

Appendix A

Applicable Waterfront Master Plan EIR Mitigation Measures

APPLICABLE WATERFRONT MASTER PLAN EIR

MITIGATION MEASURES

The mitigation measures identified in the Waterfront Master Plan EIR which are applicable to and incorporated into the project modifications are listed in Table A-1 below for reference. This includes modified mitigation measures 3.3-2c and 3.3-2l.

Table A-1 Mitigation Measures Identified in the Waterfront Master Plan EIR that are Applicable to the Project Modifications

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Biological Resources
Mitigation Measure 3.3-2c: Implement In-Water Work Window To minimize impacts on special-status fish, Cal Maritime shall require all in-water work, including pile driving and similar activities that require placing materials below the water's surface, to be completed in two low-impact work windows (LIWW) which limit the types of work that may occur at various times of the year. LIWWs are proposed for the periods of June 1, 2026 through June 15, 2026 and December 16, 2026 through January 31, 2027. Between the LIWWs there would be a primary work window (PWW), during which full work activities would occur from June 16, 2026 through December 15, 2026 and potentially again from July 1, 2027 through November 30, 2027. The timeframes and activities associated with each proposed work window would be as follows for 2026 and January 2027: ▶ Between June 1, 2026 and June 15, 2026 only vibratory hammer driving/removal and pile repair will be allowed. ▶ Between June 16, 2026 and December 15, 2026 any work may occur including impact hammer driving, vibratory driving/removal of piles, pile repair, and dredging. ▶ Between December 16, 2026 and January 31, 2027 in-water work will be limited to vibratory pile driving/removal, pile repair, and dredging only. Following January 2027, the timeframes and activities associated with in-water work would be as follows for the remainder of 2027: ▶ PWW - between July 1, 2027 and November 30, 2027 any work may occur including impact hammer driving, vibratory driving/removal of piles, as well as dredging. Work may occur above the waterline year-round, including use of necessary in-water support vessels, so long as spill prevention measures are employed as described in Mitigation Measure 3.3-2d. These in-water work windows may be modified and extended if regulatory agencies determine during the permitting process that work outside of these windows may occur without significant risk to fish. Implementation of this measure shall be required in the contract Cal Maritime establishes with its construction contractors.
Mitigation Measure 3.3-2d: Implement Spill Prevention and Control Prior to commencement of construction activities, a spill prevention and control plan shall be developed and implemented for the proposed project throughout all phases of construction. This plan shall at minimum include the following parameters to reduce potential effects from spills to less-than-significant levels: ▶ Identification of any hazardous materials used by the project. ▶ Storage locations and procedures for such materials. ▶ Spill prevention practices as well as best management practices employed for various activities. ▶ Requirements to inspect equipment daily such that it is maintained free of leaks. ▶ Spill kit location, cleanup, and notification procedures.
Mitigation Measure 3.3-2e: Implement Environmental Awareness Training A project specific environmental awareness training for construction personnel shall be prepared and conducted or administered by a qualified biologist before commencement of construction activities for each phase of the project and as needed when new personnel begin work on the proposed project. The training shall inform all construction personnel about the presence of sensitive habitat types; potential for occurrence of special status fish and wildlife species; the need to avoid damage to suitable habitat and species harm, injury, or mortality; measures to avoid and minimize impacts to species and associated habitats; the conditions of relevant regulatory permits, and the possible penalties for not complying with these requirements. The training may consist of a pre-recorded presentation to be played for new personnel,

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a script prepared by the biologist and given by construction personnel trained by the biologist, or training administered by on-site biological monitors. The training shall include:

- ▶ Applicable State and federal laws, environmental regulations, proposed project permit conditions, and penalties for non-compliance. A physical description of special-status species with potential to occur on or in the vicinity of the project site, avoidance and mitigation measures, and protocol for encountering such species including communication chain;
- ▶ Best management practices enacted for habitat protection and their location on the project site including the implementation of any Spill or Leak Prevention Programs.
- ▶ Contractors shall be required to sign documentation stating that they have read, agree to, and understand the required avoidance measures. If they do not understand, they shall withhold their signature until the qualified biologist addresses their question. The contractor may not begin work until they have signed the documentation.
- ▶ Field identification of any project site boundaries, egress points and routes to be used for work. Work shall not be conducted outside of the project site.

A record of this training shall be maintained on the project site and shall be made available to agencies upon request.

Mitigation Measure 3.3-2f: Implement Dust and Debris Control

During all phases of the project, Cal Maritime and its construction contractors shall employ debris, dust, and garbage control measures to ensure disturbances to any upland areas as well as overwater work does not result in turbidity or debris being placed in the Bay. Dust control measures shall include all of the following:

- ▶ In areas within the boat basin where waters are less affected by high velocity currents, a debris boom or silt curtain shall be deployed around demolition sites, in addition to vessels or catchments used to catch demolition debris before it falls into the water.
 - ▶ In areas outside the boat basin that are affected by high velocity currents, a debris boom or silt curtain may not be feasible during demolition and a work skiff or similar craft may be used instead of a debris boom to corral any debris that may accidentally fall into waters during demolition. Debris shall be retrieved immediately and shall not be allowed to drift away from the worksite.
 - ▶ Where cast-in-place concrete is required in over-water areas, the contractor shall use forms and catchments that will prevent concrete from falling into the water. Cast-in-place forms shall remain in place until concrete has completely cured and shall be removed using means that minimizes dust and freshly cured concrete from falling into the water.
 - ▶ Within upland areas, any disturbed soils shall be managed to prevent dust from becoming airborne or silt laden runoff from being introduced to the aquatic environment.
 - ▶ All incidental construction-related refuse shall be collected in sealed containers and removed regularly.
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Mitigation Measure 3.3-2g: Implement Sediment Testing and Dredging Controls

Prior to dredging in any phase of the project, an assessment shall be conducted according to DMMO sediment sampling requirements to sample and analyze sediments within areas proposed for dredging. The assessment shall be reviewed and approved by the DMMO according to current RWQCB and EPA standards and procedures and sediment shall be placed, beneficially re-used, or disposed of in accordance with standard DMMO requirements.

In addition, dredging activities shall implement the following best management practices:

- ▶ Materials shall only be dredged and disposed of in accordance with procedures approved by the DMMO.
 - ▶ If concentrations are too high for beneficial reuse in upland restoration or other standard dredge material disposal method, materials may be hauled to an approved hazardous waste disposal facility.
 - ▶ Dredging shall be limited to the specified areas, depths, and quantities.
 - ▶ No overflow or decant water shall be discharged from any barge at any time.
 - ▶ During transportation from the dredging site to the disposal site, no dredged material shall be permitted to overflow, leak, or spill from barges, bins, or dump scows.
 - ▶ Prior to dredging in areas of contaminated sediment, a Dredge Operations Plan shall be prepared based on the results of DMMO-required sediment sampling, and shall include all necessary measures to contain, dispose of, and/or remediate contaminated sediments, including:
 - Containment of turbidity during dredging, including BMPs, such as a silt curtain.
 - Identification of measures to contain or treat areas of contaminated sediments to prevent the potential for contaminated sediment dispersal following dredging.
 - Identification of methods for handling, transporting, and disposing of contaminated sediment and methods for handling contaminated sediment.
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Mitigation Measure 3.3-2h: Use Appropriate Creosote Pile Removal and Disposal Methods

During construction activities involving removal of creosote piles, Cal Maritime and its construction contractors shall implement the following measures to ensure the appropriate removal and disposal of creosote piles:

- ▶ When removing creosote piles the contractor shall either fully remove the pile/structure, or piles may be cut off at least 1 foot below the mudline.
 - ▶ Any fragments of wood that break off during the removal process will be collected immediately even if within the limits of a turbidity curtain.
 - ▶ Any treated timber removed in this manner shall be hauled to an upland landfill that accepts treated timber waste for disposal.
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Mitigation Measure 3.3-2i: Implement Methods to Reduce Sound Attenuation from Pile Installation

Prior to initiation of construction, the CSU shall consult with regulatory agencies with jurisdiction over the project activities, including but not limited to CDFW, NMFS, and USFWS, to obtain appropriate permits, and shall follow the required permit conditions. If permit requirements conflict with requirements below, the permit requirements shall take precedence. During all phases of the project, the following measures shall be implemented during the driving of all piles to reduce any effects from pile driving to less than significant levels:

- ▶ In water work shall be limited to the work window as stated in Mitigation Measure 3.3-2c.
- ▶ Any wildlife encountered within the work area shall be allowed to leave the area unharmed.

The following measures shall also be included for times when work involves driving steel piles.

- ▶ To the extent possible, pile driving of steel piles shall be conducted with a vibratory hammer.
 - ▶ When installation with an impact hammer is required for steel piles, the following additional measures shall be employed:
 - Use of a bubble curtain around steel piles.
 - Use of a slow start (gradually increasing energy and frequency) at the start of driving, or after a cessation of driving for more than 1 hour.
 - Underwater sound monitoring shall be performed during pile driving activities. Sound monitoring shall be completed for a minimum of 5 percent of the piles driven of each size and type utilized during construction to verify consistency with sound measurements of similar pile types and sizes documented for other projects. If sound measurements exceed those taken from similar pile types and sizes for other projects, additional sound attenuation measures, enhanced bubble curtains, or limiting pile strikes shall be implemented, and sound measurements shall be tested again to achieve sound levels similar to other projects.
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Mitigation Measure 3.3-2j: Reduce or Compensate for Shading of Open Waters and Other Special-Status Species Impacts

Where possible, the project shall install light-transmitting surfaces allowing for a minimum of 40 percent light transmission to the waters below. In the event light-transmitting surfaces cannot be installed for safety and accessibility reasons, the project shall mitigate for shading and lost aquatic resource function by one of the following means:

- ▶ Removing equivalent shaded coverage over open water at a nearby site,
 - ▶ With the purchase of appropriate mitigation credits from an approved mitigation bank at a (1:1 ratio), or
 - ▶ By other similar actions approved by regulatory agencies with jurisdiction over the project activities, such as CDFW, NMFS, and USFWS, during the consultation process, so long as those alternative actions achieve a similar effect as described above (e.g., construction of a restoration project which causes ecological uplift of habitat quality).
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Mitigation Measure 3.3-2l: Reduce Construction Impacts on Marine Mammals

In addition to implementation of Mitigation Measure 3.3-2h: Pile Driving Methods and Monitoring, the project shall implement the following additional measures to reduce impacts to marine mammals from in-water construction.

- ▶ Cal Maritime shall consult with NMFS to obtain a marine mammal harassment authorization for any potential project related harassment of marine mammals.
 - ▶ During all construction work where materials are being actively placed below the water line, a marine mammal monitor shall be present to observe and document marine mammal presence.
 - ▶ During pile driving, if a marine mammal is within the buffer distance shown in Table 3.3-4, or within distances determined by NMFS based on future updated construction drawings and contractor input, the marine mammal monitor shall inform the construction crew and work shall temporarily halt until the animal has passed outside of the disturbance buffer.
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Table 3.3-4 Distances to Marine Mammal Onset Post-Traumatic Stress by Pile and Hammer Type

Pile Material	Pile Size	Hammer Type	Hammer Strikes Per Day (Impact) or Drive Time Per Day (Vibratory)	Buffer Distance (feet)
Steel shell ¹	42-inch	Impact	10,000 strikes	598.7
Steel shell	42-inch	Vibratory	480 minutes	114.6
Steel shell ¹	36-inch	Impact	10,000 strikes	459.6
Steel shell	36-inch	Vibratory	480 minutes	39.1
Steel shell ¹	30-inch	Impact	10,000 strikes	1,154.5
Steel shell	30-inch	Vibratory	480 minutes	114.6
Steel shell ¹	24-inch	Impact	10,000 strikes	1,134.6
Steel shell	24-inch	Vibratory	480 minutes	53.2
Steel shell ¹	18-inch	Impact	10,000 strikes	990.2
Steel shell	18-inch	Vibratory	480 minutes	23.9
Sheetpile	—	Impact	10,000 strikes	990.2
Sheetpile	—	Vibratory	480 minutes	211.8

¹ For calculation of the buffers distances above it is assumed a bubble curtain would be deployed to reduce the overall decibels by 5.

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Mitigation Measure 3.3-3: Conduct Focused Surveys and Compensate for Loss of Eelgrass

For the protection and mitigation of impacts to eelgrass, surveys and assessments as well as mitigation prescribed in the California Eelgrass Mitigation Policy (CEMP) (NMFS 2014) (or its subsequent replacement document) shall be implemented by Cal Maritime for the proposed project. As stated in the CEMP, Cal Maritime shall be required to perform the following series of pre- and post-construction surveys and assessments to minimize and compensate for (as necessary) potential impacts to eelgrass.

- ▶ No more than 60 days before implementation of any in-water construction, a pre-construction eelgrass survey shall be conducted by a qualified biologist. The pre-construction survey shall assess all subtidal areas where in water work will occur plus a 150-foot buffer, excluding any subtidal areas that are deeper than -12 feet mean lower low water (MLLW) as these depths are considered unsuitable for eelgrass in San Francisco Bay. If any eelgrass is detected within the survey area during the pre-construction survey, a reference site shall also be the selected reference site will be determined by the qualified biologist following the recommendations provided in the CEMP. The reference site will be used to differentiate between project-related and non-project-related impacts to eelgrass following the completion of post-construction eelgrass surveys, described below. The preconstruction eelgrass survey shall occur during the growth period for eelgrass within San Francisco Bay as defined by the CEMP (April 1 – October 31).
- ▶ A new pre-construction eelgrass survey shall be performed for each year that in-water work will occur to account for the high amount of variability in eelgrass extent in San Francisco Bay (up to one pre-construction eelgrass survey per year).
- ▶ If eelgrass is detected during any pre-construction eelgrass survey, following the completion of in-water construction, the project site and reference site shall be resurveyed annually for three years as described below:
 - The first post-construction eelgrass survey shall occur within 30 days following the completion of in-water construction unless work is completed outside the eelgrass growing season in San Francisco Bay; if in-water work concludes outside the eelgrass growing season, the first post-construction eelgrass survey shall be conducted within the first 30 days of the start of next eelgrass growth period.
 - The second post-construction eelgrass survey shall be performed approximately one year after the first post-construction survey.
 - The third post-construction eelgrass survey shall be performed approximately two years after the first post-construction survey.
- ▶ All pre- and post-construction eelgrass survey results shall be provided to National Marine Fisheries Service (NMFS) and CDFW.
- ▶ Once all eelgrass surveys are completed, a comparison of pre- and post-construction eelgrass results at the project site shall be assessed relative to the reference site to determine if project-related impacts to eelgrass occurred. The findings shall be provided to NMFS and CDFW to make a final determination regarding the actual impact and amount of mitigation needed, if any, to offset impacts to eelgrass. If in-water work results in permanent impacts to eelgrass, the project proponent will prepare and implement an eelgrass mitigation plan approved by NMFS and CDFW that will result in a no net loss of habitat function or services, generate services similar to that of eelgrass habitat, or will improve conditions for establishment of eelgrass. The mitigation plan shall follow one or a combination of mitigation options described in the CEMP, detailed below:

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- **Option 1: Comprehensive Management Plan.** As described in the CEMP, a Comprehensive Management Plan (CMP) may be an appropriate eelgrass compensatory mitigation strategy in situations where a project or collection of similar projects will result in incremental but recurrent impacts to a small portion of local eelgrass populations through time (e.g., lagoon mouth maintenance dredging, maintenance dredging of channels and slips within established marinas, navigational hazard removal of recurrent shoals, shellfish farming, and restoration or enhancement actions). Specifically, CMPs allow for the development of region or system-specific framework for achieving the objectives of the CEMP instead of the preparation of individual mitigation plans for each discrete action. If prepared, the CMP would need to be approved by NMFS.
- **Option 2: In-kind mitigation.** In-kind compensatory mitigation is defined as the creation, restoration, or enhancement of habitat to compensate for adverse impacts to the same type of habitat. Under the CEMP, eelgrass mitigation plans which propose in-kind mitigation for eelgrass impacts in the San Francisco Bay are required to achieve a final mitigation ratio of 1.2:1 (mitigation: impact) unless otherwise stated by NMFS during consultation. In addition, because of the relatively low success rate of eelgrass restoration projects implemented in San Francisco Bay, the CEMP recommends an initial eelgrass restoration site size that is 3.01- times larger than the target mitigation size to account for substantial losses. NMFS may increase the required eelgrass mitigation ratio if there is a significant delay between when impacts occurred and when mitigation commences to account for temporal losses in eelgrass habitat. After initial eelgrass planting, the CEMP recommends five years of monitoring of the mitigation site and a reference site. Specifically, the CEMP recommends mapping of eelgrass extent and monitoring of eelgrass density 0, 12, 24, 36, 48, and 60 months after installation of mitigation plantings. Success criteria (such as eelgrass density) are typically assessed relative to the reference site. Actual success criteria, monitoring periods, and site selection shall be determined in coordination with and approved by NMFS.
- **Option 3: Mitigation banks and in-lieu-fee programs.** Under the CEMP, NMFS supports the use of mitigation bank and in-lieu fee programs to compensate for impacts to eelgrass habitat where such instruments are available and where such programs are appropriate to the statutory structure under which mitigation is recommended. If this mitigation option is selected, credits shall be used at a ratio of 1:1 if those credits have been established for a full three-year period prior to use. If the bank credits have been in place for a period less than three years, credits shall be used at a ratio determined through application of the wetland mitigation calculator.
- **Option 4: Out-of-kind mitigation.** Out-of-kind compensatory mitigation means the adverse impacts to one habitat type are mitigated through the creation, restoration, or enhancement of another habitat type. In most cases, out-of-kind mitigation is discouraged for eelgrass because eelgrass is a rare, special-status habitat in California. There may be some scenarios, however, where out-of-kind mitigation for eelgrass impacts is ecologically desirable or when in-kind mitigation is not feasible. No recommended eelgrass mitigation ratios are provided in the CEMP for out-of-kind mitigation, however the ratio is likely to be greater than that required for in-kind mitigation. If pursued, an out-of-kind mitigation plan would need to be developed and approved by NMFS prior to implementation. Per the CEMP, the out-of-kind mitigation plan must demonstrate that the proposed mitigation will compensate for the loss of eelgrass habitat function within the ecosystem and should evaluate mitigation options that generates services similar to that of eelgrass habitat or improve conditions for establishment of eelgrass.

If permanent impacts to eelgrass are evident following analysis of post-construction eelgrass survey, ahead of the final Year 3 post-construction eelgrass survey, Cal Maritime may proceed with developing and implementing an eelgrass mitigation plan in consultation with NMFS and CDFW via any of the above options. Commencing with the eelgrass mitigation process as soon as impacts are realized may help avoid increased mitigation ratios as described above.

Mitigation Measure 3.3-4: Design In-Water Structures to be Permeable to Fish Movement

Prior to approval of final design and construction plans, Cal Maritime shall require and ensure breakwaters and other in-water structures shall be designed to be permeable in such a way that the final design of the Waterfront Master Plan does not form a fully enclosed area which might trap or impede fish movement. Design plans shall provide multiple exit routes at all tides such that fish moving through the vicinity can enter or exit the waterfront facilities at will, through multiple locations thereby minimizing the potential to be affected by marina operations.
