the marine mammal monitor's observation forms during all survey and monitoring events.
 - Monitor's name performing the survey/monitoring
 - Date and time that survey and construction activities begin and end.
 - Construction activities occurring during each observation period.
 - Weather parameters (e.g., percent cover, visibility).
 - Sea state/tidal conditions [e.g., sea state, tidal state (incoming, outgoing, slack, low, and high)].
 - Upon observation of a marine mammal the following information will be recorded:
 - Monitor who sighted animal and monitor's location

- Activity at time of sighting
- Time of sighting
- Identification of the animal (e.g., genus/species, lowest possible taxonomic level, or unidentified), monitor's confidence in identification, and the composition of the group if there is a mix of species
- Distance and bearing of each marine mammal observed to the construction activity for each sighting
- Estimated number of animals (min/max/best)
- Estimated number of animals by cohort (adults, juveniles, neonates, group composition, etc.)
- Animal's closest point of approach and estimated time spent within the harassment zone
- Description of any marine mammal behavioral observations (e.g., observed behaviors such as feeding or traveling), including an assessment of behavioral responses to the activity (e.g., no response or changes in behavioral state such as ceasing feeding, changing direction, flushing, or breaching)
- Disturbance must be recorded according to NMFS' three-point pinniped disturbance scale
- Note other human activity in the area not associated with the project activities.
- Note in behavioral observations, to the extent practicable, if an animal has remained in the area during construction activities. Therefore, it may be possible to identify if the same animal or different individuals are being taken.
- Monitor will note observation of tagged animals and pertinent information regarding species, age class, and sex to the maximum extent possible.
- Collected data will be compiled following the completion of construction and submitted to the NMFS within 90 days of completion of construction at the PSL breakwater.
- Post-construction surveys will document the pinniped use of the PSL breakwater.

XIV. Suggested Means of Coordination: Suggested means of learning of, encouraging, and coordinating research opportunities, plans, and activities relating to reducing such incidental taking and evaluating its effects.

Besides NMFS, the USFW and CDFW, will be apprised of the Corps work and results of the monitoring efforts. The data will be made publicly available, will be made available upon request, and will be provided to the local citizen science and non-profit marine mammal groups within San Luis Obispo and Morro Bay.