US Army Corps of Engineers®

OAKLAND HARBOR TURNING BASINS WIDENING, CA

NAVIGATION STUDY

INTEGRATED FEASIBILITY REPORT & ENVIRONMENTAL ASSESSMENT

APPENDIX A05a:

Coastal Zone Management Act

Consistency Determination

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ACRONYMS AND ABBREVIATIONS

Bay Plan	San Francisco Bay Plan
BCDC	San Francisco Bay Conservation and Development Commission
BMP	best management practice
CD	Consistency Determination
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
DMMO	Dredged Material Management Office
DPS	distinct population segment
DTSC	Department of Toxic Substances Control
EFH	essential fish habitat
ESA	Endangered Species Act
ESU	environmentally sensitive unit
GRA	Geographic Response Area
IHTB	Inner Harbor Turning Basin
LTMS	Long-Term Management Strategy
MLLW	mean lower low water
MMPA	Marine Mammal Protection Act
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
OHTB	Outer Harbor Turning Basin
OSPR	Office of Spill Prevention and Response
Port	Port of Oakland
SFRWQCB	San Francisco Bay Regional Water Quality Control Board
SPCC	Spill Prevention Control and Countermeasure
USACE	United States Army Corps of Engineers
U.S.C.	United States Code
USCG	United States Coast Guard
USFWS	United States Fish and Wildlife Service
VRP	Vessel Response Plan

1. Introduction

The United States Army Corps of Engineers (USACE) and Port of Oakland (Port) are proposing to expand two turning basins in the Oakland Harbor (hereafter referred to as "Proposed Action" or "project"), which would allow larger vessels easier access to all existing Port terminals. USACE and the Port are the lead agencies pursuant to the National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA), respectively. This Consistency Determination (CD) describes the activities associated with the Proposed Action and whether they are consistent with the applicable state coastal management program.

Oakland Harbor is on the eastern side of San Francisco Bay (Figure 1). It includes the Entrance Channel, the Outer Harbor Channel and Outer Harbor Turning Basin (OHTB), and the Inner Harbor Channel and Inner Harbor Turning Basin (IHTB). The Outer Harbor Channel is immediately south of the San Francisco-Oakland Bay Bridge and is maintained to a depth of -50 feet mean lower low water (MLLW). The Outer Harbor Channel and OHTB serve the TraPac, Ben E. Nutter, and Outer Harbor terminals. The Outer Harbor Channel also serves Outer Harbor berths, including Berth 10, a dredged material rehandling site, which is at the eastern end of the Outer Harbor. The Inner Harbor Channel is also maintained to -50 feet MLLW. The Inner Harbor Channel and IHTB serve the following operating terminals: Oakland International Container Terminal, Matson Terminal, and Schnitzer Steel Terminal. The Inner Harbor Channel also serves the Alameda Shipyard, passenger ferry route network, and the United States Coast Guard (USCG).

As part of the Oakland Harbor Navigation Improvement (-50 -Foot) Project Study, the existing federal navigation channel was designed for a ship with a capacity of 6,500, 20 -foot equivalent units, with a 1,139 -foot length overall, 140 -foot beam, and 48 -foot draft. The Proposed Action involves the expansion of the IHTB and OHTB in the Oakland Harbor. The need for this expansion arises from inefficiencies currently experienced by vessels in harbor, specifically in the turning basins, where the current fleet exceeds the maximum dimensions of the constructed -50-Foot Oakland Harbor Navigation Project. These inefficiencies are projected to continue and magnify into the future because vessels exceeding the size of vessel for which the existing turning basins were designed for are expected to enter the channel with greater frequency and in greater numbers.

The Proposed Action involves (1) demolition of existing landside structures and landside excavation to accommodate widening of the IHTB, (2) installation of new bulkheads in the IHTB, and (3) dredging to widen the IHTB and OHTB.

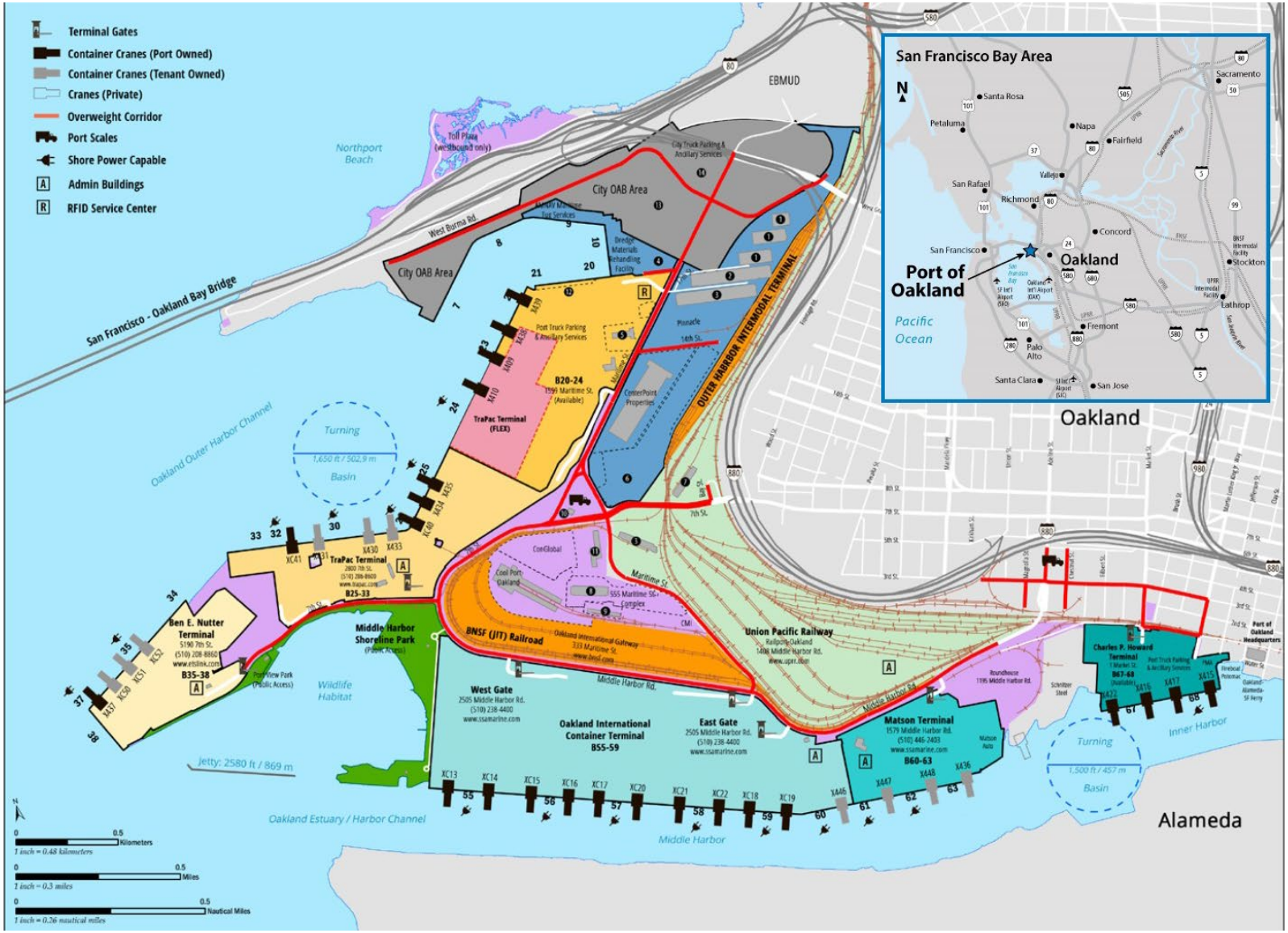

Figure 1 Current Port of Oakland Navigation Features

2. Legal Authority

This CD was prepared in accordance with the Coastal Zone Management Act of 1972, as amended (16 United States Code [U.S.C.] Section 1451), and the implementing regulations entitled Federal Consistency with Approved Coastal Management Programs (15 Code of Federal Regulations Part 930). The program applicable to USACE projects in San Francisco Bay is the San Francisco Bay Plan (Bay Plan), which is administered by the San Francisco Bay Conservation and Development Commission (BCDC).

3. Federal Determination

USACE has evaluated the Proposed Action and has determined that it is consistent, to the maximum extent practicable, with the Bay Plan policies. A detailed assessment of this project's consistency with those policies is provided in Section 5.

4. Project Description

The Proposed Action entails expansion of both the IHTB and OHTB. The proposed improvements and construction methods for each turning basin are described under Sections 4.1 and 4.2 below. Widening the turning basins is expected to improve both vessel transit efficiencies in the harbor and navigational safety. It is assumed that the economic variables that directly influence economic growth and subsequent demand for Port services remain constant under the Proposed Action and No Action alternatives; thus, the Port's total projected volume handled is constant.

4.1. Expansion of the Inner Harbor Turning Basin

Expansion of IHTB consists of widening the existing IHTB from 1,500 feet to 1,834 feet, with a depth of -50 feet MLLW, consistent with the existing depth of the IHTB. In addition to in-water work to widen the IHTB, land would be impacted in two locations: Howard Terminal and private property along the Alameda shoreline (Figure 2).

Construction activities at Howard Terminal (in the northeastern corner of the widened IHTB on Figure 2) include removal of asphalt and concrete pavement, installation of a new bulkhead, removal of piles, and excavation of landside soil between the new bulkhead and existing rock dike. The construction of the new bulkhead includes installing steel sheet piles, steel pipe piles, and/or pre-cast, pre-stressed concrete piles through vibratory or impact pile-driving methods; 10 percent of the total piles are assumed to be installed through the aquatic environment. Subsequently, batter piles would be installed, additional material would be dredged, and rock would be removed. Following installation of the new bulkhead wall and batter piles and dredging/rock removal, rock would be installed for slope protection in the front of the new bulkhead wall. A typical rock slope protection section is shown on Figure 3.

Construction activities at the Alameda site (in the southeastern portion of the widened IHTB on Figure 2) would require partial demolition of two existing buildings, estimated to impact five warehouse bays. Like Howard Terminal, Alameda improvements include removal of asphalt and concrete pavement, installation of a new bulkhead, removal of piles, and excavation of landside soil between the new and existing bulkheads. The construction of the new bulkhead includes installing steel sheet piles, steel pipe piles, and/or pre-cast, pre-stressed concrete piles through vibratory or impact pile-driving methods; 10 percent of the total piles are assumed to be installed through the aquatic environment. Subsequently, batter piles would to be installed and the existing bulkhead would be removed, followed by dredging of material and removal of rock. Following installation of the new bulkhead wall and batter piles and dredging/rock removal, rock would be installed for slope protection in the front of the new bulkhead wall. A typical rock section is shown on Figure 3.

An approximately 300- to 400 -foot long, in-water retaining structure may be required between the northwestern portion of the IHTB footprint and Schnitzer Steel property. Construction would include installation of steel sheet piles, steel pipe piles, and/or pre-cast, pre-stressed concrete piles by vibratory or impact pile-driving methods, through the aquatic environment. Batter piles and rock would be installed through the water column to stabilize the structure.

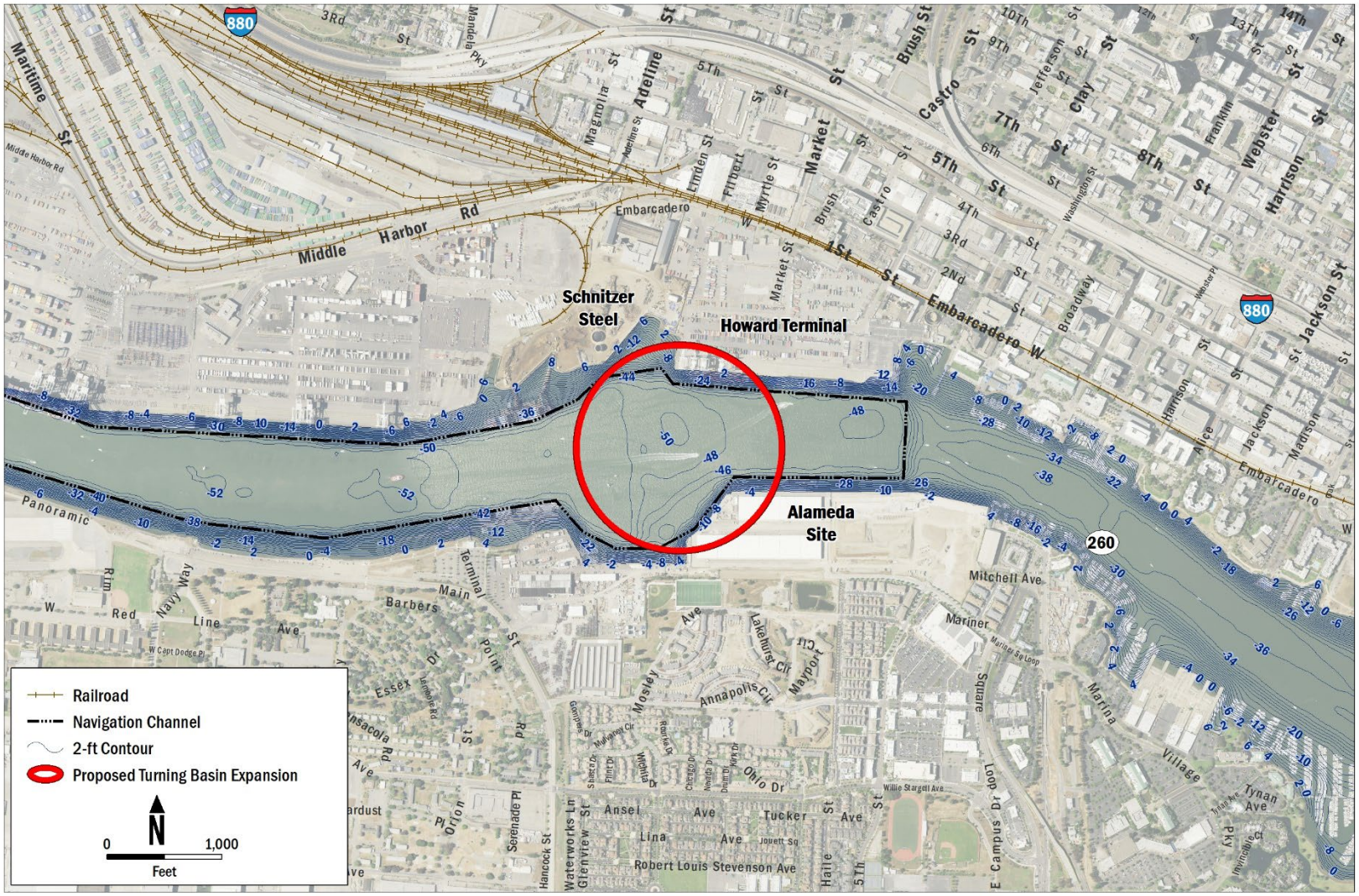

Figure 2 Proposed Expansion of Inner Harbor Turning Basin

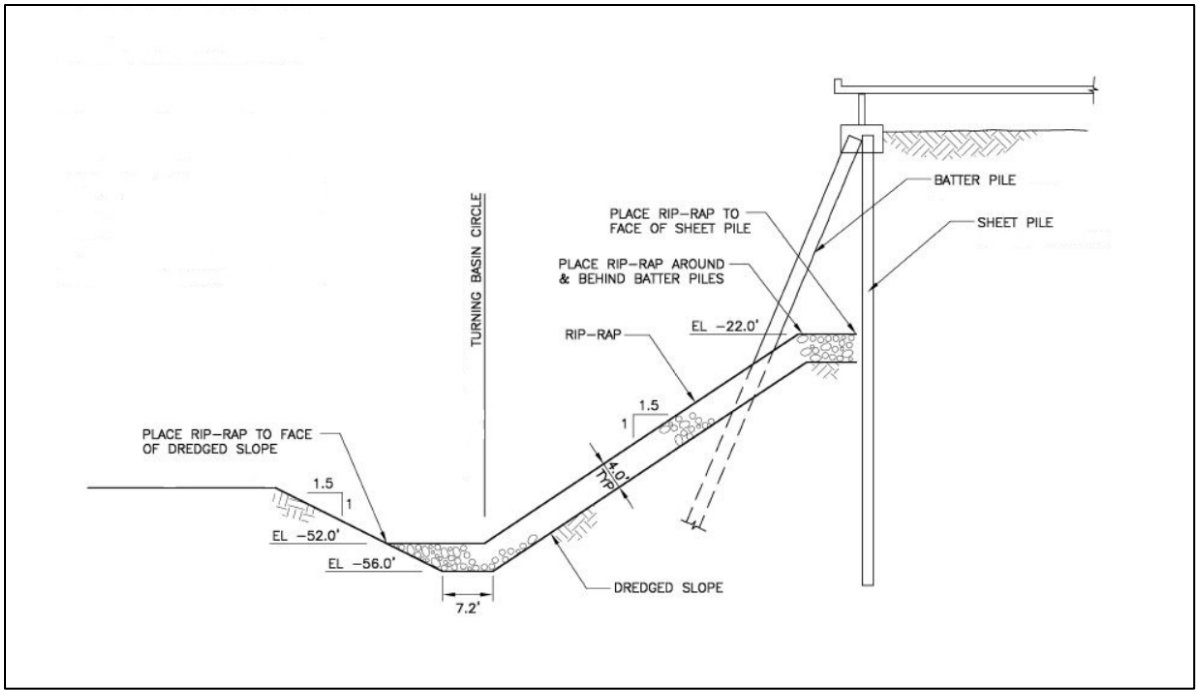

Figure 3 Preliminary Bulkhead Wall Cross-Section

For the Howard Terminal and Alameda sites, landside excavation of soils would occur to a depth of approximately -5 feet MLLW, which is approximately 15 feet below existing ground surface elevations. Due to the historical industrial use of these sites and the documented presence of contaminants underlying portions of Howard Terminal, it is assumed that landside excavated materials would be disposed at a Class I (hazardous) or Class II (nonhazardous) landfill. Table 1 summarizes truck trip totals for the transportation of asphalt and concrete to a local recycler, and soils to a landfill. Material below the limits of landside excavation at each site would be dredged, with all suitable dredged material going to beneficial reuse. In addition, for both sites, the depth of sheet pile/bulkhead installation and removal is assumed to be between 65 and 125 feet below ground surface. Dredging of existing Inner Harbor sediments—that is, areas currently considered submerged lands—would also be required. Volumes of material to be excavated landside or dredged for this alternative are summarized in Table 2. A total area of approximately 800,100 square feet would be impacted by dredging and landside construction activities for the IHTB widening.

Construction staging, including a construction trailer, equipment and construction materials storage, and material stockpiles, would occur at Howard Terminal and the Alameda property, immediately within, adjacent to, or close to the excavation areas.

Construction is expected to start in July 2027, with an approximate duration of 2 years and 4 months. Construction, excluding dredging, would occur Monday through Friday between the hours of 7 a.m. and 7 p.m. During the first year of construction, land-based activities would be completed at Howard Terminal. Marine-based pile removal activity is anticipated to be conducted at Howard Terminal during the 2027 in-water work window (June 1 through November 30). Marine-based dredging activity at Howard Terminal and in-water bulkhead and

Table 1 Truck Trips for Hauling Demolished, Excavated, and Dredged Materials

Howard Terminal		
Location	**Approximate Cubic Yards[1]**	**Trips[2]**
Class I landfill	2,900	290
Class II landfill	25,800	2,580
Recycler	22,800	2,280
Recycler – Quarry (Montezuma)[3]	69,000	N/A
Alameda		
Location	**Approximate Cubic Yards[1]**	**Trips[2]**
Class I landfill	8,000	800
Class II landfill	151,900	15,190
Recycler	101,500	10,150
Recycler – Quarry (Montezuma)[3]	13,500	N/A
Inner Harbor Sediments		
Location	**Approximate Cubic Yards[1]**	**Trips[2]**
Class II landfill	9,700	970
Total		
Location	**Approximate Cubic Yards[1]**	**Trips[2]**
Class I landfill	10,900	1,090
Class II landfill	187,400	18,740
Recycler	124,300	12,430
Recycler – Quarry (Montezuma)[3]	82,500	N/A
Total (Material Hauled via Truck)	322,600	32,260

Notes:

[1] Quantities include 10 percent contingency and applicable bulking factor (0 to 25 percent) and are rounded up to nearest hundredth.

[2] Trip numbers are based on a 10-cubic-yard truck size.

[3] This material would be taken by barge and is not included in the total material to be hauled via truck.

Table 2 Inner Harbor Only Construction Actions

Howard Terminal		
Action	**Approximate Quantity[1]**	**Unit**
Pavement and wharf deck removal – area	180,600	square feet
Pile removal (total, 125-foot-long, 24-inch-diameter concrete piles)	800	each
Landside soil excavation	24,900	cubic yards
Dredging (includes rock removal)	244,200	cubic yards
Bulkhead installation (total length)	850	linear feet
Bulkhead installation – in water (10 percent of total)	85	linear feet
Batter pile installation (total, 115-foot-long, 24-inch-diameter steel piles)	90	each
Batter pile installation in water (10 percent of total)	9	each
Rock installation	8,400	cubic yards
Impacted upland area	167,500	square feet
Schnitzer Site		
Action	**Approximate Quantity[1]**	**Unit**
Bulkhead installation – in water	330	linear feet
Batter pile installation – in water	34	each
Rock installation	6,000	cubic yards
Alameda Site		
Action	**Approximate Quantity[1]**	**Unit**
Building demolition – area	175,900	square feet
Pavement and wharf deck – area	287,800	square feet
Pile removal (total, 65-foot-long, 24-inch-diameter concrete piles)	4,200	each
Batter pile removal (total, 115-foot-long, 24-inch-diameter steel piles)	55	each
Existing sheet pile removal length	900	linear feet
Landside soil excavation	159,900	cubic yards
Dredging (includes rock removal)	493,100	cubic yards
Bulkhead installation – total length	1,200	linear feet
Bulkhead installation – in water length (10 percent of total)	120	linear feet
Batter pile installation – total	122	each
Batter pile installation – in water (10 percent of total)	12	each
Rock installation	11,700	cubic yards
Impacted area (upland)	262,000	square feet

Inner Harbor Sediments (Dredged)		
Action	**Approximate Quantity[1]**	**Unit**
Dredging	143,300	cubic yards
Impacted area (submerged land)	370,600	square feet
Total		
Action	**Approximate Quantity[1]**	**Unit**
Building demolition – area	175,900	square feet
Pavement and wharf deck removal – area	468,400	square feet
Pile removal	5,000	each
Batter pile removal	55	each
Existing sheet pile removal length	900	linear feet
Landside soil excavation	184,800	cubic yards
Dredging (includes rock removal)	880,600	cubic yards
Bulkhead installation – total	2,380	feet
Bulkhead installation – in water	535	feet
Batter pile installation – total	246	each
Batter pile installation – in water	55	each
Rock installation	26,100	cubic yards
Impacted area	800,100	square feet

Notes:

[1] Quantities include 10 percent contingency.

rock installation activities at Howard Terminal and nearby Schnitzer Steel are anticipated to be conducted during the 2028 in-water work window. Land-based construction at the Alameda property is anticipated to commence in April 2028 and take approximately 14 months to complete. Marine-based activities at the Alameda property (sheet pile/bulkhead removal and in-water installation, and rock installation), dredging at the Alameda property, and dredging of Inner Harbor sediments is anticipated to occur during the 2029 in-water work window. Most piles for the new bulkheads at Howard Terminal and Alameda would be installed landside; approximately 10 percent of the pile installation would require in-water work, which would be completed during the in-water work windows.

Equipment for pavement removal, landside excavation, warehouse demolition, pile removal, sheet pile/bulkhead removal and installation, rock removal and installation, and batter pile installation and removal would include backhoes/front loaders, concrete saws, cranes, bulldozers, excavators, dump trucks, drilling rigs, barges, dive vessels, pile drivers, vibratory hammers, tugboats, compressors, and generators. Depending on the concurrent activities occurring over the course of construction, the number of construction workers at any given

time would range from approximately eight to 65 (excluding dredging operations, described below).

Excavated landside material, removed piles, and debris from warehouse demolition at the Howard Terminal and Alameda sites would be hauled off site for disposal at a landfill or recycling facility, as required. Current estimates, based on available information and past project experience, assume that approximately 5 to 10 percent of excavated landside material from the two sites would require disposal at a Class I landfill. Furthermore, it is assumed that approximately 90 to 95 percent of excavated landside material from the two sites would require disposal at a Class II landfill. General construction debris—including removed piles, concrete, pavement, and warehouse demolition debris—would be transported to a local recycler. Truck trip totals for the Howard Terminal and Alameda sites are summarized in Table 1.

Dredging would be conducted with an electric-powered barge-mounted excavator dredge with a clamshell bucket. Dredged material would be placed onto scows for transport for beneficial reuse, or to Berth 10 for rehandling prior to transport via truck to a landfill. Tugboats are required for positioning the barge and for towing the scows. It is assumed that approximately 7 percent of Inner Harbor sediments would require disposal at a Class II landfill, which would be rehandled at Berth 10 prior to truck transport. Truck trip totals for transport of Inner Harbor sediments from Berth 10 to a landfill are reflected in the Class II landfill material summarized in Table 1. Approximately 825,000 cubic yards of dredged materials from the Inner Harbor work locations are expected to be suitable for beneficial reuse. Approximately 26 workers would be required for the dredging operation, and approximately 28 workers would be required for rehandling operations at Berth 10. Dredging would be conducted 24 hours per day, 7 days per week. Best management practices (BMPs), such as silt and bubble curtains, would be used during dredging and in-water pile driving, when required, to minimize impacts to the aquatic environment.

4.2. Expansion of the Outer Harbor Turning Basin

The OHTB would be widened from 1,650 feet to 1,965 feet. Figure 4 shows the proposed expanded OHTB relative to the current limits of the navigation channel. This alternative involves dredging material to widen the basin to a depth of -50 feet MLLW, consistent with the existing depth of the OHTB.

To support electrical dredging for widening the OHTB, electrical infrastructure would be added near Berth 26 at the Outer Harbor. An electrical switchgear would be constructed adjacent to the nearest existing substation, Substation SS-C-57, which is approximately 270 feet southeast from the water's edge at Berth 26 and from which the dredging operator would then draw power used for the electrical dredging activities. A switchgear allows the Port to regulate, isolate, and meter power during dredging activities. A switchgear consists of circuit breakers, switches, fuses, isolators, relays, currents, potential transformers, indicating instruments, control panels, and other devices that together are referred to as a "switchgear." The switchgear would be adjacent to existing electrical infrastructure and would be comparable in height and dimensions to the existing substation. The dredging operator would supply their own 12-kilovolt cable and terminations to directly connect to the Port's switchgear. Once connected, the dredging operator would have an on-board system to regulate power during dredging activities.

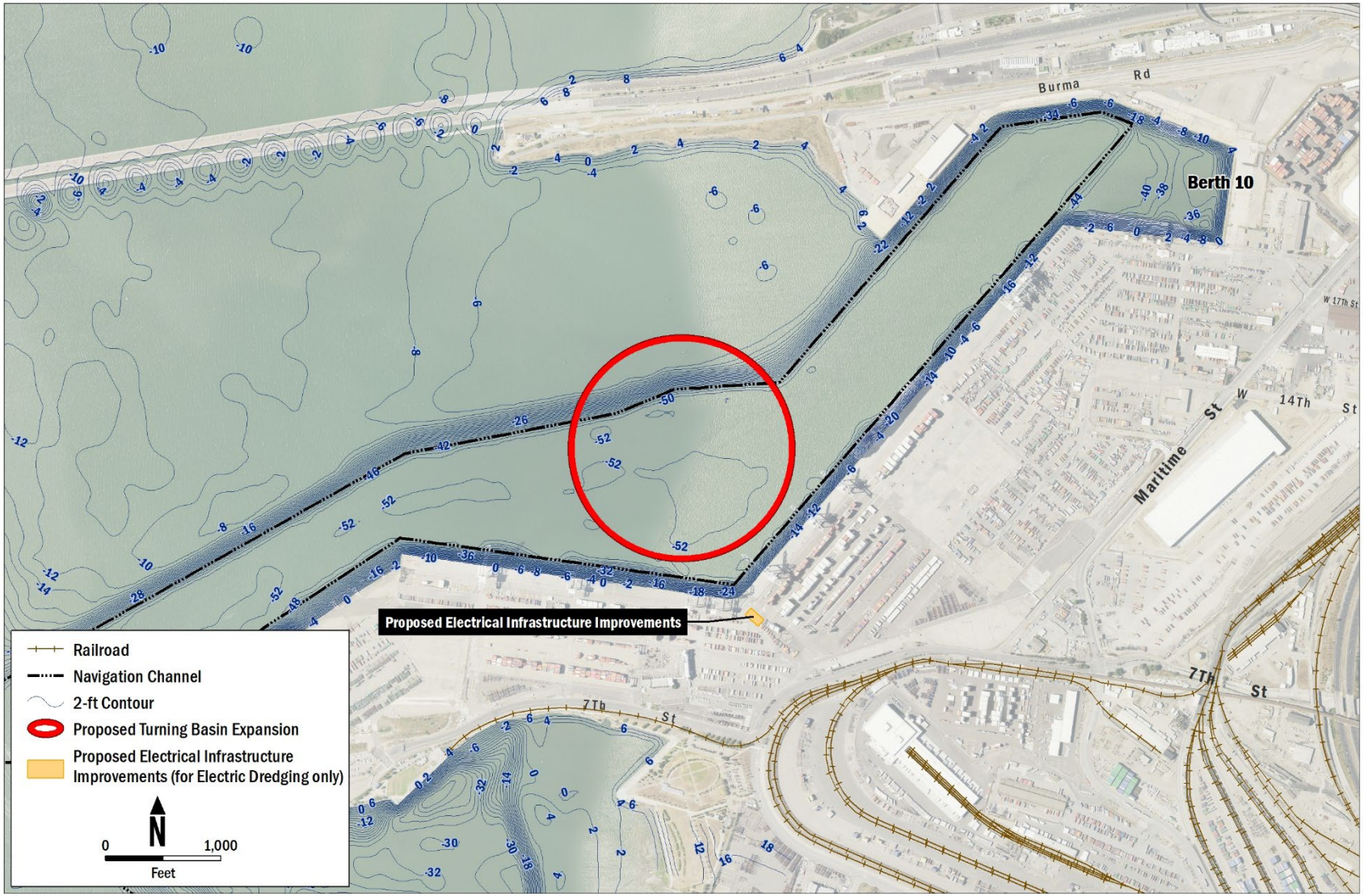

Figure 4 Proposed Expansion of Outer Harbor Turning Basin

Construction activities would include excavating a 2 foot-wide by 4- -foot-deep trench for new conduits that run from the new switchgear to existing utility vaults and Substation SS-C-57, backfilling this trench with controlled density fill and base rock, and repaving with asphalt concrete. If an existing concrete slab at the site is unsuitable for the placement of the switchgear, excavation would be conducted for a new concrete foundation. Excavation would also be required for the placement of bollards and fencing that would be installed along the perimeter of the switchgear. The new switchgear would be UL-certified and tested prior to use.

The construction equipment is anticipated to include a backhoe/front loader, concrete saw, smooth drum roller, and dump truck. Approximately six workers would be required for this activity. The excavation for the foundations associated with the new switchgear, bollards, and fence posts—in addition to the trenching for the new conduit—would generate approximately 15 cubic yards of soil for disposal and 15 cubic yards of asphalt concrete for off-haul to a local recycling facility. The estimated construction duration for this activity is 3 months; it is anticipated that this work would commence in August 2027.

Dredge equipment includes an electric-powered barge-mounted excavator dredge with a clamshell bucket, scows for dredged material transport to the beneficial reuse site, and tugboats for positioning of the barge and towing the scows for transport to a beneficial reuse site. Approximately 26 workers would be required for the dredging operation. Dredging of the OHTB would be conducted for 6 months during the 2028 in-water work window (June 1 through November 30) and 2 months of the 2029 in-water work window. Dredging would be conducted up to 24 hours per day, 7 days per week. BMPs such as silt curtains would be used during dredging, when required, to minimize impacts to the aquatic environment.

Construction staging would occur at Berth 10, at the eastern end of the Outer Harbor. Table 3 summarizes volumes of dredged material for the Outer Harbor.

Table 3 Outer Harbor Sediments

Type of Soil (Dredging)	Approximate Quantity	Unit
Dredging	1,342,000	cubic yards
Impacted area (submerged land)	1,005,000	square feet

4.3. Avoidance and Minimization Measures

Given the nature of the Proposed Action, USACE would implement various avoidance and minimization measures, as well as construction BMPs, as part of the project. The purpose of these measures is to reduce potential adverse environmental effects of the project. A detailed description of these measures is included as Attachment A of this CD.

5. Consistency with Applicable San Francisco Bay Plan Policies

This section presents analyses of the Proposed Action's consistency with applicable Bay Plan policy topics. The project area does not contain, and the project does not propose and would not result in impacts related to, the following Bay Plan policy topics: salt ponds, managed wetlands, areas of freshwater inflow, areas of shell deposits, shoreline protection, airports, and commercial fishing operations. Consequently, Bay Plan polices related to those identified topics are not applicable to the project and are not addressed further.

5.1. Consistency with Policies Related to Fish, Other Aquatic Organisms, and Wildlife

Three of the Bay Plan's policies related to fish, other aquatic organisms, and wildlife are applicable to the Proposed Action: Policies 1, 2, and 4. The Proposed Action's consistency with these policies is discussed in the following sections.

5.1.1. Policy 1

To assure the benefits of fish, other aquatic organisms, and wildlife for future generations, to the greatest extent feasible, the Bay's tidal marshes, tidal flats, and subtidal habitat should be conserved, restored, and increased.

Dredging under the Proposed Action is the minimum amount needed to achieve the project objective and would mostly occur in places that are already heavily disturbed by operations and maintenance at the Port. Benthic habitat in the federal channel and turning basins, and their margins, is regularly disturbed under baseline conditions because of annual maintenance dredging and the propeller wash of ship traffic. The United States Fish and Wildlife Service (USFWS) considers this aquatic habitat type to be Resource Category 4 (i.e., the less valuable and most common kinds of habitat) due to its regional abundance, regular disturbance, and medium value to fish and wildlife. In their Draft Fish and Wildlife Coordination Act report for this study, USFWS determined that, although restored tidal wetland is different from subtidal benthic habitat, the beneficial reuse of suitable sediments at a wetland restoration site—as proposed under the project—would meet Resource Category 4's mitigation goals for minimizing loss of habitat value resulting from the Proposed Action's impact to subtidal benthic habitat. Implementation of various avoidance and minimization measures and BMPs (Attachment A), including a stormwater pollution prevention plan and use of silt curtains, when required, would minimize the impact of project construction activities on aquatic habitats. The Proposed Action would also include pre- and post-construction surveys for eelgrass. If impacts to eelgrass are observed to occur after construction, USACE and the Port would develop a mitigation plan to achieve no net loss in eelgrass function. Expansion of the IHTB would result in a permanent increase of open waters and soft-substrate bottom, increasing the extent of subtidal habitat in the project area, although this habitat would receive periodic disturbance and would not be of the quality of undisturbed habitat. Therefore, the Proposed Action is consistent to the maximum extent practicable with Policy 1.

5.1.2. Policy 2

Native species, including candidate, threatened, and endangered species; species that the California Department of Fish and Wildlife, the National Marine Fisheries Service, and/or the U.S. Fish and Wildlife Service have listed under the California or Federal Endangered Species Act; and any species that provides substantial public benefits, as well as specific habitats that are needed to conserve, increase, or prevent the extinction of these species, should be protected, whether in the Bay or behind dikes. Protection of fish, other aquatic organisms, and wildlife and their habitats may entail placement of fill to enhance the Bay's ecological function in the near-term and to ensure that they persist into the future with sea level rise.

Marine-based construction and dredging required for the Proposed Action would occur during the in-water work window (June 1 through November 30) to minimize adverse effects on special-status aquatic species that have the potential to occur in the project area. To ensure that the expansion of the IHTB and OHTB is conducted in a manner that protects special-status species and their habitats in and around San Francisco Bay, USACE is consulting with the National Marine Fisheries Service (NMFS) and USFWS on the Proposed Action, in accordance with Section 7(a)(2) of the Endangered Species Act (ESA) (16 U.S.C. 1536[c]); Section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act (Public Law 104 297); and Section 101(a)(5) of the Marine Mammal Protection Act (MMPA) (16 U.S.C. 1371(a)(5)), as applicable.

The Port is situated on the eastern shore of central San Francisco Bay, often referred to as the Oakland-Alameda Estuary. Table 4 identifies federal ESA-listed and California ESA-listed endangered and threatened species, and marine mammals, that are known to occur in or with potential to occur in the project area. USACE has reviewed the Proposed Action for its potential effects on federal ESA-listed threatened or endangered species and their designated critical habitats. USACE has determined that the project may affect, but is not likely to adversely affect, steelhead, Chinook Salmon, Longfin Smelt, California least tern, or designated critical habitats under the purview of NMFS or USFWS. USACE has determined that the project may adversely affect Green Sturgeon. USACE will submit these determinations for the Proposed Action to NMFS and USFWS, requesting their concurrence; and will submit a request for NMFS consultation on potential effects to essential fish habitat (EFH) and marine mammals. USACE will consider any recommendations and ensure compliance with any requirements from these agencies that are applicable to avoid potential adverse effects on special-status species and their habitat.

Special-Status Fish Species

No spawning or rearing habitat for Steelhead exists in the project area.

Chinook Salmon is expected to forage in Central Bay shallow water areas (less than 30 feet deep) during in-migration and out-migration transits. As with Steelhead, the primary migration corridor for Chinook Salmon is through the northern reaches of Central San Francisco Bay (Raccoon Straight and north of Yerba Buena Island) (NMFS 2001; Baxter et al. 1999; Jahn 2011). No spawning or quality rearing habitat for this species exists near the Port. Longfin Smelt is most likely to occur in Central San Francisco Bay during the late summer months, before migrating upstream in fall and winter. During Bay surveys conducted by the California Department of Fish and Wildlife, Longfin Smelt was last observed at the observation stations nearest the project area in 2007; therefore, there is a low likelihood of Longfin Smelt occurring in the project area. Pacific Herring is known to breed on in-water structures and to use this habitat along the Oakland-Alameda Estuary waterfront; however, herring spawning has not been observed along this portion of the waterfront since 2012 (CDFW 2019).

Table 4 Federally and State-Listed Endangered and Threatened Species and Marine Mammals Known to Occur or Potentially Occurring in the Project Area

Species	Federal Status	State Status
Birds		
California least tern (*Sternula antillarum browni*)	FE	SE
Fish		
Southern Population of North American Green Sturgeon DPS (*Acipenser medirostris*)	FT/CH	—
Steelhead, Central California Coast DPS (*Oncorhynchus mykiss*)	FT/CH	—
Steelhead, Central Valley DPS (*Oncorhynchus mykiss*)	FT	—
Chinook Salmon, Sacramento winter-run ESU (*Oncorhynchus tshawytscha*)	FE	SE
Chinook Salmon, Central Valley spring-run ESU (*Oncorhynchus tshawytscha*)	FT	ST
Longfin Smelt, San Francisco Bay-Delta DPS (*Spirinchus thaleichthys*)	FP	ST
Marine Mammals		
Pacific harbor seal (*Phoca vitulina richardii*)	MMPA	—
California sea lion (*Zalophus californianus*)	MMPA	—
Harbor porpoise (*Phocoena phocoena*)	MMPA	—

Notes:

Federal Status: CH = Critical Habitat; FP – Federal Proposed Species for Listing; FE = Federally Listed Endangered; FT = Federally Listed Threatened; MMPA = Marine Mammal Protection Act

State Status: SE = State Listed Endangered; ST = State Listed Threatened

DPS = distinct population segment
ESU = environmentally sensitive unit

In-water construction would result in underwater noise, including from mechanical dredging and from pile removal and installation along the new shoreline of the IHTB. Underwater noise is not anticipated to substantially affect Chinook Salmon, Steelhead, and Green Sturgeon, due to their mobility, the existing activity at the harbor, and the anticipated intensity of sound produced by construction.

The loss of benthic invertebrates during dredging or other bottom-disturbing activities may decrease the forage value of benthic habitat in the project area. This impact would be localized, and would be negligible in the context of the forage habitat available in the Oakland-Alameda Estuary. Recolonization of disturbed areas by benthic invertebrates could require several months; full recovery may require a few years.

Dredging, pile driving, and other in-water construction activities would result in increased turbidity from suspended sediments. This could affect fish behavior, including avoidance responses, territoriality, feeding, and homing behavior. The eggs or larval life stages of Steelhead

or Green Sturgeon are not expected to be present in the project area because it does not serve as spawning habitat for these species. Large adult and juvenile fish (including Chinook Salmon, Steelhead, and Green Sturgeon) would be mobile enough to avoid areas of high-turbidity plumes caused by dredging. The dredge material plume would occupy only a small percentage of the habitat available to fish species at any given time.

As described above, in-water work associated with this project is proposed to occur within the environmental work windows for applicable special-status fish species that have the potential to occur in the footprint or in the project vicinity of the IHTB or OHTB. In addition, USACE would implement the avoidance and minimization measures identified in Attachment A. These include standard BMPs to protect against leaks and spills; silt curtains, as required to reduce adverse effects caused by the mobilization of sediments; and equipment measures related to dredging and pile driving (e.g., use of vibratory hammers for pile installation, and contingency measures if impact hammers are required). All of these measures would be implemented to minimize sediment intrusion and potential noise impacts to critical habitat for special-status fish species, among others.

Areas of San Francisco Bay below mean higher high water are designated as EFH under the Pacific Coast Groundfish, Coastal Pelagic Species, and Pacific Salmon fisheries management plans. The Proposed Action may affect EFH through sediment suspension, entrainment of fish and plankton during dredging, and removal of sediment and benthic organisms with a clamshell dredge. As noted, the recolonization of disturbed areas by benthic invertebrates could require several months; full recovery may require a few years. Implementation of the general and dredge-related measures described in Attachment A—such as the use of silt curtains, when required, limitations on decant water, and water quality monitoring—are expected to reduce potential impacts to EFH during construction. The removal of piles and other man-made hard substrates would result in the alteration of EFH in the project footprint because hard-substrate habitat would be removed and replaced with soft-substrate area and new hard-substrate surfaces (e.g., new bulkhead walls and piles). Overall, expansion of the IHTB would result in an increase of open waters and soft-substrate bottom, increasing the extent of EFH in the project area; however, this habitat would receive periodic disturbance and would not be of the quality of undisturbed habitat.

The project would not directly remove any mapped eelgrass areas, and the dredge plume is not anticipated to result in turbidity or other water quality impacts that would affect eelgrass. The IHTB and OHTB expansion areas are predominantly in waters that are too deep to support eelgrass. Some areas with depths potentially suitable for eelgrass would be deepened to -50 feet MLLW. However, these areas have not been colonized by eelgrass, and habitat suitability is likely minimal, given existing vessel traffic and maintenance dredging disturbance in the adjoining navigation channel. There is one small patch of eelgrass approximately 167 meters (548 feet) northeast of the proposed OHTB expansion area; the nearest patch to the IHTB expansion area occurs approximately 500 meters (1,640 feet) to the west (Merkel and Associates 2021). No terrestrial, emergent, or submerged aquatic vegetation would be directly impacted by construction or operations of the expanded IHTB and OHTB. The Proposed Action would also include pre- and post-construction surveys for eelgrass. If impacts to eelgrass are observed to occur after construction, USACE and the Port would develop a mitigation plan to achieve no net loss in eelgrass function.

Special-Status Bird Species

California least tern typically feeds in shallow estuaries or lagoons, where small fish are abundant. Least terns have been observed to forage primarily along the breakwaters and shallows of the southern shoreline of Naval Air Station Alameda, and in Ballena Bay. Least terns are also known to forage and roost in the nearby Middle Harbor Enhancement Area. Increased turbidity may decrease foraging success in the project area by decreasing prey abundance or by making it more difficult for least terns to detect prey. Turbidity impacts from the Proposed Action would be mostly confined to existing moderately deep waters or shoreline areas currently occupied by marine structures proposed for removal. Impacts to shallow-water habitat would be limited, and would not occur in waters adjacent to known California least tern colonies. Suitable foraging habitat for this species is widely available outside of the proposed construction limits, including along the southern Alameda shoreline and the Bay Farm borrow pits to the south of Alameda. Similarly, noise from construction activities would not substantially disrupt least tern foraging activities. Birds currently residing in the vicinity are accustomed to varying levels of ambient noise emanating from existing human activities in the project area; however, some may relocate to preferable environments elsewhere in the Oakland-Alameda Estuary during construction activities. The Long-Term Management Strategy (LTMS) program dredging work window for this species in the project vicinity is August 1 through March 15 each year. In-water construction would occur partially outside of this work window (starting as early as June 1); USACE would consult with USFWS to obtain written authorization to work outside this window. In addition, USACE would implement the avoidance and minimization measures identified in Attachment A, such as the use of silt curtains, when required; limitations on decant water; and the use of vibratory pile driving for in-water pile installation to the extent feasible, which would reduce impacts on California least tern.

Protected Marine Mammals

Three marine mammal species protected under the MMPA are likely to be found in the vicinity of the project area: Pacific harbor seal (*Phoca vitulina richardii*), California sea lion (*Zalophus californianus*), and harbor porpoise (*Phocoena phocoena*). There are several other species of marine mammals that uncommonly occur in the central portion of the San Francisco Bay Estuary, such as northern elephant seal (*Mirounga angustirostris*), common bottlenose dolphin (*Tursiops truncatus*), and gray whale (*Eschrichtius robustus*). These species are not federally or state listed as threatened or endangered; however, all marine mammals are protected under the MMPA.

The marine mammal most likely to occur in the project area is the Pacific harbor seal, which hauls out in several locations in the central portion of the Bay and may forage in the project area; and to a lesser extent, California sea lions, which may forage in the project area. Harbor porpoise may also be infrequently present in the project area. Marine mammals would not be substantially affected by the turbidity generated during the dredging operations, because they forage over large areas of San Francisco Bay and the Pacific Ocean and can avoid areas of temporarily increased turbidity and dredging disturbance.

The project does have the potential to affect marine mammals during pile driving. Underwater noise generated during pile removal and installation would have the potential to harass marine mammals; therefore, in accordance with the requirements of the MMPA, an incidental

harassment authorization would be needed for the Proposed Action. This authorization would be pursued through coordination with NMFS.

Avoidance and minimization measures that would be implemented as part of the Proposed Action to reduce impacts on marine mammals are presented in Attachment A. These include use of vibratory driving for in-water pile installation to the extent feasible, sound attenuation measures to minimize acoustic disturbance if in-water impact pile-driving is required, and hydroacoustic and biological monitoring. With the implementation of these measures, no injuries or permanent impacts to marine mammals are expected to occur. For these reasons, the Proposed Action is consistent to the maximum extent practicable with Policy 2.

5.1.3. Policy 4

The Commission should:

a. *Consult with the California Department of Fish and Wildlife, and the U.S. Fish and Wildlife Service or the National Marine Fisheries Service, whenever a proposed project may adversely affect an endangered or threatened plant, fish, other aquatic organism or wildlife species;*

b. *Not authorize projects that would result in the "taking" of any plant, fish, other aquatic organism or wildlife species listed as endangered or threatened pursuant to the state or federal Endangered Species Acts, or the federal Marine Mammal Protection Act, or species that are candidates for listing under these acts, unless the project applicant has obtained the appropriate "take" authorization from the U.S. Fish and Wildlife Service, National Marine Fisheries Service or the California Department of Fish and Wildlife; and*

c. *Give appropriate consideration to the recommendations of the California Department of Fish and Wildlife, the National Marine Fisheries Service or the U.S. Fish and Wildlife Service in order to avoid possible adverse effects of a proposed project on fish, other aquatic organisms and wildlife habitat.*

Policy 4 is not enforceable with respect to a federal agency. BCDC cannot require a federal agency to enter consultation with another agency. However, please see the response to Policy 2 above regarding consultations undertaken for this action.

5.2. Water Quality

Five of the Bay Plan's water quality policies are applicable to the Proposed Action: Policies 1, 2, 3, 4, and 6. The Proposed Action's consistency with these policies is discussed in the following sections.

5.2.1. Policy 1

Bay water pollution should be prevented to the greatest extent feasible. The Bay's tidal marshes, tidal flats, and water surface area and volume should be conserved and, whenever possible, restored and increased to protect and improve water quality. Fresh water inflow into the Bay should be maintained at a level adequate to protect Bay resources and beneficial uses.

The proposed dredging required for expansion of the IHTB and OHTB would not result in adverse effects to tidal marshes or tidal flats, nor would it affect the surface area, flow of water into the Bay, and volume of the Bay. All suitable dredged material would be used for beneficial reuse, which may include restoration of wetlands and other aquatic habitats. For these reasons, the Proposed Action is consistent to the maximum extent practicable with Policy 1.

5.2.2. Policy 2

Water quality in all parts of the Bay should be maintained at a level that will support and promote the beneficial uses of the Bay as identified in the San Francisco Bay Regional Water Quality Control Board's Water Quality Control Plan, San Francisco Bay Basin, and should be protected from all harmful or potentially harmful pollutants. The policies, recommendations, decisions, advice, and authority of the State Water Resources Control Board and the Regional Board should be the basis for carrying out the Commission's water quality responsibilities.

USACE would implement BMPs throughout project construction to protect water quality and prevent the discharge of pollutants to the Bay. These include implementation of a Stormwater Pollution Prevention Plan and use of silt curtains, as required (see Attachment A for additional measures). In addition, pursuant to Section 401 of the Clean Water Act (33 U.S.C. Section 1251), USACE is coordinating with the San Francisco Bay Regional Water Quality Control Board (SFRWQCB) and would submit an application for a Section 401 Water Quality Certification for the project to ensure consistency with the SFRWQCB's Water Quality Control Plan for the San Francisco Bay Basin. For these reasons, the Proposed Action is consistent to the maximum extent practicable with Policy 2.

5.2.3. Policy 3

New projects should be sited, designed, constructed, and maintained to prevent or, if prevention is infeasible, to minimize the discharge of pollutants into the Bay by: (a) controlling pollutant sources at the project site; (b) using construction materials that contain nonpolluting materials; and (c) applying appropriate, accepted, and effective best management practices, especially where water dispersion is poor and near shellfish beds and other significant biotic resources.

The project does not involve sewage systems, bayside parking lots, commercial fishing docks, or other site uses that would typically have the potential to discharge pollutants into the Bay.

Any components (e.g., sheet piles, bulkhead, or rock) to be installed for expansion of the IHTB would be constructed with materials that do not contain elevated levels of contaminants.

The replacement of the rock dike and bulkhead and proposed dredging activity has the potential to resuspend sediment in the immediate vicinity of the turning basins, and to degrade water quality if eroded soils and construction-related wastes and runoff flow into waterways. The effects of dredging activities are expected to be of short duration and limited to the immediate dredging area. Please see the response to Policy 2 above for discussion of BMPs. For these reasons, the Proposed Action is consistent to the maximum extent practicable with Policy 3.

5.2.4. Policy 4

When approving a project in an area polluted with toxic or hazardous substances, the Commission should coordinate with appropriate local, state, and federal agencies to ensure that

the project will not cause harm to the public, to Bay resources, or to the beneficial uses of the Bay.

The 50-acre Howard Terminal site, which includes a portion of the IHTB proposed expansion area, is under the regulatory jurisdiction of the Department of Toxic Substances Control (DTSC) and there are land use restrictions applied to the site. The land use covenant restrictions require notice and approval before any excavation or changes in land use, as well as regular groundwater monitoring and cap integrity inspections.

All ground-disturbing activities at Howard Terminal would occur in coordination with DTSC to ensure that adverse impacts associated with existing contamination would be avoided, thus protecting human health and the environment, including groundwater. This would likely include developing plans specifying how the construction contractor(s) would remove, handle, transport, and dispose of all excavated materials, and manage groundwater encountered during construction in a safe, appropriate, and lawful manner. Project plans would be developed to avoid, if applicable, impeding existing cleanup and abatement orders; this would likely include evaluating effects on existing monitoring wells in or near the project footprint, and implementing corrective measures as needed in coordination with DTSC. The proposed IHTB expansion would not affect the existing concrete quay wall and wood bulkhead at Howard Terminal, which has been shown to contain and prevent the movement of impacted groundwater to San Francisco Bay.

Although the proposed IHTB expansion does have the potential to disturb contaminated soils and affect existing monitoring activities pertaining to groundwater, impacts to groundwater quality are expected to be minimized through adherence to applicable regulations and through coordination with DTSC. This would include development of project design components and procedures to ensure that the project does not substantially exacerbate existing contamination issues or impede existing monitoring efforts.

In addition, prior to construction and annual maintenance dredging activities, USACE would ensure that all required sediment testing and analysis is conducted (see Section 5.10 for additional discussion). The results of the sediment testing and analysis would be provided to BCDC, the SFRWQCB, and the United States Environmental Protection Agency through the Dredged Material Management Office (DMMO). The DMMO would have the opportunity to review the results and recommend suitability for placement. USACE would beneficially reuse sediment determined to be suitable for reuse in accordance with the requirements of the placement site. For these reasons, the Proposed Action is consistent to the maximum extent practicable with Policy 4.

5.2.5. Policy 6

To protect the Bay and its tributaries from the water quality impacts of nonpoint source pollution, new development should be sited and designed consistent with standards in municipal stormwater permits and state and regional stormwater management guidelines, where applicable, and with the protection of Bay resources. To offset impacts from increased impervious areas and land disturbances, vegetated swales, permeable pavement materials, preservation of existing trees and vegetation, planting native vegetation, and other appropriate measures should be evaluated and implemented where appropriate.

The Proposed Action would not result in an increase in impervious areas. With implementation of the BMPs and the avoidance and minimization measures described in Attachment A, and with

adherence to established regulatory requirements and processes, impacts to water quality from project construction would be minimized. For these reasons, the Proposed Action is consistent to the maximum extent practicable with Policy 6.

5.3. Water Surface and Volume

Two of the Bay Plan's water surface and volume policies are applicable to the Proposed Action: Policies 1 and 2. The Proposed Action's consistency with these policies is discussed in the following sections.

5.3.1. Policy 1

The surface area of the Bay and the total volume of water should be kept as large as possible in order to maximize active oxygen interchange, vigorous circulation, and effective tidal action. Filling and diking that reduce surface area and water volume should therefore be allowed only for purposes providing substantial public benefits and only if there is no reasonable alternative.

The proposed expansion of the IHTB and OHTB would remove fill material to widen the turning basins to a depth of -50 feet MLLW. The Proposed Action would not reduce water surface area and would increase the volume of the Bay, which is consistent with the policy of increasing the volume of water in the Bay when possible. For these reasons, the Proposed Action is consistent to the maximum extent practicable with Policy 1.

5.3.2. Policy 2

Water circulation in the Bay should be maintained, and improved as much as possible. Any proposed fills, dikes, or piers should be thoroughly evaluated to determine their effects upon water circulation and then modified as necessary to improve circulation or at least to minimize any harmful effects.

The project does not propose new fills, dikes, or piers that would substantially impact water circulation. Portions of a rock dike at Howard Terminal and a bulkhead along the Alameda shoreline would be relocated slightly landward from their current location, but this would not impede water circulation. In addition, the retaining structure offshore from Schnitzer Steel would extend only slightly above the sediment surface and would not substantially impact water circulation, given that the IHTB is a wide open area. For these reasons, the Proposed Action is consistent to the maximum extent practicable with Policy 2.

5.4. Smog and Weather

The Bay Plan's smog and weather Policy 1 is applicable to the Proposed Action. The Proposed Action's consistency with this policy is discussed in the following section.

5.4.1. Policy 1

To the greatest extent feasible, the remaining water volume and surface area of the Bay should be maintained.

As stated in Section 5.3, the Proposed Action would remove fill to expand the turning basins. The project would involve only the minimum fill necessary to ensure the future structural

integrity and seismic safety of the portions of rock dike and bulkhead being replaced. The project would not reduce water surface area in the Bay and is not expected to affect the Bay's function as an environmental regulator of particulate and smog in the atmosphere of the Bay Area. For these reasons, the Proposed Action is consistent to the maximum extent practicable with Policy 1.

5.5. Subtidal Areas

Two of the Bay Plan's subtidal area policies are applicable to the Proposed Action: Policies 1 and 2. The Proposed Action's consistency with these policies is discussed in the following sections.

5.5.1. Policy 1

Any proposed filling or dredging project in a subtidal area should be thoroughly evaluated to determine the local and Bay-wide effects of the project on: (a) the possible introduction or spread of invasive species; (b) tidal hydrology and sediment movement; (c) fish, other aquatic organisms and wildlife; (d) aquatic plants; and (e) the Bay's bathymetry. Projects in subtidal areas should be designed to minimize and, if feasible, avoid any harmful effects.

USCG and State of California have mandatory regulations in effect that require ships carrying ballast water to have a ballast water management and reporting program in place and to exchange ballast water with mid-ocean water or use an approved form of ballast water treatment prior to releasing any ballast water in a port in the United States. All water-based vessels associated with construction would be required to comply with these regulations, as applicable, to avoid the spread of invasive nonnative species and any associated impacts. Therefore, project activities would not be expected to substantially increase the spread of invasive nonnative species.

During dredging, some sediment would be resuspended in the water column and settle out in the channel and adjacent areas. The project dredging would be localized and is not expected to affect tidal hydrology or to result in significant changes to sediment movement or bathymetry. The Proposed Action would require some dredging of subtidal areas that have not been subject to dredging in the past, which would remove previously undisturbed benthic communities; however, these areas would be recolonized by benthic communities. As described in Section 5.1, USFWS determined in their Draft Fish and Wildlife Coordination Act report that, although restored tidal wetland is different from subtidal benthic habitat, the beneficial reuse of suitable sediments at a wetland restoration site—as proposed under the project—would meet the Resource Category 4 mitigation goals for minimizing loss of habitat value resulting from the Proposed Action's impact to subtidal benthic habitat. As also described in Section 5.1, various BMPs and avoidance and minimization measures would be implemented to minimize impacts on subtidal areas during construction. All dredging for the Proposed Action is the minimum required to meet the objectives of the Proposed Action. For these reasons, the Proposed Action is consistent to the maximum extent practicable with Policy 1.

5.5.2. Policy 2

Subtidal areas that are scarce in the Bay or have an abundance and diversity of fish, other aquatic organisms and wildlife (e.g., eelgrass beds, sandy deep water or underwater pinnacles)

should be conserved. Filling, changes in use; and dredging projects in these areas should therefore be allowed only if: (a) there is no feasible alternative; and (b) the project provides substantial public benefits.

The project would not directly impact special aquatic habitats such as eelgrass beds, sandy deep water, or underwater pinnacles. As described in Section 5.1, the project would not directly remove any mapped eelgrass areas, and the dredge plume is not anticipated to result in turbidity or other water quality impacts that would affect eelgrass. There is one small patch of eelgrass approximately 167 meters (548 feet) northeast of the proposed OHTB expansion area; the nearest patch to the IHTB expansion area occurs approximately 500 meters (1,640 feet) to the west (Merkel and Associates 2021). The Proposed Action would include pre- and post-construction surveys for eelgrass. If impacts to eelgrass are observed to occur after construction, USACE and the Port would develop a mitigation plan to achieve no net loss in eelgrass function.

As also described in Section 5.1, dredging may affect fish, other aquatic organisms, and birds. Turbidity and noise generated from clamshell mechanical dredging could affect fish and other aquatic organisms at the dredge site. Additionally, fish could be directly injured by a clamshell dredge and associated equipment and vessels. These impacts would be limited to the immediate area around the turning basins expansion areas. Potential effects of these activities would be reduced through implementation of the avoidance and minimization measures identified in Attachment A, such as the use of silt curtains (when required) and water quality monitoring. The project would not directly remove any mapped eelgrass areas in the Oakland Harbor.

Excavation and dredging would occur in the existing and authorized turning basins; there is no feasible alternative to expanding the turning basins in these areas. Furthermore, the turning basins provide a substantial public benefit to commerce, not only to the region but also to California and the nation. For these reasons, the Proposed Action is consistent to the maximum extent practicable with Policy 2.

5.6. Environmental Justice and Social Equity

Two of the Bay Plan's environmental justice and social equity policies are applicable to the Proposed Action: Policies 3 and 4. The Proposed Action's consistency with these policies is discussed in the following sections.

5.6.1. Policy 3

Equitable, culturally relevant community outreach and engagement should be conducted by local governments and project applicants to meaningfully involve potentially impacted communities for major projects and appropriate minor projects in underrepresented and/or identified vulnerable and/or disadvantaged communities, and such outreach and engagement should continue throughout the Commission review and permitting processes. Evidence of how community concerns were addressed should be provided. If such previous outreach and engagement did not occur, further outreach and engagement should be conducted prior to Commission action.

The project area is predominantly characterized by maritime, industrial, and urban uses associated with the Port, whose terminals surround the turning basins; the City of Oakland, which encompasses the Port and borders it to the north and east; and the City of Alameda, which

borders the Inner Harbor Channel on the south. The United States Census Bureau's 2015-2019 American Community Survey was used to determine whether environmental justice communities (i.e., federally defined as low-income communities and/or minority communities) occur in the project area. Based on census tract data, three environmental justice communities are within a 0.5-mile radius of the project area; nine additional environmental justice communities are within a 1-mile radius of the project area. These include environmental justice communities identified in West Oakland, Downtown Oakland, and West Alameda. West Oakland has a high cumulative air pollution exposure burden due to the combined air pollution effects resulting from freight, freeways, industry, and Port operations, and is identified by the State of California as an area with disproportionate impacts from air quality under the Community Air Protection Program (Assembly Bill 617).

Bay Plan Environmental Justice Policy 3 states that equitable, culturally relevant community outreach and engagement should be conducted by project applicants to meaningfully involve potentially impacted communities in underrepresented and/or disadvantaged communities. A community engagement meeting was held on August 23, 2021. Attendees for this meeting included neighboring Port residents and users including the West Oakland Environmental Indicators Project, the Jack London Improvement District and environmental groups. A similar meeting was held on January 12, 2022 with the same entities. The project presented at the Acorn and Prescott neighborhood councils meetings in March 31, 2022 and April 7, 2022 respectively. The team met by phone with the West Oakland Environmental Indicators Project and the EPA on May 12, 2022. An EJ focused meeting was held at the West Oakland Senior Center on February 15, 2023 which also had a virtual component. Additional meetings in the West Oakland community are planned to continue in 2023 to update the public and obtain additional input. The Port will also be conducting similar meetings as they prepare their CEQA documentation. For these reasons, the Proposed Action is consistent to the maximum extent practicable with Policy 3.

5.6.2. Policy 4

If a project is proposed within an underrepresented and/or identified vulnerable and/or disadvantaged community, potential disproportionate impacts should be identified in collaboration with the potentially impacted communities. Local governments and the Commission should take measures through environmental review and permitting processes, within the scope of their respective authorities, to require mitigation for disproportionate adverse project impacts on the identified vulnerable or disadvantaged communities in which the project is proposed.

At the public meeting on August 23, 2021, the main concerns voiced by the West Oakland Community were related to (a) continued sharing of project updates via email and website; (b) minimizing commercial business impacts during construction; (c) minimizing environmental impacts during construction, namely noise, traffic and air quality; and (d) local hiring for construction jobs.

In accordance with requirements under NEPA and Executive Order 12898 (*Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*), USACE evaluated the potential environmental effects of the project and whether the project would result in significant adverse human health or environmental resource impacts that disproportionately harm environmental justice communities. The NEPA analyses for all resource topics concluded

that the project would not result in significant effects on the environment, and there would not be disproportionate adverse impacts to the surrounding environmental justice communities. Furthermore, the Proposed Action includes the use of electric-powered dredges, which would reduce construction-related air-pollutant emissions and the health risk associated with such emissions compared to those that would result from the use of diesel-powered dredges under other project alternatives considered. Local thresholds not considered in the NEPA analyses will be further evaluated during CEQA review led by the Port, as will the Proposed Action's consistency with the West Oakland Community Action Plan, which specifically addresses disadvantaged communities near the project area. It will be determined whether any further mitigation measures are warranted and feasible for these communities during the CEQA process. For these reasons, the Proposed Action is consistent to the maximum extent practicable with Policy 4.

5.7. Climate Change

Three of the Bay Plan's climate change policies are applicable to the Proposed Action: Policies 1, 3, and 7. The Proposed Action's consistency with these policies is discussed in the following sections.

5.7.1. Policy 1

The Commission intends that the Bay Plan Climate Change findings and policies will be used as follows:

a. *The findings and policies apply only to projects and activities located within the following areas: San Francisco Bay, the 100-foot shoreline band, salt ponds, managed wetlands, and certain waterways, as these areas are described in Government Code section 66610, and the Suisun Marsh, as this area is described in Public Resources Code section 29101;*

b. *For projects or activities that are located partly within the areas described in subparagraph a and partly outside such area, the findings and policies apply only to those activities or that portion of the project within the areas described in subparagraph a;*

c. *For the purposes of implementing the federal Coastal Zone Management Act, the findings and policies do not apply to projects and activities located outside the areas described in subparagraph a, even if those projects or activities may otherwise be subject to consistency review pursuant to the federal Coastal Zone Management Act; and*

d. *For purposes of implementing the California Environmental Quality Act, the findings and policies are not applicable portions of the Bay Plan for purposes of CEQA Guideline 15125(d) for projects and activities outside the areas described in subparagraph a and, therefore, a discussion of whether such proposed projects or activities are consistent with the policies is not required in environmental documents.*

The Proposed Action will take place in the San Francisco Bay. Accordingly, applicable policies of the Bay Plan have been addressed in this document. For these reasons, the Proposed Action is consistent to the maximum extent practicable with Policy 1.

5.7.2. Policy 3

To protect public safety and ecosystem services, within areas that a risk assessment determines are vulnerable to future shoreline flooding that threatens public safety, all projects—other than repairs of existing facilities, small projects that do not increase risks to public safety, interim projects and infill projects within existing urbanized areas—should be designed to be resilient to a mid-century sea level rise projection. If it is likely the project will remain in place longer than mid-century, an adaptive management plan should be developed to address the long-term impacts that will arise based on a risk assessment using the best available science-based projection for sea level rise at the end of the century.

The project does not involve planning shoreline areas or design of a large shoreline project, but rather widens a transportation facility that is necessary to serve existing development, consistent with Bay Plan Climate Change Policy 3. The project would construct the new bulkhead at an elevation the same as or higher as the elevation of the bulkhead being replaced; would not add any new structures or facilities that would be vulnerable to sea level rise; and would not otherwise modify shoreline areas in such a way that the vulnerability or hazard risk of existing developments would be changed. The proposed turning basins expansion would not negatively impact the Bay and would not increase risks to public safety. For these reasons, the Proposed Action is consistent to the maximum extent practicable with Policy 3.

5.7.3. Policy 7

Until a regional sea level rise adaptation strategy can be completed, the Commission should evaluate each project proposed in vulnerable areas on a case-by-case basis to determine the project's public benefits, resilience to flooding, and capacity to adapt to climate change impacts. The following specific types of projects have regional benefits, advance regional goals, and should be encouraged, if their regional benefits and their advancement of regional goals outweigh the risk from flooding:

a. *remediation of existing environmental degradation or contamination, particularly on a closed military base;*
b. *a transportation facility, public utility or other critical infrastructure that is necessary for existing development or to serve planned development;*
c. *a project that will concentrate employment or housing near existing or committed transit service (whether by public or private funds or as part of a project), particularly within those Priority Development Areas that are established by the Association of Bay Area Governments and endorsed by the Commission, and that includes a financial strategy for flood protection that will minimize the burdens on the public and a sea level rise adaptation strategy that will adequately provide for the resilience and sustainability of the project over its designed lifespan; and*
d. *a natural resource restoration or environmental enhancement project.*

The following specific types of projects should be encouraged if they do not negatively impact the Bay and do not increase risks to public safety:

e. *repairs of an existing facility;*
f. *a small project;*

g. *a use that is interim in nature and either can be easily removed or relocated to higher ground or can be amortized within a period before removal or relocation of the proposed use would be necessary; and*

h. *a public park.*

Consistent with Policy 7b, the Proposed Action would involve widening a transportation facility that is necessary to serve existing development. For these reasons, the Proposed Action is consistent to the maximum extent practicable with Policy 7.

5.8. Safety of Fills

Policy 1 of the Bay Plan's safety of fills policies is applicable to the Proposed Action. The Proposed Action's consistency with this policy is discussed in the following section.

5.8.1. Policy 1

The Commission has appointed the Engineering Criteria Review Board consisting of geologists, civil engineers specializing in geotechnical and coastal engineering, structural engineers, and architects competent to and adequately empowered to: (a) establish and revise safety criteria for Bay fills and structures thereon; (b) review all except minor projects for the adequacy of their specific safety provisions, and make recommendations concerning these provisions; (c) prescribe an inspection system to assure placement and maintenance of fill according to approved designs; (d) with regard to inspections of marine petroleum terminals, make recommendations to the California State Lands Commission and the U.S. Coast Guard, which are responsible for regulating and inspecting these facilities; (e) coordinate with the California State Lands Commission on projects relating to marine petroleum terminal fills and structures to ensure compliance with other Bay Plan policies and the California State Lands Commission's rules, regulations, guidelines and policies; and (f) gather, and make available performance data developed from specific projects. These activities would complement the functions of local building departments and local planning departments, none of which are presently staffed to provide soils inspections.

The Proposed Action would involve only the minimum fill necessary to ensure the future structural integrity and seismic safety of the portion of the rock dike, bulkhead, and piles being replaced. A narrow band of rock slope protection would be placed in front of the bulkhead walls (see Figure 3). The project would be designed in accordance with USACE design specifications. Moreover, all plans and specifications for the project would be subject to review by the Commission's Engineering Criteria Review Board to ensure adequacy with adopted safety provisions related to Bay fills. For these reasons, the Proposed Action is consistent to the maximum extent practicable with Policy 1.

5.9. Shoreline Protection

Bay Plan shoreline protection Policy 1 is applicable to the Proposed Action. The Proposed Action's consistency with this policy is discussed in the following section.

5.9.1. Policy 1

New shoreline protection projects and the maintenance or reconstruction of existing projects and uses should be authorized if: (a) the project is necessary to provide flood or erosion protection for (i) existing development, use or infrastructure, or (ii) proposed development, use or infrastructure that is consistent with other Bay Plan policies; (b) the type of the protective structure is appropriate for the project site, the uses to be protected, and the causes and conditions of erosion and flooding at the site; (c) the project is properly engineered to provide erosion control and flood protection for the expected life of the project based on a 100-year flood event that takes future sea level rise into account; (d) the project is properly designed and constructed to prevent significant impediments to physical and visual public access; (e) the protection is integrated with current or planned adjacent shoreline protection measures; and (f) adverse impacts to adjacent or nearby areas, such as increased flooding or accelerated erosion, are avoided or minimized. If such impacts cannot be avoided or minimized, measures to compensate should be required. Professionals knowledgeable of the Commission's concerns, such as civil engineers experienced in coastal processes, should participate in the design.

The Proposed Action includes the replacement of an existing rock dike and bulkhead with new bulkhead walls. No new shoreline erosion control or protection infrastructure is proposed as part of the IHTB and OHTB expansion pursuant to Policy 1(a)(1). The new bulkhead walls and rock slope protection are necessary to protect the existing development inland of the walls from erosion. For these reasons, the Proposed Action is consistent to the maximum extent practicable with Policy 1.

5.10. Dredging

Six of the Bay Plan's dredging policies are applicable to the Proposed Action: Policies 1, 2, 3, 5, 6, and 7. The Proposed Action's consistency with these policies is discussed in the following sections.

5.10.1. Policy 1

Dredging and dredged material disposal should be conducted in an environmentally and economically sound manner. Dredgers should reduce disposal in the Bay and certain waterways over time to achieve the LTMS goal of limiting in-Bay disposal volumes to a maximum of one million cubic yards per year. The LTMS agencies should implement a system of disposal allotments to individual dredgers to achieve this goal only if voluntary efforts are not effective in reaching the LTMS goal. In making its decision regarding disposal allocations, the Commission should confer with the LTMS agencies and consider the need for the dredging and the dredging projects, environmental impacts, regional economic impacts, efforts by the dredging community to implement and fund alternatives to in-Bay disposal, and other relevant factors. Small dredgers should be exempted from allotments, but all dredgers should comply with policies 2 through 12.[1]

[1] Policy 4 addresses the disposal of dredged material in tidal areas of the Bay and certain waterways that exceed either disposal site limits or any disposal allocation that the Commission has adopted by regulation, which is not applicable. Policies 8 through 12 address either project requirements that do not apply to the Proposed Action, regulate actions by the Commission, or apply to projects that used dredged sediment to create, restore, or enhance Bay or certain waterway natural resources, which are not applicable to the Proposed Action.

All dredging for the Proposed Action is the minimum required to meet the objectives of the Proposed Action. All suitable dredged material would be beneficially used at an approved site that would be identified during the pre-construction and design phase that follows completion of USACE's study phase. All dredging activities would be consistent with the standards and procedures set forth in the LTMS to guide the disposal, in an environmentally sound manner, of materials dredged from San Francisco Bay waters. During the pre-construction and design phase, a sampling and analysis plan would be developed and implemented to characterize soils and sediments to be removed or exposed. The plan would be prepared in accordance with applicable guidance for sediment sampling and testing. The results would be presented to the DMMO (of which the SFRWQCB is part) for review. Upon review of the sediment testing results, the DMMO would make a determination regarding the suitability of dredged material placement. USACE complies with the DMMO's placement site suitability determinations. USACE would dispose of dredged material according to the LTMS work windows. For these reasons, the Proposed Action is consistent to the maximum extent practicable with Policy 1.

5.10.2. Policy 2

Dredging should be authorized when the Commission can find: (a) the applicant has demonstrated that the dredging is needed to serve a water-oriented use or other important public purpose, such as navigational safety; (b) the materials to be dredged meet the water quality requirements of the San Francisco Bay Regional Water Quality Control Board; (c) important fisheries and Bay natural resources would be protected through seasonal restrictions established by the California Department of Fish and Game, the U.S. Fish and Wildlife Service, and/or the National Marine Fisheries Service, or through other appropriate measures; (d) the siting and design of the project will result in the minimum dredging volume necessary for the project; and (e) the materials would be disposed of in accordance with Policy 3.

Consistent with Policy 2(a), the expansion of the IHTB and OHTB is proposed to allow safe and efficient passage of large marine vessels. Consistent with Policy 2(b), compliance of dredged materials with SFRWQCB standards is addressed through DMMO review, as described in the response to Policy 1 in Section 5.10.1. Consistent with Policy 2(c), project measures to be protective of fisheries and bay natural resources, including adherence to the June 1 through November 30 in-water work window, are discussed in Section 5.1. Consistent with Policy 2(d), the dredging proposed for widening the turning basins is the minimum required to meet the objectives of the project. Consistent with Policy 2(e), compliance with requirements for appropriate disposal of dredged materials is addressed in Section 5.10.3 and Policy 3 below. For these reasons, the Proposed Action is consistent to the maximum extent practicable with Policy 2.

5.10.3. Policy 3

Dredged materials should, if feasible, be reused or disposed outside the Bay and certain waterways. Except when reused in an approved fill project, dredged material should not be disposed in the Bay and certain waterways unless disposal outside these areas is infeasible and the Commission finds: (a) the volume to be disposed is consistent with applicable dredger disposal allocations and disposal site limits adopted by the Commission by regulation; (b) disposal would be at a site designated by the Commission; (c) the quality of the material disposed of is consistent with the advice of the San Francisco Bay Regional Water Quality Control Board and the inter-agency Dredged Material Management Office; and (d) the period of

disposal is consistent with the advice of the California Department of Fish and Game, the U.S. Fish and Wildlife Service, and the National Marine Fisheries Service.

Widening of the IHTB and OHTB is proposed to allow safe and efficient passage of large marine vessels. Consistent with Policies 3(a), 3(b), 3(c), and 3(d), and as addressed in the response to Policy 1 in Section 5.10.1, all dredging activities would be consistent with the standards and procedures set forth in the LTMS to guide the disposal, in an environmentally sound manner, of materials dredged from San Francisco Bay waters. The soils and sediments sampling and analysis plan would be prepared in accordance with applicable guidance for sediment sampling and testing. The results would be presented to the DMMO (of which the SFRWQCB is part) for review. Upon review of the sediment testing results, the DMMO would make a determination regarding the suitability of dredged material placement. USACE complies with the DMMO's placement site suitability determinations. For these reasons, the Proposed Action is consistent to the maximum extent practicable with Policy 3.

5.10.4. Policy 5

To ensure adequate capacity for necessary Bay dredging projects and to protect Bay natural resources, acceptable non-tidal disposal sites should be secured, and the Deep Ocean Disposal Site should be maintained. Furthermore, dredging projects should maximize use of dredged material as a resource consistent with protecting and enhancing Bay natural resources, such as creating, enhancing, or restoring tidal and managed wetlands; creating and maintaining levees and dikes, providing cover and sealing material for sanitary landfills; and filling at approved construction sites.

As addressed in the response to Policy 1 in Section 5.10.1, all dredged material that is suitable would be beneficially used at an approved site that would be identified at a later date. All dredging activities would be consistent with the standards and procedures set forth in the LTMS to guide the disposal, in an environmentally sound manner, of materials dredged from San Francisco Bay waters; would be sampled and analyzed according to applicable guidance; and would be presented to the DMMO for review and approval. For these reasons, the Proposed Action is consistent to the maximum extent practicable with Policy 5.

5.10.5. Policy 6

Dredged materials disposed in the Bay and certain waterways should be carefully managed to ensure that the specific location, volumes, physical nature of the material, and timing of disposal do not create navigational hazards; adversely affect Bay sedimentation, currents, or natural resources; or foreclose the use of the site for projects critical to the economy of the Bay Area.

As addressed in the responses to Policy 1 in Section 5.10.1, Policy 3 in Section 5.10.3, and Policy 5 in Section 5.10.4, the project would comply with all applicable Bay Plan regulations for the disposal of dredged materials. For these reasons, the Proposed Action is consistent to the maximum extent practicable with Policy 6.

5.10.6. Policy 7

All proposed channels, berths, turning basins, and other dredging projects should be carefully designed so as not to undermine the stability of any adjacent dikes, fills or fish and wildlife habitats.

The project will be designed to applicable fill safety standards, as discussed in Section 5.8; and would not undermine fish and wildlife habitats, as discussed in Section 5.1. For these reasons, the Proposed Action is consistent to the maximum extent practicable with Policy 7.

5.11. Water Related Industry and Ports

Two of the Bay Plan's water related industry and ports policies are applicable to the Proposed Action: Policies 1 and 4. The Proposed Action's consistency with these policies is discussed in the following sections.

5.11.1. Policy 1

Sites designated for both water-related industry and port uses in the Bay Plan should be reserved for those industries and port uses that require navigable, deep water for receiving materials or shipping products by water in order to gain a significant transportation cost advantage.

The project does not propose changes to the uses or designations of sites reserved for water-related industry or Port uses. Accordingly, the Proposed Action is consistent to the maximum extent practicable with Policy 1.

5.11.2. Policy 4

Water-related industry and port sites should be planned and managed so as to avoid wasteful use of the limited supply of waterfront land. The following principles should be followed to the maximum extent feasible in planning for water-related industry and port use:

a. *Extensive use of the shoreline for storage of raw materials, fuel, products, or waste should not be permitted on a long-term basis. If required, such storage areas should generally either be at right angles to the main direction of the shoreline or be as far inland as feasible, so other use of the shoreline may be made possible.*

b. *Where large acreages are available, site planning should strive to provide access to the shoreline for all future plants and port facilities that might locate in the same area. (As a general rule, therefore, the longest dimension of plant sites should be at right angles to the shoreline.) Marine terminals should also be shared as much as possible among industries and port uses.*

c. *Waste treatment ponds for water-related industry and port uses should occupy as little land as possible, be above the highest recorded level of tidal action, and be as far removed from the shoreline as possible.*

d. *Any new highways, railroads, or rapid transit lines in existing or future water-related industrial and port areas should be located sufficiently far away from the waterfront so as not to interfere with industrial use of the waterfront. New access roads to waterfront industrial and port areas should be approximately at right angles to the shoreline, topography permitting.*

The project would remove approximately 4 acres of land area from the Howard Terminal site. In June 2022, BCDC voted to remove the port priority use designation on Howard Terminal. Regardless, the project would not preclude the continued use of this or other sites for water-

related industrial or Port activities. The project would benefit water-related industry in general by allowing water-related and Port industry dependent on vessel transportation to continue and to keep pace with changes in shipping technology. The project is intended to improve the efficiency of vessels when transiting to and from marine terminals. Accordingly, the Proposed Action is consistent to the maximum extent practicable with Policy 4.

5.12. Transportation

The Bay Plan's transportation Policy 1 is applicable to the Proposed Action. The Proposed Action's consistency with this policy is discussed in the following section.

5.12.1. Policy 1

Because of the continuing vulnerability of the Bay to filling for transportation projects, the Commission should continue to take an active role in Bay Area regional transportation and related land use planning affecting the Bay, particularly to encourage alternative methods of transportation and land use planning efforts that support transit and that do not require fill. The Metropolitan Transportation Commission, the California Department of Transportation, the California Transportation Commission, the Federal Highway Administration, county congestion management agencies and other public and private transportation authorities should avoid planning or funding roads that would require fill in the Bay and certain waterways.

Although the project would facilitate continued maritime navigation in the Port, it is not considered a transportation project in the context of the Bay Plan policies. For example, the project proposes no new roads that would require Bay fill, no bridges or other routes across the Bay or shoreline, and no ferry terminals. The project would generally benefit marine vessel traffic through the Port by improving the navigational efficiency and safety of large marine vessels that are forecasted to travel Bay water with greater frequency and in greater numbers in the future. Accordingly, the Proposed Action is consistent to the maximum extent practicable with Policy 1.

5.13. Recreation

The Bay Plan's recreation Policy 1 is applicable to the Proposed Action. The Proposed Action's consistency with this policy is discussed in the following section.

5.13.1. Policy 1

Diverse and accessible water-oriented recreational facilities, such as marinas, launch ramps, beaches, and fishing piers, should be provided to meet the needs of a growing and diversifying population, and should be well distributed around the Bay and improved to accommodate a broad range of water-oriented recreational activities for people of all races, cultures, ages and income levels. Periodic assessments of water-oriented recreational needs that forecast demand into the future and reflect changing recreational preferences should be made to ensure that sufficient, appropriate water-oriented recreational facilities are provided around the Bay. Because there is no practical estimate of the acreage needed on the shoreline of the Bay, waterfront parks should be provided wherever possible.

Recreational activities in the project vicinity consist of boating,[2] fishing from private boats via trolling and from land, walking and bicycling along portions of the Bay Trail, and a variety of activities at several existing and planned landside public parks in Oakland and Alameda. The project sites do not contain recreational facilities. The expansion of the IHTB and OHTB would not permanently change the public's ability to recreate on and by the Bay. Direct effects during construction would occur from the presence of water-based construction equipment in the turning basins, necessitating that those areas of the channel be closed to public waterway access. Indirect effects to recreational fisherman could also occur from temporary displacement of fish from the construction areas. However, during construction activity, there would remain ample room for recreational boaters to pass through both turning basins. Furthermore, all of the Inner Harbor and Outer Harbor Channels would remain open and available for use by recreational boaters and fishermen—an area encompassing more than 2 square miles.

Construction activities associated with the expanded IHTB and OHTB could potentially displace some users to other parks farther from the construction area due to increased noise and dust from construction. However, all landside parks, including Alameda's Estuary Park—the closest park in the project vicinity—would remain open to the public during project-related construction. Other nearby parks within half a mile of the IHTB and OHTB vicinity, such as Alameda Landing Park, Main Street Dog Park, the Northwest Territories Regional Shoreline Park, Judge John Sutter Regional Shoreline Park, and Middle Harbor Shoreline Park, would be available for use. Accordingly, the Proposed Action is consistent to the maximum extent practicable with Policy 1.

5.14. Public Access

Two of the Bay Plan's public access policies are applicable to the Proposed Action: Policies 1 and 10. The Proposed Action's consistency with these policies is discussed in the following sections.

5.14.1. Policy 1

A proposed fill project should increase public access to the Bay to the maximum extent feasible, in accordance with the policies for Public Access to the Bay.

The proposed expansion of the IHTB and OHTB is not a fill project that would warrant new public access, would not involve the creation of new public access and infrastructure, would not result in changes to any public access, and would be executed in a way that maintains maximum feasible public access during construction. Connections to existing public streets or offsite public pathways would not be altered by the proposed IHTB and OHTB expansion. The IHTB and OHTB do not provide public shoreline access, and there are no landside public access facilities that would be impacted by the expansion footprints. Accordingly, the Proposed Action is consistent to the maximum extent practicable with Policy 1.

5.14.2. Policy 10

Access to and along the waterfront should be provided by walkways, trails, or other appropriate means and connect to the nearest public thoroughfare where convenient parking or public

[2] Boats may not stop or anchor in the navigational channels or turning basins, or otherwise interfere with vessels, such as cargo ships, that are restricted in ability to maneuver and constrained by draft.

transportation may be available. Diverse and interesting public access experiences should be provided which would encourage users to remain in the designated access areas to avoid or minimize potential adverse effects on wildlife and their habitat.

The IHTB and OHTB do not provide public shoreline access, and there are no landside public access facilities that would be impacted by the expansion footprints. Although the presence of water-based construction equipment in the IHTB and OHTB necessitate that publicly accessible areas of the channel be closed off from public access, both turning basins and the Inner and Outer Harbor Channels are wide enough that recreational boaters would have ample room to traverse either the northern side or the southern side of the channels, respectively. Accordingly, the Proposed Action is consistent to the maximum extent practicable with Policy 10.

5.15. Appearance, Design, and Scenic Views

Three of the Bay Plan's appearance, design, and scenic views policies are applicable to the Proposed Action: Policies 1, 2, and 3. The Proposed Action's consistency with these policies is discussed in the following sections.

5.15.1. Policy 1

To enhance the visual quality of development around the Bay and to take maximum advantage of the attractive setting it provides, the shores of the Bay should be developed in accordance with the Public Access Design Guidelines.

As addressed in the response to Public Access Policy 1 in Section 5.14.1, the proposed expansion of the IHTB and OHTB is not a fill project that would warrant new public access, would not involve the creation of new public access and infrastructure, would not result in changes to any public access, and would be executed in a way that maintains maximum feasible public access during construction. Connections to existing public streets or offsite public pathways would not be altered by the proposed IHTB and OHTB expansion. The IHTB and OHTB do not provide public shoreline access, and there are no landside public access facilities that would be impacted by the expansion footprints. For these reasons, the Proposed Action is consistent to the maximum extent practicable with Policy 1.

5.15.2. Policy 2

All bayfront development should be designed to enhance the pleasure of the user or viewer of the Bay. Maximum efforts should be made to provide, enhance, or preserve views of the Bay and shoreline, especially from public areas, from the Bay itself, and from the opposite shore. To this end, planning of waterfront development should include participation by professionals who are knowledgeable of the Commission's concerns, such as landscape architects, urban designers, or architects, working in conjunction with engineers and professionals in other fields.

Both the Inner and Outer Harbor Channels and Turning Basins are characterized by land uses and activities consisting of industrial, light industrial, Port, and marine support activity. Views of the project areas from publicly accessible landside areas are limited and generally distant. Publicly accessible nearfield views of the project areas are generally restricted to those from the Inner and Outer Harbor Channels. There are no scenic vistas identified on the Bay Plan maps from which project activities would be plainly visible.

The new bulkheads and piles installed along the waterfront on both the northern and southern sides of the IHTB would be of a size, scale, mass, and color similar to those of existing facilities. Similarly, there is no landside work associated with the OHTB, with the exception of the proposed electrical switchgear near Berth 26, which would be co-located with existing electrical infrastructure. Therefore, the expanded OHTB would appear visually similar to the existing conditions. The vertical structures proposed by the project (i.e., bulkhead) would be of a size and scale substantially similar to those it is replacing; therefore, the project does not include any vertical structures or facilities that would appreciably change the appearance, design, or scenic views of the shoreline.

During construction, barges and scows used for dredging; cranes, bulldozers, and trucks used for demolition of concrete pavement, bulkhead, and warehouses; and cranes, excavators, drill rigs, and barges used for installation of the new bulkheads and piles may be visible from public vantage points. The presence of such equipment would be visually consistent with existing heavy industrial/maritime uses of the area, and therefore their temporary visual presence would not diminish existing scenic views.

Nighttime lighting associated with the dredge would be comparable to that required on all boats in the Inner and Outer Harbors. The project's temporary addition of nighttime lighting in the dredge areas would be inconsequential in relation to the existing nighttime lighting in the area, which includes high-mast lighting on the northern and southern sides of the IHTB and along the landside of the OHTB, among other substantial light sources. For these reasons, the Proposed Action is consistent to the maximum extent practicable with Policy 2.

5.15.3. Policy 3

In some areas, a small amount of fill may be allowed if the fill is necessary—and is the minimum absolutely required—to develop the project in accordance with the Commission's design recommendations.

As described in Section 5.8, the project would result in a net reduction of bay fill, with the new fill required being only the minimum necessary to replace the existing rock dike and bulkhead and ensure the future structural integrity and seismic safety of the portion of the rock dike and bulkhead being replaced. For these reasons, the Proposed Action is consistent to the maximum extent practicable with Policy 3.

5.16. Other Uses of the Bay and Shoreline

The Proposed Action would not involve any of the other uses of the Bay and shoreline described in the Bay Plan; therefore, such policies are not applicable. The project is consistent to the maximum extent practicable with the Bay Plan's policies related to other uses of the Bay and shoreline.

5.17. Fills in Accord with the Bay Plan

The Bay Plan's fills in accord with the Bay Plan Policy 1 is applicable to the Proposed Action. The Proposed Action's consistency with this policy is discussed in the following section.

5.17.1. Policy 1

Fills in Accord with Bay Plan. A proposed project should be approved if the filling is the minimum necessary to achieve its purpose, and if it meets one of the following three conditions:

a. The filling is in accord with the Bay Plan policies as to the Bay-related purposes for which filling may be needed (ports, water-related industry, and water-related recreation) and is shown on the Bay Plan maps as likely to be needed; or

b. The filling is in accord with Bay Plan policies as to purposes for which some fill may be needed if there is no other alternative (airports, roads, and utility routes); or

c. *The filling is in accord with the Bay Plan policies as to minor fills for improving shoreline appearance or public access.*

As described in Section 5.8, the project would result in a net reduction of Bay fill, with the new fill required being only the minimum necessary to replace the existing rock dike and bulkhead and ensure the future structural integrity and seismic safety of the portion of the rock dike and bulkhead being replaced. Similarly, as discussed in Section 5.11, the filling is in accordance with the Bay Plan policies regarding Bay-related purposes for port operations and water-related industry. For these reasons, the Proposed Action is consistent to the maximum extent practicable with Policy 1.

5.18. Mitigation

The Bay Plan's mitigation Policy 1 is applicable to the Proposed Action. The Proposed Action's consistency with this policy is discussed in the following section.

5.18.1. Policy 1

Projects should be designed to avoid adverse environmental impacts to Bay natural resources, such as to water surface area, volume, or circulation, and to plants, fish, other aquatic organisms and wildlife habitat, subtidal areas, or tidal marshes or tidal flats. Whenever adverse impacts cannot be avoided, they should be minimized to the greatest extent practicable. Finally, measures to compensate for unavoidable adverse impacts to the natural resources of the Bay should be required. Mitigation is not a substitute for meeting the other requirements of the McAteer-Petris Act.

To the maximum extent practicable, the Proposed Action has been designed to avoid or minimize adverse environmental impacts to San Francisco Bay, in accordance with Bay Plan policies. The project would result in a net reduction of Bay fill. The new fill required to replace the existing rock dike and bulkhead is the minimum necessary for the structural integrity and seismic safety of the portion of the rock dike and bulkhead being replaced. Avoidance and minimization measures would be in place to reduce potential effects resulting from construction and dredging activity (see Attachment A). Furthermore, the project would beneficially use the dredged material, which would contribute to restoration projects around the Bay. For these reasons, no compensatory mitigation is required, and the project is consistent to the maximum extent practicable with Policy 1.

5.19. Public Trust

The Bay Plan's Public Trust Policy 1 is applicable to the Proposed Action. The Proposed Action's consistency with this policy is discussed in the following section.

5.19.1. Policy 1

When the Commission takes any action affecting lands subject to the public trust, it should assure that the action is consistent with the public trust needs for the area and, in case of lands subject to legislative grants, should also assure that the terms of the grant are satisfied and the project is in furtherance of statewide purposes.

The Proposed Action would involve lands in San Francisco Bay that are subject to the public trust. This replacement action would increase the navigation safety of these public trust lands. Accordingly, the project is consistent to the maximum extent practicable with Policy 1.

5.20. Navigational Safety and Oil Spill Prevention

The Bay Plan's navigational safety and oil spill prevention Policy 2 is applicable to the Proposed Action. The Proposed Action's consistency with this policy is discussed in the following section.

5.20.1. Policy 2

The Commission should ensure that marine facility projects are in compliance with oil spill contingency plan requirements of the Office of Spill Prevention and Response, the U.S. Coast Guard and other appropriate organizations.

To ensure navigational safety and help prevent accidents that could spill hazardous material, a Spill Prevention Control and Countermeasure (SPCC) plan would be prepared to address the emergency cleanup of any hazardous material related to construction. This SPCC would be available on site. As described in Attachment A, the SPCC plan would incorporate SPCC, hazardous waste, stormwater, and other emergency planning requirements. In addition, to operate in U.S. waters and ports, applicable vessels regulated by USCG under Code of Federal Regulations, Title 33, are required to provide a variety of plans—including a Vessel Response Plan (VRP)—to the USCG for review and approval. A VRP serves as an oil spill response plan for vessels. A VRP would include, at a minimum, a contact list, including the spill removal contractor and contacts for spill notifications; procedures for spill notifications; shipboard spill mitigation procedures to mitigate or prevent discharge or threat of discharge resulting from operations, accidents, or emergencies; and, shore-based response activities, including notification, coordination actions, and organization structure for response. A VRP would be consistent with both the National Oil and Hazardous Substances Pollution Contingency Plan and the California of Office of Spill Prevention and Response (OSPR) Area Contingency (CDFW 2022). For this project, the VRP would be consistent with the OSPR ACP 2 for San Francisco Bay and Delta and Geographic Response Area (GRA) 2 for Central San Francisco Bay for the area north of the Oakland Bay Bridge; and GRA 3 for South San Francisco Bay for areas south of Oakland Bay Bridge. For these reasons, the project is consistent to the maximum extent practicable with Policy 2.

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Attachment A.
Avoidance and Minimization Measures

Attachment A. Avoidance and Minimization Measures

To reduce the potential impacts of the project alternatives on environmental resources, the analysis assumes that the following or equivalent measures would be incorporated into the project as avoidance and minimization measures.

General Measures

- Marine-based construction and dredging would occur during the in-water work window (June 1 through November 30). If in-water work is determined to be necessary during times other than the approved work window, the Port of Oakland (Port) and the United States Army Corps of Engineers (USACE) would re-consult with the National Marine Fisheries Service (NMFS), as needed, to address potential impacts on special-status aquatic species. USACE would also consult with the United States Fish and Wildlife Service (USFWS) to work outside of the Least Tern environmental window and implement and required measures for that purpose.
- The Port and USACE would consult with NMFS, the USFWS, and the California Department of Fish and Wildlife, as necessary, to address potential impacts on special-status aquatic species and habitats, and implement all requested actions to avoid impacts.
- A worker education program would be implemented for listed fish and shorebirds that could be adversely impacted by in-water construction activities. The program would include a presentation to all workers on biology, general behavior, distribution, habitat needs, sensitivity to human activities, legal protection status, and project-specific protective measures for each listed species. Workers would also be provided with written materials containing this information.
- Standard construction best management practices (BMPs), such as a stormwater pollution prevention plan, would be applied to protect species and their habitat(s) from pollution due to fuels, oils, lubricants, and other harmful materials. Vehicles and equipment that are used during the course of the project would be fueled and serviced in a manner that would not affect the aquatic environment.
- A Spill Prevention Control and Countermeasure (SPCC) plan would be prepared to address the emergency cleanup of any hazardous material, related to construction activities, and would be available on site during construction. The SPCC plan would incorporate hazardous waste, stormwater, and other emergency planning requirements.
- Silt curtains would be used where specific site conditions demonstrate that they would be practicable and would effectively minimize any potential adverse effects caused by the mobilization of material that may cause adverse water quality conditions, or contain contaminants at levels in excess of applicable regulatory thresholds. Prior to in-water construction, a silt curtain would be deployed from the water's edge and pushed out to a predetermined location to avoid entrapping aquatic wildlife species.
- Prior to construction, a sampling and analysis plan would be developed and implemented to characterize soils and sediments to be removed or exposed.

- All dredging and in-water construction activities would be consistent with the standards and procedures set forth in the Long-Term Management Strategy to guide the disposal, in an environmentally sound manner, of materials dredged from San Francisco Bay waters. Prior to construction, a sampling and analysis plan would be developed and implemented to characterize soils and sediments to be removed or exposed. In addition, a dredge operations plan would need to be submitted to all regulatory agencies before the start of dredge operations.
- Piles would be removed by direct pull or vibratory means, where possible; piles that cannot be pulled would, to the extent feasible, be cut 2 feet below the mudline or 2 feet below the overdredge depth elevation if they are in a navigable waterway.
- No pilings or other wood structures that have been pressure-treated with creosote would be installed.
- A Water Quality Monitoring Plan would be developed that specifies sample locations, depths, constituents, and objectives during in-water construction work. The Water Quality Monitoring Plan would also specify when work would be suspended for water quality exceedances, and potential BMPs to comply with turbidity requirements stated in the Section 401 certification.
- Should archaeological resources, including human remains, be inadvertently exposed (i.e., accidentally discovered) during construction activities, all activities at the discovery site that may result in disturbance to the discovery would be required to cease until an archaeologist has evaluated the finds and determined their significance. The archaeologist would evaluate the finds and determine the disposition in accordance with applicable laws and regulations.

Dredging-Related Measures

- Dredging would be conducted with a clamshell bucket dredger; there would be no hydraulic dredging. An environmental bucket would be used where technically feasible.
- No overflow or decant water would be allowed to be discharged from any barge, with the exception of spillage incidental to mechanical dredge operations, unless monitoring or relevant studies show that the effects of such discharge are negligible.
- Where a thick horizontal volume needs to be dredged, multiple horizontal dredge cuts would be taken to avoid overfilling the bucket and causing spillage.
- The load line on disposal barges used for mechanical dredging would be predetermined, and the barge would not be filled above this predetermined level. Before each disposal barge is transported to a placement site, the dredging contractor and a site inspector would certify that it is filled correctly.
- The cycle time would be increased as needed to reduce the velocity of the ascending loaded bucket through the water column. This would reduce the potential to wash sediment from the bucket.
- Floating debris would be removed from the water and disposed of properly.

- During dredging activities, a temporary noise barrier would be used as a minimization measure approximately 200 feet from the Oakland Inner Harbor Alameda side along the southern edge of the turning basin expansion area; this would lower the nighttime noise levels at the Mosley Avenue residences. Barriers are generally constructed with two layers of ½-inch-thick plywood (with joints staggered), and K-rail or other support; or a limp mass barrier material weighing 2 pounds per square foot.
- To reduce the noise level at Alameda Landing at Bay 37 residences during nighttime dredging, use of tugs would be restricted during nighttime hours (10:00 p.m. to 7 a.m.) for dredging within 1,100 feet of the Landing at Bay 37 residences, unless noise monitoring during construction demonstrates that both the dredge and tug could operate closer to these residences without exceeding the City of Alameda noise ordinance's nighttime noise threshold of 50 A-weighted decibels.

Pile-Driving–Related Measures

- To the extent feasible, pile driving shall not occur during the bird breeding season of February 1 through August 15. If such activities must occur during the bird breeding season, a qualified biologist would survey work areas, plus an appropriate buffer area determined by the biologist, to verify the presence or absence of nesting raptors or other birds. Pre-construction surveys shall be conducted within 15 days prior to the start of pile-driving work during the bird breeding season. If the survey indicates the potential presence of nesting raptors or other nesting birds, the biologist shall determine an appropriately sized buffer around the nest in which no work would be allowed until the young have successfully fledged, so that nesting birds are not disturbed by the project activity. The size of the nest buffer would be determined by the biologist, in coordination with USFWS, and would be based to a large extent on the nesting species and its sensitivity to disturbance. In general, buffer sizes of 200 feet for raptors and 50 feet for other birds should suffice to prevent disturbance to birds nesting in the urban environment; these buffers may be increased or decreased, as appropriate, depending on the bird species and the level of disturbance anticipated near the nest, as necessary to avoid disturbance of nesting birds.
- A Hydroacoustic and Biological Monitoring Plan would be prepared prior to the start of construction. This plan would provide details on the methods used to monitor and verify sound levels during pile-driving activities. The plan would include specific measures to minimize exposure of marine mammals and fish to high sound levels.
- Construction monitoring would be conducted by qualified observers familiar with marine mammal species and their behavior. An "exclusion zone," defined as the area over which underwater sound levels may exceed Level A harassment thresholds for marine mammals, would be established during pile removal and installation work. The exclusion zone would be monitored for 15 minutes prior to any pile extraction and driving activities to ensure that the area is clear of any marine mammals. Pile extraction or driving would not commence until marine mammals have not been sighted in the exclusion zone for a 15-minute period. If a marine mammal enters the exclusion zone during pile replacement work, activity would continue, and the behavior of the animal would be monitored and documented. If the animal appears disturbed by the pile replacement activity, work would stop until the animal leaves the exclusion zone.

- To the extent feasible, all pilings or similar in-water structures would be installed and removed with vibratory pile drivers only. An impact pile driver would only be used where necessary to complete installation of in-water piles or other in-water structures in accordance with seismic safety or other engineering criteria. If impact driving is needed for in-water pile installation, the following measures would be implemented:
    - Prior to the start of impact pile driving, the project applicant would prepare an NMFS-approved sound attenuation monitoring plan to protect fish and marine mammals.
    - Piles driven with an impact driver would employ a "soft start" technique to give fish an opportunity to move out of the area before full-powered impact driving begins. Only a single impact hammer would be operated at a time.
    - The impact hammer would be cushioned using a 12-inch-thick wood or nylon cushion block during all impact hammer pile-driving operations.
    - During impact pile-driving of steel piles, a bubble curtain would be used to attenuate underwater sound levels.
    - The Port and USACE would monitor and verify sound levels during pile-driving activities. The sound monitoring results would be made available to NMFS and other regulatory agencies as needed.
- The Port and USACE shall require the construction contractor to use noise-reducing pile-driving techniques if nearby structures are subject to pile-driving noise and vibration. These techniques shall include use of cushion blocks during pile installation activities within 1,500 feet of sensitive receptors in Oakland and Alameda. The pile hammer shall be cushioned using a 12-inch-thick wood cushion block or nylon blocks during all impact hammer pile driving operations. Construction contractors shall be required to use construction equipment with state-of-the-art noise shielding and muffling devices. In addition, at least 48 hours prior to pile-driving activities, USACE and the Port shall contact building owners and occupants within 1,500 feet of the project site and notify them of the dates, hours, and expected duration of such activities.

Eelgrass-Related Measures

Prior to the start of any in-water construction, the Port and USACE would conduct a NMFS-approved eelgrass survey, consistent with the measures described in the NMFS October 2014 California Eelgrass Mitigation Policy and Implementation Guidelines (CEMP) (NMFS 2014). The survey would include the following:

- Before in-water construction activities occur in the marine environment, eelgrass surveys would be conducted in the Action Area and an appropriate reference site(s). Surveys would take place within 60 days before the start of construction, consistent with the methods outlined in the CEMP.
- After construction, a post-action survey of the eelgrass habitat in the Action Area and at an appropriate reference site(s) would be completed. Surveys would take place within 30 days of completion of construction, or within the first 30 days of the next active growth period that follows completion of construction and occurs outside of the active growth period.

- Areas of direct and indirect impact would be determined from an analysis that compares the pre-action condition of eelgrass habitat with the post-action conditions from this survey, relative to eelgrass habitat change at the reference site(s), in accordance with the methods described in the CEMP.
- If impacts to eelgrass are known to occur prior to construction or observed to occur after construction, the Port and USACE would develop a mitigation plan to achieve no net loss in eelgrass function, following the steps recommended in the CEMP. Potential mitigation options include comprehensive management plans, in-kind mitigation, mitigation banks and in-lieu-fee programs, and out-of-kind mitigation, as defined in the CEMP.

Particulate Emissions Reduction Measures

To reduce impacts from fugitive dust emissions during project construction, construction contractors shall be required to implement the following Basic and Additional Construction Mitigation Measures recommended by the Bay Area Air Quality Management District. These measures would reduce particulate emissions primarily during soil movement, grading, and demolition activities, but also during vehicle and equipment movement on unpaved project areas. Basic measures include:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading, unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure, Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- A publicly visible sign shall be posted, showing the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Additional measures include:

- All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by laboratory samples or moisture probes.
- All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
- Wind breaks (e.g., trees or fences) shall be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity.
- If applicable, vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
- The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.
- All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
- Site accesses to a distance of 100 feet from the paved road shall be treated with a 6- to 12-inch compacted layer of wood chips, mulch, or gravel.
- Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than 1 percent.
- Diesel-powered construction equipment shall not be left idling for more than 2 minutes.
- The project shall develop a plan demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project-wide fleet-average reduction of 20 percent for oxides of nitrogen (NO_X) and of 45 percent for particulate matter (PM) in comparison to the most recent California Air Resources Board (CARB) fleet average. Acceptable options for reducing emissions include the use of late-model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as they become available.
- Coatings used for the project shall have levels of volatile organic compounds (i.e., reactive organic gases) that are lower than the local requirements (i.e., Regulation 8, Rule 3: Architectural Coatings).
- All construction equipment, diesel trucks, and generators shall be required to be equipped with Best Available Control Technology for emission reductions of NO_x and PM.
- All contractors shall be required to use equipment that meets CARB's most recent certification standard for off-road heavy-duty diesel engines.

Best Available Control Technology for Off-Road Construction Equipment

- Construction contractors shall be required to demonstrate that all heavy-duty off-road construction equipment with engines greater than 25 horsepower used for construction activities shall be equipped with the most effective Verified Diesel Emissions Control Strategies (VDECS) available for the engine type. In this case, the best available VDECS would be the use of engines that meet the Tier 4 Final (Tier 4F) standards, as certified by CARB and United States Environmental Protection Agency.

Traffic Control Measures

The Port and USACE would require the project construction contractor to develop a comprehensive construction traffic control plan (TCP) that includes measures to minimize the effects of project-related construction traffic on overall circulation, including traffic, transit, bicycle, and pedestrian routes, safety, and emergency access. Measures in the construction TCP would include, but would not necessarily be limited to:

- signage/striping and temporary traffic control devices to minimize conflicts, encourage use of detour or alternative routes (to avoid construction traffic), and ensure safety for all roadway users, particularly during periods of heavy hauling activity;
- identification and enforcement of designated truck haul routes;
- advance notification of neighboring residents, businesses, and other property owners, as well as affected jurisdictions and key stakeholders, of any substantial increases in construction traffic (e.g., ramping up of hauling activity);
- maintenance of adequate emergency access at the project sites and general access for neighboring properties, at all times; and
- construction worker parking and transportation demand management (e.g., carpool/ vanpool programs, and leased parking in remote/offsite parking facilities).