Section 3.3
Biological Resources

SECTION SUMMARY

This section identifies the biological resources at the proposed project site and analyzes the effects of the proposed Project and the alternatives on biological resources at, and adjacent to, the proposed project site. The proposed project site is described in Section 2.4.3 of Chapter 2, Project Description, and presented on Figure 2-1. The primary features of the proposed Project and alternatives that could affect these resources include: dredging of approximately 21,000 cubic yards at Berths 214–216 and 6,000 cubic yards at Berths 217–220, installation of sheet piles and king piles, backlands improvements, and operation of the terminal until 2026.

Section 3.3, Biological Resources, covers the following:

- the environmental setting in the harbor area;
- the terrestrial habitats and biological communities;
- the aquatic habitats and biological communities;
- vessel collisions with marine mammals and sea turtles;
- Essential Fish Habitat (EFH) and managed species found in the proposed project vicinity;
- applicable local, state, and federal regulations and policies regarding biological resources that are applicable to construction or operational activities associated with the proposed Project or alternatives;
- the methodology used to determine whether the proposed Project or alternatives adversely affect biological resources in the proposed project site;
- an impact analysis of the proposed Project and alternatives; and
- mitigation measures proposed to reduce any potential impacts, as applicable.

Key Points of Section 3.3:

The proposed Project would increase the capacity of an existing container terminal, and its operations would be consistent with other uses and container terminals in the vicinity of the proposed Project.

Biology mitigation measure MM BIO-1 and air quality mitigation measure MM AQ-9 are applicable to the proposed Project and Alternative 3. With implementation of the following mitigation measure there would be no potential for significant impacts:

- **MM BIO-1: Avoid marine mammals.** Although it is expected that marine mammals will voluntarily move away from the area at the commencement of the vibratory or "soft start" of pile-driving activities, as a precautionary measure, pile-driving activities occurring as part of the sheet pile and king pile installation will include establishment of a safety zone, and the area surrounding the operations will be monitored for pinnipeds and cetaceans by a qualified marine mammal observer. A 300-meter-radius safety zone will be established around the pile-driving site and monitored for marine mammals. The pile-driving site will move with each new pile, therefore the 300-meter safety zone will move accordingly.

  Prior to commencement of pile driving, observers on shore or by boat will survey the safety zone to ensure that no marine mammals are seen within the zone before pile driving of a pile segment begins. If a marine mammal is observed within 10 meters of pile-driving operations, pile driving will be delayed until the marine mammal moves out of the 10-meter zone. If a marine mammal in the 300-meter safety zone is observed, but more than 10 meters away, the contractor will wait at least 15 minutes to commence pile driving. If the marine mammal has not left the 300-meter safety zone after 15 minutes, pile driving can commence with a "soft start." This 15-minute criterion is based on a study indicating that pinnipeds dive for a mean time of 0.50 to 3.33 minutes; the 15-minute delay will allow a more than sufficient period of observation to be reasonably sure the animal has left the proposed project vicinity.

  If marine mammals enter the safety zone after pile driving of a segment has begun, pile driving will continue. The qualified observer will monitor and record the species and number of individuals observed, and make note of their behavior patterns. If the animal appears distressed, and if it is operationally safe to do so, pile driving will cease until the animal leaves the area. Prior to the initiation of each new pile-driving episode, the area will again be thoroughly surveyed by the qualified observer.

Below is the related mitigation measure from Section 3.2, Air Quality and Meteorology, which would further reduce the potential for vessel collision with marine mammals:

- **MM AQ-9: Vessel Speed Reduction Program (VSRP)**. Starting January 1, 2017 and thereafter, 95% of ships calling at the YTI Terminal will be required to comply with the expanded VSRP at 12 knots between 40 nm from Point Fermin and the Precautionary Area.

3.3.1 Introduction

This section identifies the existing conditions of biological resources at the proposed project site and analyzes the effects of the proposed Project and alternatives on biological resources at, and adjacent to, the proposed project site. The primary features of the proposed Project and alternatives that could affect these resources include:

- improvement of the terminal backlands;
- dredging of approximately 21,000 cubic yards at Berths 214–216, and 6,000 cubic yards at Berths 217–220;
- installation of approximately 1,400 linear feet of king piles and sheet piles along Berths 214–216;
- installation of approximately 1,200 linear feet of sheet piles along Berths 217–220; and
- operation of the marine terminal until 2026.

All of the approximately 27,000 cubic yards of dredged material would be disposed of at an approved site, such as the LA-2 Ocean Dredged Material Disposal Site (ODMDS), the Berths 243–245 confined disposal facility (CDF), or another approved upland location.

Environmental effects associated with disposal at the LA-2 ODMDS were evaluated during the site designation process (EPA 1988) and subsequently evaluated in consideration of higher maximum annual disposal volume (EPA and USACE 2005). Biological impacts due to construction and fill of the CDF were evaluated in the Final Supplemental Environmental Impact Statement/Environmental Impact Report (EIS/EIR) for the Port of Los Angeles Channel Deepening Project (USACE and LAHD 2009). This evaluation included mitigation for habitat loss at the Berths 243–245 CDF.

3.3.2 Environmental Setting

The Port of Los Angeles is the number one port by container volume and cargo value in the United States. The Port handled approximately 8,100,000 twenty-foot equivalent units (TEUs) in calendar year 2012, and TEU throughput increased each of the last three years. In addition, Los Angeles Harbor (the Harbor) provides berthing for cruise ships, sportfishing vessels, commercial fishing vessels, pleasure boaters, and harbor support vessels. The physical size of the Harbor, diversity of harbor uses, and ongoing upgrade and development projects results in continuous harbor modifications. Thus, harbor waters are subjected to continuous vessel traffic and periodic construction or modification, such as dredging and filling. Commercial vessels and recreational boats produce high levels of underwater noise; ambient noise in San Francisco Bay/Oakland Harbor has been estimated at 120 to 155 dB_{PEAK} (or the peak sound pressure level in decibels) (ICF and Illingworth & Rodkin 2009). A recent baseline hydroacoustic study in Cerritos Channel (in both Los Angeles and Long Beach Harbors) recorded L_{90} values (sound levels that were exceeded 90% of the time during the measurement period) of 120 to 132 decibels (dB) (Tetra Tech 2011). By comparison, ambient underwater noise in the open ocean has been estimated at 74 to 100 dB_{PEAK} on the central California coast.

Biological resources in the Port of Los Angeles/Port of Long Beach Harbor Complex (Port Complex) have been described in several environmental documents, including the

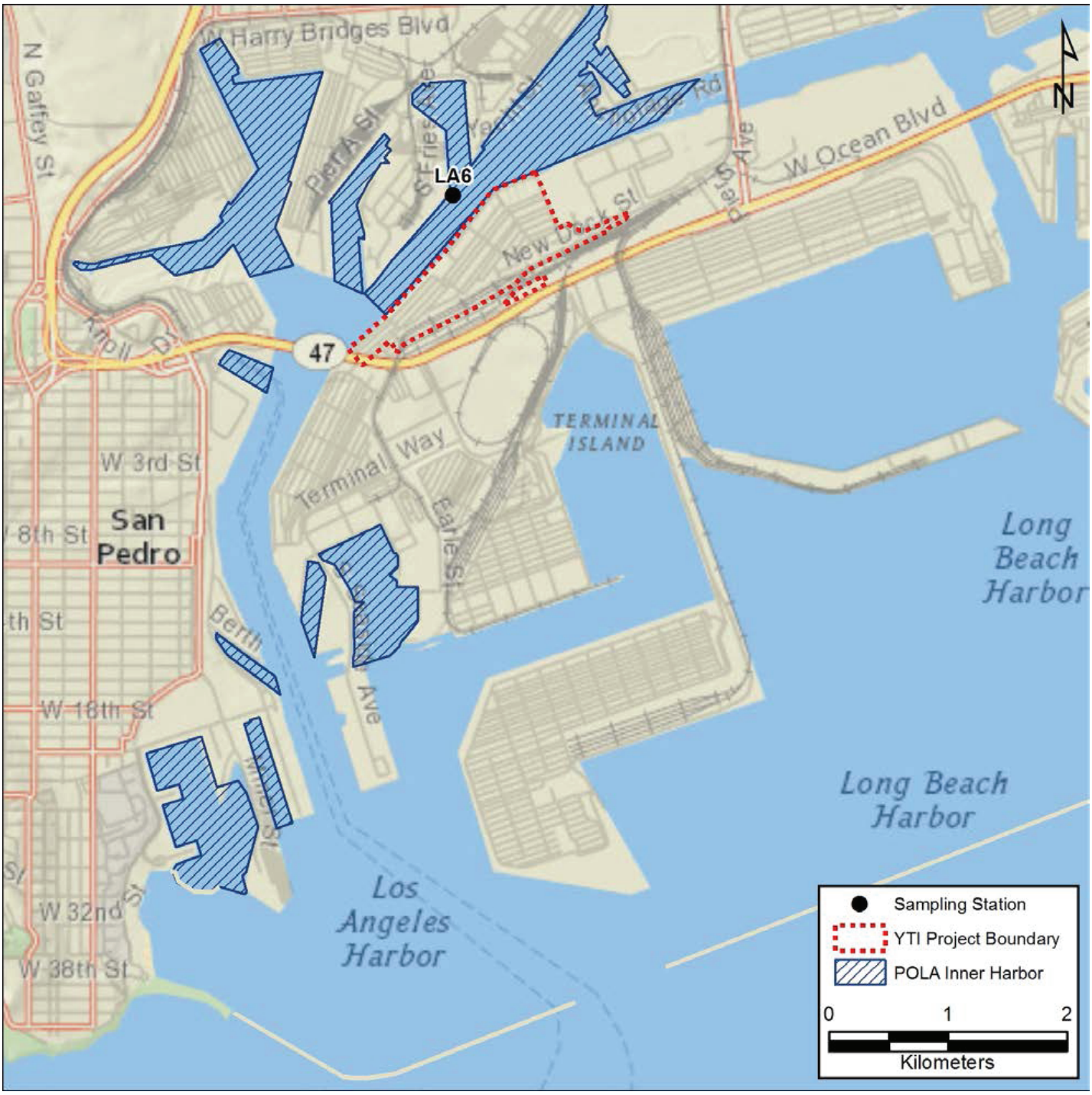
Los Angeles and Long Beach Deep Draft Navigation Improvement EIS/EIR (USACE and LAHD 1992), West Basin Entrance Widening Project EIR (LAHD 1991), Pier 400 (LAHD 1999), Channel Deepening Project (USACE and LAHD 2000, 2009), and regular biological surveys (Soule and Oguri 1980; MEC 1988; MBC et al. 2007; MEC and Associates 2002; MBC 2009a, b; SAIC 2010).

Over the years, the Ports of Los Angeles and Long Beach have worked with the state and federal resource agencies to conduct periodic evaluations of biological resources within the Port Complex to assess baseline conditions of the various harbor habitats. The most recent comprehensive biological surveys within the Port Complex were completed in 2008. Based on these assessments, the resource agencies and the Ports determine appropriate harbor habitat values, as necessary. For example, the 2000 report resulted in modification of the mitigation values in the Harbor (LAHD 2004). These modifications were indicative of a gradual increase in habitat value in the Main Channel and resulted in an increase in mitigation requirements in the Main Channel from lower value Inner Harbor habitat to higher value Outer Harbor habitat (Figure 3.3-1). Inner Harbor habitat occurs mostly north of the Vincent Thomas Bridge, but is also found in Fish Harbor, at Cabrillo Marina, in the East Channel, and in a few relatively small blind slip areas off the Main Channel. Although still valuable, the remainder of the Inner Harbor was identified as having lower habitat values relative to the deep and shallow waters of the Outer Harbor (see MEC and Associates 2002; LAHD 2004). Most of the waters adjacent to the proposed project site (off Berths 212–222) are classified as Inner Harbor (LAHD 2004).

Marine resources along the California Coast, and within the Harbor, fluctuate on both a seasonal basis due to differences such as water temperature and rainfall, and on an annual basis due to large-scale oceanographic processes such El Niño/La Nina events. In the Harbor, substantial improvements in water quality occurred in the period between the 1970s and mid-1980s as a result of the Clean Water Act of 1972. Further improvements in marine resources have occurred since that time, though at a slower pace than in the previous period (MEC and Associates 2002). The types of habitats (shallow and deep pelagic, benthic, riprap, and piling) in the Inner Harbor and Outer Harbors, and most of the species associated with those habitats, have remained fairly stable over time, as described for each habitat below. Perhaps the most significant recent change has been the expansion of eelgrass habitat at Inner Cabrillo Beach and the Shallow Water Habitat/Seaplane Lagoon off Pier 300 (MEC and Associates 2002; MBC 2005; SAIC 2010). The Shallow Water Habitat site off Pier 300 was constructed, and eelgrass (*Zostera marina*) was planted in winter 2002–2003, as mitigation for the Pier 400 project (which was implemented as part of the Los Angeles and Long Beach Harbors Deep Draft Navigation Improvements Project). The site was augmented with additional sediment and eelgrass plants in 2007 (SAIC 2010).

Based on the information summarized above, data from 1999 to 2012 accurately reflect current environmental conditions in the Harbor because those conditions have remained relatively static or improved. Data from biological surveys prior to 1999 are used for context. The 2002 MEC report was the first survey that included quantification and identification of nonnative taxa that have been introduced over time to the Port Complex.

The sediment adjacent to the YTI Terminal has been dredged to accommodate ship traffic, and is currently about 45 feet deep. There are no shallow water habitats in the vicinity of the proposed project area. Where possible, site-specific data from sampling



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Source: SAIC, 2010

Figure 3.3-1
Location of Inner Harbor habitat areas in Los Angeles Harbor Berths 212-224 (YTI) Container Terminal Improvements Project

locations (stations) adjacent to the YTI Terminal were used to characterize the biological communities.

3.3.2.1 Terrestrial Habitats

All of the proposed project site and adjacent areas are developed and paved. As such, very little vegetation or terrestrial habitat exists on site. The proposed project site was surveyed by a biologist on June 12, 2013. Prior to the survey, biologists reviewed aerial photographs and information on sensitive plant and animal species that could potentially occur in the area from the California Natural Diversity Database (CNDDB) and California Native Plant Society (CNPS) (San Pedro and Long Beach Quadrangles). These data sources provided information on the historical presence and numbers (if any) of sensitive resources at the proposed project site. The CNDDB included species listed as threatened or endangered (or proposed for listing) by the California Fish and Game Commission, the U.S. Secretary of the Interior (for the U.S. Fish and Wildlife Service [USFWS]), and the U.S. Secretary of Commerce (for the National Oceanographic and Atmospheric Administration [NOAA]). Summary tables from the CNDDB are included in Appendix C1.

Photographs of the proposed project site are presented in Appendix C2. The only plants observed were nonnative, mostly ornamental, in landscaped areas (Table 3.3-1). During the June 2013 survey, no wildlife was observed, and there was no other evidence of habitat use, such as tracks or scat, by mammals.

Table 3.3-1: Plant Species Observed at the YTI Terminal, June 2013

Common name	Scientific name	Origin
Azalea	*Rhododendron* sp hybrid	Asia
Bougainvillea	*Bougainvillea* sp	South America
Daylily	*Hemerocallis* sp hybrid	East Asia
Indian hawthorn	*Rhaphiolepis indica*	China
Indian laurel (fig)	*Ficus microcarpa*	China
Lantana	*Lantana montevidensis*	Tropical America
Lily-of-the-Nile	*Agapanthus* sp hybrid	South Africa
Natal plum	*Carissa macrocarpa*	South Africa
Pittosporum	*Pittosporum* sp	Japan, Australia, New Zealand
Queen palm	*Syagrus romanzoffianum*	Brazil

3.3.2.2 Benthic Environments

Soft-Bottom Habitats

Benthic organisms are those associated with seafloor sediments. Those that live within soft sediments, primarily invertebrate species, are referred to as infauna, while those living on the sediment surface are referred to as epifauna. Benthic marine organisms are an important component of the food web and are indicators of environmental quality. Since the 1950s, improvements in water quality have aided the establishment of diverse assemblages of the benthic community in areas that were once largely devoid of marine life (MEC and Associates 2002; SAIC 2010). Data from the 1970s show that the

polychaete *Tharyx parvus* accounted for most of the benthic organisms in soft-bottom samples (Soule and Oguri 1976; USACE and LAHD 1980). An assessment of dominant species in the Port Complex in 2000 indicated a gradient of increasing environmental stress (enrichment/contamination) from the Outer Harbor to the Inner Harbor and from basins to slips (MEC and Associates 2002). The infaunal surveys in 2008 documented relatively similar densities between the Inner Harbor and Outer Harbor, but densities at shallow water stations were markedly higher than those in deeper water (SAIC 2010). (The waters adjacent to the YTI Terminal are considered Inner Harbor habitat.) Highest species diversity and abundance in 2008 were recorded at the Pier 300 Shallow Water Habitat (SAIC 2010). Over time, there has been an increasing tendency of movement of healthy Outer Harbor assemblages up the Main Channel and improved benthic indicators in the Inner Harbor areas (MEC and Associates 2002; MBC 2009a; SAIC 2010).

In 2008, one station (Station LA6) was sampled in winter and summer at the proposed project site off Berths 214–215 (SAIC 2010) (Figure 3.3-1). In winter, 25 infaunal taxa were collected, and the most abundant species were the polychaetes *Cossura* sp. and *Pista wui*, and the amphipod *Listriella goleta*. In summer 2008, abundance was higher than in winter and more than twice as many species (61) were collected. The most abundant taxa were the polychaetes *Cossura* sp. and *Euchone limnicola*, and an Asian clam, *Theora lubrica* (known as Asian semele), which is thought to have been introduced from the Western Pacific, and was first recorded in the West Basin in 1980 (IRC 1981). The abundance of nonnative species such as *T. lubrica* has increased throughout the Port Complex since the 1970s. About 12% of the infaunal abundance collected in 2008 was composed of non-indigenous taxa, including *T. lubrica*, which was collected at 86% of the stations sampled and accounted for 10% of infaunal abundance.

In 2008, the biomass of invertebrates in sediments at Station LA6 averaged 14.2 grams per 0.1 square meter (g/0.1 m^2) (SAIC 2010). Polychaetes comprised 83% of the total biomass. Annual and seasonal variations in density of infaunal organisms are to be expected as a result of variations in oceanographic (chemical and physical) conditions over time, and human activities (USACE and LAHD 1992).

Epifaunal invertebrates are associated with, but not living in, soft-bottom habitats. Epifaunal abundance varied spatially and temporally in the 2008 surveys of the Port Complex. The number of individuals per trawl was five times higher at night (103 individuals) than during the day (21 individuals), although epifaunal biomass was similar between night and day.

One trawl station adjacent to the proposed project site was sampled in 2008: Station LA6, located off Berth 215 at a depth of 56 feet (Figure 3.3-1). A combined mean of 15 epifaunal invertebrate species were collected at that location in 2008, with a mean of seven species collected during the day sampling and a mean of eight species collected at night (SAIC 2010). Mean abundance at Station LA6 was substantially higher at night (152 individuals) than during the day (32 individuals). Throughout the Port Complex the most abundant invertebrates were: blackspotted bay shrimp (*Crangon nigromaculata*; 38% of total abundance), ridgeback rock shrimp (*Sicyonia ingentis*; 16%), blacktail bay shrimp (*Crangon nigricauda*; 14%), and Xantus swimming crab (*Portunus xantusii*; 11%). Blackspotted bay shrimp, Xantus swimming crab, and shrimp of the genus *Heptacarpus* were collected at all stations during the 2008 surveys.

Hard Substrate Habitats

Surveys of aquatic invertebrate communities on riprap, pilings, and concrete were conducted at eight stations throughout the Port Complex in 2008 (SAIC 2010). The surveys included quantitative observations by biologist-divers, as well as scraping samples that were preserved and analyzed in the laboratory. Elevations/depths of sampling stations were not measured; instead, biologists used a combination of tidal zones and biological zones to delineate the upper intertidal, lower intertidal, and subtidal zones. For example, the "barnacle zone" distinguished the upper intertidal, while the "mussel zone" marked the lower intertidal. Mean abundance was highest in the lower intertidal (233 individuals per 0.01 m^2), lowest in the upper intertidal (140 individuals per 0.01 m^2), and intermediate in the subtidal zone (183 individuals per 0.01 m^2). Abundance was relatively similar between Inner and Outer Harbor stations, though highest abundance was recorded on the Middle Breakwater. Abundance was also relatively similar among substrate types. On average, the number of species was substantially higher in the lower intertidal and subtidal zones (38 and 40 species, respectively) than in the upper intertidal (12 species). Mean biomass was similar among depth zones (24.1 to 25.6 g/0.01 m^2).

In 2008, the upper intertidal zone (as measured in the scraped quadrats) was dominated by the barnacles *Chthamalus fissus*, *Balanus glandula*, and *Balanus crenatus* (SAIC 2010). The dominant members of the lower intertidal and subtidal communities included the amphipods *Photis* spp. 1 and *Caprella simia*, and the brittlestar *Amphipholis squamata*. Divers observed several motile species, including California spiny lobster (*Panulirus interruptus*), kelp crabs (such as *Mimulus foliatus* and *Pugettia* spp.), and hermit crabs (*Pagurus* spp.). The riprap studies in 2000 identified a more robust community in Outer Harbor areas compared with the Inner Harbor (MEC and Associates 2002); however, the communities in 2008 appeared to be relatively similar among locations with no distinct gradient between the Inner and Outer Harbors. Overall, results suggested improved conditions in the riprap communities since 2000 (SAIC 2010).

Of the 334 observed species in 2008, 12 were introduced and another 31 were considered cryptogenic (of unknown origin), indicating up to 13% of the riprap biota was potentially nonnative in origin. The most conspicuous nonnative species observed during 2008 was the bay mussel (or Mediterranean mussel, *Mytilus galloprovincialis*), and the most abundant was the amphipod *Caprella simia*.

Hard substrate habitats that are shallow enough for light penetration also support algal communities. Ripap studies conducted throughout the Port Complex in 2008 found that encrusting coralline and other small algae, including *Chondracanthus* sp, *Colpomenia peregrina*, *Dictyota* sp, and *Ulva* sp were relatively common in the intertidal and subtidal zones (SAIC 2010). At the deeper stations, macroalgae such as giant kelp (*Macrocystis pyrifera*), feather boa kelp (*Egregia menziesii*), sargassum (*Sargassum muticum*), and *Halymenia* sp were also common. Subtidal macroalgae dominants in 2008 were similar to those found in 2000, although the overall number of species increased between the surveys. Algal diversity in 2008 was lower at Inner Harbor stations than at Outer Harbor locations. Two invasive species of algae, *Sargassum muticum* and *Undaria pinnatifida*, were found in the 2008 survey.

3.3.2.3 Water Column Habitats

Organisms in the water column include plankton (including fish eggs and larvae [ichthyoplankton], and small, free-floating plants [phytoplankton] and animals [zooplankton]), as well as juvenile and adult fish. Plankton abundances in the Inner Harbor vary seasonally, but the zooplankton community is dominated by copepods (Allan Hancock Foundation 1980). Species composition and abundance of ichthyoplankton in the Harbor has been shown to be similar to that of the juvenile and adult fish community (Brewer 1983), suggesting that the Harbor is a nursery for nearly all of the fish species found there as adults (MBC 1984; MEC 1988; MBC et al. 2007).

There is distinct stratification in the vertical distribution of ichthyoplankton in Los Angeles and Long Beach Harbors. In 2008, fish eggs were nearly twice as abundant (847 eggs per 100 m^3) in the neuston, or surface waters, than in midwater (456 eggs per 100 m^3) or epibenthos (433 eggs per 100 m^3) (SAIC 2010). Fish larvae, however, were more abundant in midwater (139 larvae per 100 m^3) and the epibenthos (134 larvae per 100 m^3) than in the neuston (39 larvae per 100 m^3). The overall weighted mean densities throughout the water column in 2008 were 5,402 fish eggs and 1,293 fish larvae per 100 m^2 of surface area.

During three ichthyoplankton surveys throughout the Port Complex in 2008, density of fish eggs and larvae were highest during the July 2008 survey (2,889 organisms/100 m^2) and lowest during the April 2008 survey (426 organisms/100 m^2) (SAIC 2010). The most abundant larval fish taxa included CIQ gobies (gobies of the genus *Clevelandia*, *Ilypnus*, and *Quietula*), combtooth blennies (*Hypsoblennius* spp.), bay goby (*Lepidogobius lepidus*), clingfishes (Gobiesocidae), yellowfin goby (*Acanthogobius flavimanus*), and white croaker (*Genyonemus lineatus*) (SAIC 2010). Most of the fish eggs could not be identified during the study. In the proposed project area CIQ gobies comprised 42% of ichthyoplankton density in 2008, followed by combtooth blennies (31%), bay goby (17%), and yellowfin goby (3%), a nonnative species common in bays and estuaries of California. Results from 2008 were relatively similar to those recorded during biweekly surveys in 2006 (MBC et al. 2007) and quarterly surveys in 2000 (MEC and Associates 2002).

The Port Complex consists of habitat for more than 130 species of juvenile and adult fish; some of them are transient visitors and some are permanent residents (USACE and LAHD 1980; Horn and Allen 1981; Brewer 1983; MEC 1988; MEC and Associates 2002; Allen and Pondella 2006; SAIC 2010). Several species, however, have dominated fish populations in the harbors: white croaker, northern anchovy (*Engraulis mordax*), queenfish (*Seriphus politus*), Pacific sardine (*Sardinops sagax*), and topsmelt (*Atherinops affinis*) (Brewer 1983; MEC and Associates 2002; SAIC 2010). Some of the other species that are also relatively abundant and are considered important residents of the harbors include: white seaperch (*Phanerodon furcatus*), California tonguefish (*Symphurus atricauda*), speckled sanddab (*Citharichthys stigmaeus*), and shiner perch (*Cymatogaster aggregata*) (Horn and Allen 1981). Juvenile and adult individuals of most species are usually more abundant during the spring and summer than in winter (Horn and Allen 1981); however, pelagic fishes in 2008 were most abundant in winter (SAIC 2010). The Harbor also provides habitat for recreationally important species such as California halibut (*Paralichthys californicus*), barred sand bass (*Paralabrax nebulifer*), and Pacific barracuda (*Sphyraena argentea*).

At Station LA6, located off the YTI Terminal, abundance of pelagic, or water column, fishes as sampled by lampara net[1] was relatively low during 2008, with means of 249 individuals during the day and 37 at night (SAIC 2010). For comparison, the harbor-wide station mean was 113 individuals during the day and 358 at night. The total numbers of species collected at Station LA6 were similar to the harbor-wide means: four species collected during both day and night, compared with means of three and six species throughout the Port Complex. The most abundant species collected by lampara off the YTI Terminal were northern anchovy, topsmelt, and California grunion (*Leuresthes tenuis*).

Abundance of demersal fishes, those that live and feed on or near the bottom, sampled by a bottom-sampling net (otter trawl) in 2008 at Station LA6 was relatively low, with means of 32 individuals during the day and 81 at night (SAIC 2010). For comparison, the harbor-wide station mean was 177 individuals during the day and 179 at night. The total numbers of species collected at Station LA6 (13 species during the day and 18 at night) were identical to the harbor-wide means. The most abundant species collected by otter trawl were northern anchovy, white croaker, queenfish, shiner perch, and white seaperch.

Results from recent studies of the fish communities in the Port Complex were consistent with those in other recent studies, although differences in sampling methods and gear precluded direct comparisons in many cases (SAIC 2010). Fish collections in 2008 did not discern any distinct spatial pattern in the distribution of pelagic fishes throughout the Port Complex (SAIC 2010). In contrast, Outer Harbor areas generally were typified by a greater number, biomass, and variety of trawl-caught fish than Inner Harbor areas. Number of fish species collected by otter trawl has been relatively consistent since 1986.

3.3.2.4 Water Birds

Numerous water-associated birds use the Harbor as residents and as seasonal visitors. Surveys in 2008 recorded 68 species in the Port Complex that depend on marine habitats and another 28 species that do not (SAIC 2010). Waterfowl, gulls, and aerial fish foragers were the dominant groups observed throughout the Port Complex in 2008. Large shorebirds, wading/marsh birds, upland birds, and raptors were also represented but in much smaller numbers. The most abundant species, in order of decreasing abundance, were western gull (*Larus occidentalis*), Brandt's cormorant (*Phalacrocorax penicillatus*), surf scoter (*Melanitta perspicillata*), California brown pelican (*Pelecanus occidentalis californicus*), western grebe (*Aechmophorus occidentalis*), Heermann's gull (*L. heermanni*), and elegant tern (*Thelasseus elegans*). The areas in the Harbor with the highest reported bird observations in 2008 were the Main Channel, the channel adjacent to Pier 300, and the Pier 300 Shallow Water Habitat.

3.3.2.5 Special-Status Species

Three state and federally listed threatened or endangered species have historically been observed, or have the potential to occur in the Port Complex (Table 3.3-2). One federally listed endangered bird species, the California least tern (*Sternula antillarum browni*), uses the Port Complex seasonally. The California least tern is present in the harbor area during its breeding season (April to September). The federally threatened western snowy

[1] The typical gear used for commercial fishing and sampling are nets known as lampara or seines.

plover (*Charadrius alexandrinus nivosus*) is a transient migratory visitor, and a few individuals have been observed on Pier 400 in the last decade (Keane Biological Consulting 2005a, 2005b). Western snowy plover forages on sandy beaches, has occasionally been observed on Pier 400 at the California least tern nesting site (SAIC 2010; Keane Biological Consulting 2012), and has also been observed outside the Port Complex at Point Fermin and outer Cabrillo Beach (Ryan et al. 2009). It was not observed during the year-long bird surveys of 2007–2008 (SAIC 2010). The state-listed endangered Belding's savannah sparrow (*Passerculus sandwichensis beldingi*) inhabits pickleweed marshes exclusively (USACE and LAHD 1992). No suitable habitat for this species is present in the area of the proposed Project, and there have been no known sightings of this species in Los Angeles Harbor.

Table 3.3-2: Threatened and Endangered Bird Species in the Proposed Project Area

	Status		
Species	Federal	State	Notes
California least tern	E	E	Breeds on Pier 400 from about approximately April through August; forages preferentially over shallow waters; six sightings near YTI in May 2008.
Western snowy plover	T, BCC	--	Infrequent visitor to Harbor; observed on Pier 400. No observations during 2007–2008 surveys.
Belding's savannah sparrow	--	E	Inhabits pickleweed marsh. No individuals observed in 2007–2008.

Note: E = Endangered, T = Threatened, BCC = USFWS Birds of Conservation Concern. Designations from CDFW 2013a. Data in Notes from SAIC (2010).

There are multiple bird species that are not listed by the state or federal governments as threatened or endangered, but have special status designated by either the California Department of Fish and Wildlife (CDFW; state) or USFWS (federal) (Table 3.3-3) (CDFG 2011b). These include:

- **CDFW Species of Special Concern:** Vertebrates with declining population levels, limited ranges, and/or continuing threats make them vulnerable to extinction.
- **CDFW Watch List:** Birds that are: (1) not on the Bird Species of Special Concern list, but were on previous lists, and have not been listed under the California Endangered Species Act (CESA); (2) were previously state or federally listed, and now are on neither list; or (3) are on the list of Fully Protected Species.
- **CDFW Fully Protected:** This was the state's initial effort to identify and protect animals that were rare or faced possible extinction. Most of the animals on the Fully Protected list were subsequently listed under state and/or federal ESAs. It is unlawful to take these species except with an authorization for necessary scientific research.
- **USFWS Birds of Conservation Concern:** Birds of Conservation Concern are those identified by USFWS that represent the highest conservation priorities.

The designation is meant to draw attention to species in need of conservation action.

California Least Tern

The California least tern was federally listed as endangered in 1970 and state listed as endangered in 1971. Loss of nesting and nearby foraging habitat due to human activities caused a decline in the number of breeding pairs (USFWS 1992). The biology of this Fully Protected species has been described in the biological assessment for the Channel Improvement and Landfill Development Feasibility Study (USACE 1990), biological opinion for the Los Angeles Harbor Development Project (1-6-92-F-25), and Deep Draft Navigation Improvement EIS/EIR (USACE and LAHD 1992), and these studies are incorporated by reference. The following is a summary of information on California least tern use of the Los Angeles Harbor.

The California least tern has been known to nest during the summer in the Los Angeles Harbor area since the late 1800s, with regular nest monitoring on Terminal Island since 1973 (Keane Biological Consulting 2013). In 1979, LAHD began providing nesting habitat for the species and in 1984 entered into a Memorandum of Agreement (MOA) with USFWS, the U.S. Army Corps of Engineers (USACE), and CDFW (formerly California Department of Fish and Game) for management of a 6-hectare (15-acre) California least tern nesting site. The MOA set forth the responsibilities of the signing parties for management of the designated California least tern nesting site in the Harbor, and it is renewed every three to five years. The MOA allows the designated nesting site to be relocated under specific conditions, and the location of this nesting site has changed over time due to Port development activities. From 1970 through 1985, California least tern nesting on Terminal Island occurred at an undeveloped site northwest of the Pier 300 Shallow Water Habitat (Keane Biological Consulting 2013). From 1981 through 1989, California least terns nested on dredged fill created for Pier 300 at a site protected by LAHD on the western side of the pier, and from 1989 through 1997 the terns nested at a fenced site on the side of Pier 300. In 1997, LAHD prepared a new nesting site located at the southern tip of Pier 400 (Keane Biological Consulting 2013). Since 1997, the only successful California least tern nesting on Terminal Island has occurred at the Pier 400 nesting site. In 1998, the Pier 300 nesting site was decommissioned (Keane Biological Consulting 1998).

California least terns are plunge divers that dive head first into water to catch small fish, including northern anchovies (*Engraulis mordax*) and topsmelt (*Atherinops affinis*). These schooling species are frequently very abundant in open water, although locations of the schools can be highly variable. California least terns have also been observed feeding on larval fish associated with kelp forests. Foraging studies conducted in the Harbor have demonstrated that Outer Harbor shallow water areas (less than six meters [20 feet] deep), especially near the nesting site, provide important foraging areas for the California least tern (Keane Biological Consulting 1997). During harbor-wide least tern foraging studies in 2001 and 2002, very few foraging flights, dives, and transits were observed in Inner Harbor areas (Keane Biological Consulting 2003). Foraging preference scores were calculated using the ratio between observed foraging dives and foraging flights. Similarly, transit preference scores were calculated using the ratio between the total number of transits at a particular station to the total number of transit flights in a given year. In general, foraging scores were lowest at areas more distant from the nesting site, and in areas with deeper water, including the station nearest the YTI Terminal.

During the year-long avian surveys of 2007–2008, California least terns were present from May through July 2008, as is typical, but only observed in the area of the YTI Terminal in May 2008 (SAIC 2010). The majority of the observations during the study were recorded near the Pier 400 nesting site, where California least terns were observed flying and foraging. In summary, the foraging studies show that the California least terns feed primarily in the Outer Harbor where forage fish are typically more common and not in the channels, basins, and slips of the Inner Harbor.

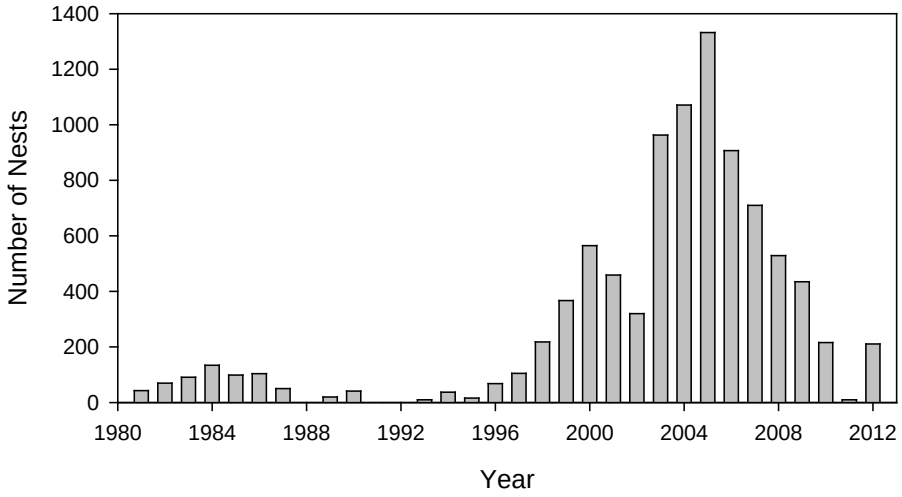

Figure 3.3-2: Least Tern Nesting at Los Angeles Harbor Nesting Sites, 1981–2012

Source: Keane Biological Consulting 2013.

Other Special-Status Bird Species

California brown pelican was previously federally listed as endangered and was a state Fully Protected species; however, this species was delisted by the state of California in June 2009 and by USFWS in November 2009 as a result of population recovery. California brown pelican is present year-round throughout the Port Complex. It accounted for 9.6% of the total bird observations in 2007–2008, with most of the individuals observed roosting on the breakwaters of the Outer Harbor (SAIC 2010). Individual brown pelicans were observed in all of the surveys in the waters off the YTI Terminal from May through November 2008.

Peregrine falcon (*Falco peregrines*), which was previously listed as endangered, was delisted by USFWS in 1999 and by the state of California in November 2009 (CDFG 2011a). It is designated as Fully Protected by CDFW and a Bird of Conservation Concern by USFWS. Peregrine falcon nest at several locations in the Port Complex, but the nesting site nearest to the proposed Project is on the Schuyler Heim Lift Bridge (SAIC 2010). This species was observed during two surveys in 2008, and both observations were lone individuals.

Table 3.3-3: Special-Status Bird Species (Designated by CDFW and USFWS) in the Proposed Project Area

Species	Status	Notes
Black oystercatcher	USFWS – BCC	Nested in Port Complex in 2007–2008; no individuals observed near YTI in 2007–2008.
Black skimmer	CDFW – SSC, USFWS – BCC	No nesting in the Harbor in 2008; no individuals observed near YTI in 2007–2008.
Brant	CDFW – SSC	Six individuals observed during February 2008 in Long Beach Outer Harbor; no observations near YTI.
Burrowing owl	CDFW – SSC, USFWS – BCC	Observed on Pier 400 in 2007–2008; nesting status within the Port Complex unknown.
California brown pelican	CDFW – FP	Abundant throughout Port Complex.
Caspian tern	USFWS – BCC	Nested on Pier 400 in 2011 and 2012. One to six individuals observed at a time off YTI in summer 2008.
Common loon	CDFW – SSC	Thirteen individual observed throughout Port Complex in 2007–2008; no observations near YTI.
Double-crested cormorant	CDFW – Watch List	Nested in transmission towers in Long Beach Harbor in 2007–2008; among most abundant birds in the Harbor.
Elegant tern	CDFW – Watch List	Nested on Pier 400 in 1998–2005 and 2012; very abundant, forages over water near nests.
Loggerhead shrike	CDFW – SSC, USFWS – BCC	Observed in Inner Harbor areas of Port Complex in 2001–2002; no observations near YTI in 2007–2008.
Long-billed curlew	CDFW – Watch List, USFWS – BCC	No observations near YTI in 2007–2008.
Merlin	CDFW – Watch List	One individual observed on riprap in Long Beach Outer Harbor in December 2007; no observations near YTI in 2007–2008.
Osprey	CDFW – Watch List	Observed in Port Complex during all surveys in 2007–2008, but no observations near YTI.
Peregrine falcon	CDFW – FP, USFWS – BCC	Nests on the Schuyler Heim and Gerald Desmond Bridges. Usually observed near nesting sites; observed off YTI during two surveys in 2008.

Note: USFWS BCC = U.S. Fish and Wildlife Service Bird of Conservation Concern; CDFW = California Department of Fish and Wildlife; SSC = Species of Special Concern; FP = Fully Protected. Data in Notes from SAIC 2010 and Keane Biological Consulting 2009, 2010.

Black oystercatcher (*Haematopus bachmani*) nested on the breakwaters during the 2000–2001 and 2007–2008 biological surveys of the Port Complex, but no individuals were observed flying or resting near the proposed project site in 2007–2008 (SAIC 2010). Nesting in the Port Complex is considered unusual for this species (SAIC 2010).

Black skimmer (*Rynchops niger)* nested in the Harbor at Pier 400, but have not nested there since 2000 (SAIC 2010).

Six brant (*Branta bernicla*) were observed in Long Beach Harbor in February 2008. This species (a "sea goose") is considered a common migrant offshore Los Angeles County, but is rarely observed in Harbor and estuarine habitats (SAIC 2010).

The burrowing owl (*Athene cunicularia*) was sighted on Pier 400 in 2007 and 2008, but its nesting status within the Port Complex is unknown. It was not observed near the proposed project site in 2007–2008 (SAIC 2010).

A total of 13 common loon (*Gavia immer*) were observed during the 2007–2008 bird surveys in the Port Complex; none of the observations were near the proposed project site (SAIC 2010).

Double-crested cormorant (*Phalacrocorax auritus)* is one of the most abundant species in the Port Complex, and it nests on transmission towers in Long Beach Harbor. It was the most abundant special-status bird species observed near the YTI Terminal in 2007–2008 with 267 observations (SAIC 2010).

The elegant tern nested on Pier 400 from 1998 through 2005, but did not return to nest at that site from 2006 through 2011 (Keane Biological Consulting 2009, 2010, 2013). However, 11,000 elegant tern nested at Pier 400 in 2012. Only three elegant terns were observed near the YTI Terminal during biweekly bird surveys in 2007–2008.

Caspian terns nested on Pier 400 from 1997 until 2005, when they left the area due to a nocturnal predator. No Caspian terns nested at Pier 400 from 2006 through 2010, but 400 nested there in 2011, and 200 nested in 2012 (Keane Biological Consulting 2013). Only seven observations of this species were made near the YTI Terminal in 2007–2008 (SAIC 2010).

Loggerhead shrike (*Lanius ludovicianus*) was observed in 2001 and 2002, but not during the latest yearlong bird study. In 1984, loggerhead shrike was one of only five bird species known to nest in the Port Complex (USACE 1984).

Long-billed curlew (*Numenius americanus*) is common in Southern California, but none of the observations throughout the Port Complex occurred in the two survey zones near the YTI Terminal (SAIC 2010).

Merlin (*Falco columbarius*) is considered an uncommon winter visitor, and a single individual was observed on the riprap in Outer Long Beach Harbor in December 2007 (SAIC 2010).

Osprey (*Pandion haliaetus*) was one of 20 bird species observed during all surveys in 2007–2008. However, no osprey observations were made near the YTI Terminal in 2007–2008 (SAIC 2010).

3.3.2.6 Sea Turtles and Marine Mammals

Sea Turtles

Sporadic sightings of sea turtles have been reported in Los Angeles-Long Beach Harbor over the years; however, none have been observed during more than 20 years of baseline biological surveys (MEC 1988; MEC and Associates 2002; SAIC 2010). Because several green sea turtles (*Chelonia mydas*) have been observed in nearby Alamitos Bay and in the San Gabriel River (Lawson pers. comm. 2009; Crear et al. 2013), it is possible that this species and perhaps other species of sea turtle listed below may be rare visitors to the Outer Harbor areas.

Several turtle species are found in the eastern Pacific Ocean, including loggerhead sea turtles (*Caretta caretta*), green sea turtles, leatherback sea turtles (*Dermochelys coriacea*), and olive ridley sea turtles (*Lepidochelys olivacea*). The North Pacific distinct population segment of loggerhead sea turtles is federally listed as endangered. Loggerhead sea turtles are found in all temperate and tropical waters throughout the world and are the most abundant species of sea turtle found in U.S. coastal waters (NMFS 2011).

Green sea turtles, federally listed as threatened, also are found in all temperate and tropical waters throughout the world. They primarily remain near the coastline and around islands and live in bays and protected shores, especially in areas with seagrass beds. In the eastern North Pacific, green turtles have been sighted from Baja California to southern Alaska, but most commonly occur from San Diego south (NMFS 2011). A small population of green sea turtles has been observed in the lower San Gabriel River, and studies are underway to determine the movements and habitat preferences of these animals (Crear et al. 2013). They rarely are observed in the open ocean.

Leatherback sea turtles, federally listed as endangered, are the most widely distributed of all sea turtles and are found worldwide with the largest north and south range of all the sea turtle species. The Pacific Ocean leatherback population is smaller than the Atlantic Ocean population (NMFS 2011).

Olive ridley sea turtles, federally listed as threatened, are found in tropical regions of the Pacific, Indian, and Atlantic Oceans. They typically forage offshore in surface waters or dive to depths of 500 feet to feed on bottom-dwelling crustaceans.

Marine Mammals

All marine mammals are protected under the Marine Mammal Protection Act (MMPA) of 1972, and some (Table 3.3-4) are also protected by the Endangered Species Act (ESA) of 1973. Marine mammal species may forage in the Harbor but do not breed there. Sightings of marine mammals were recorded during the 2008 biological surveys of the Port Complex (SAIC 2010). During 2008 California sea lions (*Zalophus californianus*) were observed throughout the Los Angeles-Long Beach Harbor, including near the proposed project site, while harbor seals (*Phoca vitulina*) were limited to Outer Harbor waters. Neither of these pinniped species is endangered, and there are no designated significant ecological areas for either species within the Port Complex.

Table 3.3-4: Special-Status Marine Mammal Species (Designated by CDFW and USFWS) in the Proposed Project Area

Species	Status		Notes
	Federal	State	
Guadalupe fur seal	T	T	Occasional visitor to Southern California.
Stellar sea lion	T		Once common in Southern California, now rare.
Southern sea otter	T		USFWS stopped enforcing no-otter zone in 2011. Observations of sea otters in Southern California have been increasing since, including reports of otters at Palos Verdes and in Huntington Harbor.
Gray whale	delisted		Migrate through Southern California twice per year. Individuals have been observed in the Harbor.
Sei whale	E		Offshore species rare in California.
Blue whale	E		Abundance in Southern California has increased, probably due to increased use of feeding areas and not population increases. Observations include feeding offshore of Palos Verdes and multiple locations in Orange County.
Fin whale	E		Abundance has increased in California coastal waters.
Humpback whale	E		Occasional visitor to Southern California.
North Pacific right whale	E		Only 12 sightings in California since 1950.
Sperm whale	E		Occasional visitor to Southern California.

Note: E = Endangered; T = Threatened. Data in Notes from Bonnell and Daily (1983), SAIC (2010), L.A. Times (2011), Bay (pers. comm. 2012), Carretta et al. (2013), OC Register (2013), NOAA (2013).

Outside the breakwaters, a variety of marine mammals use nearshore waters. These include the gray whale (*Eschrichtius robustus*), which migrates from the Bering Sea to Mexico and back each year. This and other species of baleen whales generally are found as single individuals or in pods of a few individuals. Toothed whales, and particularly dolphins, can be found in larger groups of up to a thousand or more (Leatherwood and Reeves 1983). Several species of dolphin and porpoise are commonly found in coastal areas near Los Angeles, including the Pacific white-sided dolphin (*Lagenorhynchus obliquidens*), Risso's dolphin (*Grampus griseus*), Dall's porpoise (*Phocoenoides dalli*), bottlenose dolphin (*Tursiops truncatus*), northern right-whale dolphin (*Lissodelphis borealis*), and common dolphin (*Delphinus delphis*), with the common dolphin the most abundant (Forney et al. 1995). Bottlenose and common dolphin were observed during the 2008 baseline surveys; except for bottlenose dolphin sighted near the San Pedro Waterfront in the Main Channel, all other observations were in the Outer Harbors (SAIC 2010).

Vessel Collisions with Sea Turtles and Marine Mammals

Ship strikes involving marine mammals and sea turtles, although uncommon, have been documented for the following listed species in the eastern North Pacific: blue whale

(*Balaenoptera musculus)*, fin whale (*Balaenoptera physalus)*, gray whale, humpback whale *(Megaptera novaeangliae)*, sperm whale (*Physeter macrocephalus)*, southern sea otter (*Enhydra lutris nereis*), loggerhead sea turtle, green sea turtle, olive ridley sea turtle, and leatherback sea turtle (NOAA Fisheries and USFWS 1998a, 1998b, 1998c, 1998d; Stinson 1984; Carretta et al. 2009; NMFS 2010). The blue whale, fin whale, humpback whale, sperm whale, and gray whale are all listed as endangered under the ESA; however, the Eastern Pacific gray whale population was delisted by the NOAA in 1994.

Determining the cause of death for marine mammals and sea turtles that wash ashore dead or are found adrift is not always possible, nor is it always possible to determine whether propeller slashes were inflicted before or after death. In the case of a sea otter for example, wounds originally thought to represent propeller slashes were determined to have been inflicted by great white sharks (Ames and Morejohn 1980). In general, dead specimens of marine mammals and sea turtles showing injuries consistent with vessel strikes are not common.

Between 2000 and 2004, 13 California sea lion deaths were attributed to collisions with boats along the coasts of California, Oregon, and Washington combined, while eight harbor seals were killed and two injured by vessel strikes in California between 1999 and 2003 (Carretta et al. 2009). Stock assessments for bottlenose dolphin (coastal and offshore stocks) do not list any information on ship strikes, although dolphins (as well as seals, sea lions, and some whale species) are susceptible to injury and mortality from fishery interactions (i.e., entanglement in nearshore gill nets). From January 2000 through June 2010, two olive ridley sea turtles were found with injuries consistent with ship strikes: one washed ashore near the launch ramp in Alamitos Bay in 2003, and the other washed ashore at Goleta (Santa Barbara County) in 2004 (NMFS 2010).

Whale Strikes

The National Marine Fisheries Service (NMFS), a division of NOAA, keeps records of vessel strikes with whales in U.S. coastal waters. From January 2004 through June 2013, 30 whales were believed to have been struck by ships in Southern California (NMFS 2013). These included 11 gray whales, nine fin whales, six blue whales, one humpback whale, and three unidentified whales. Of these 30 whales, 12 were struck by a vessel and their final disposition was unknown. The other 18 were either found dead with wounds consistent with ship strikes or were found dead on the bow of cargo vessels. Of these 18, eight were found in or near the Los Angeles and Long Beach Port Complex, including one blue whale and four fin whales found dead on the bows of freighters. From January 2004 through June 2013, the number of strikes per year in Southern California ranged from one (2005) to five (2007, 2009, and 2010) and averaged two to three strikes per year, but the actual number is likely to be greater because not all strikes are reported. The type of vessel involved often was not known, but of the 30 reported strikes three involved U.S. Naval vessels, three involved commercial island passenger vessels, five involved freighters at the Port Complex, and four involved private pleasure vessels.

In Southern California, potential strikes to blue whales are of the most concern, in part due to low population numbers compared to historical populations. Blue whales normally pass through the Santa Barbara Channel en route from breeding grounds in Mexico to feeding grounds farther north, a migration pattern along the California coast that at times runs perpendicular to the established shipping channels in and out of California ports, increasing the opportunities for whale/vessel collisions. Blue whales

were historically a target of commercial whaling activities worldwide, but are now protected from whaling. In the North Pacific, the pre-whaling population is estimated to have been approximately 4,900 individuals; the recent population estimate is approximately 1,400 (Carretta et al. 2009). Along the California coast, there is evidence that despite vessel strikes blue whale abundance has increased over the past three decades (Calambokidis et al. 1990; Barlow 1995; Calambokidis 1995; Carretta et al. 2009).

According to NMFS records, the average number of blue whale mortalities in California attributed to ship strikes was 0.2 per year from 1991 to 1995 and from 1998 to 2002; the average blue whale mortality was 0.6 per year from 2002 to 2006 (Carretta et al. 2009). However, in fall 2007, four blue whales were found dead in Southern California, and at least three of these were likely killed by ship strikes (Berman-Kowalewski et al. 2010). Blue whales were more abundant in the Santa Barbara Channel during 2007 than at any other time since annual surveys began in 1992 (Berman-Kowalewski et al. 2010). The deaths of four blue whales in one year exceeded the previous annual regional maximum (three in 1998 and 2002). Other potential causes of whale mortality in the region include domoic acid, mid-frequency acoustic testing, ambient noise, and infectious disease (Abramson and Petras 2009).

Vessel speed seems to influence whale/ship collision incidences. The Jensen and Silber whale-strike database (Jensen and Silber 2003) reports that there are 134 cases of known vessel strikes in U.S. coastal waters. Of these, 14.9% (20 cases) involved container/cargo ships/freighters, and 6.0% (eight cases) involved tankers. The remaining incidents involved Navy vessels (17.1%, or 23 cases), whale-watching vessels (14.2%, or 19 cases), cruise ships/liners (12.7%, or 17 cases), ferries (11.9%, or 16), U.S. Coast Guard (USCG) vessels (6.7%, or nine cases), recreational vessels (5.2%, or six cases), and fishing vessels (3.0%, or four cases). One collision (0.75%) was reported from each of the following: dredge boat, research vessel, pilot boat, and whaling catcher boat. Of the 134 cases, vessel speed was known for 58 cases (43.3%). Of these, most vessels were traveling at 13 to 15 knots, while others traveled at 16 to 18 knots and 22 to 24 knots.

According to a report from NOAA, which was based on information in the Jensen and Silber (2003) whale-strike database and on Laist et al. (2001), the majority of vessel collisions with whales occurred at speeds between 13 and 15 knots (NOAA, undated). Specifically, NOAA recommends:

> *Overall, most ship strikes of large whale species occurred when ships were traveling at speeds of 10 knots or greater. Only 12.3% of the ship strikes in the Jensen and Silber database occurred when vessels were traveling at speeds of 10 knots or less. While vessel speed may not be the only factor in ship/whale collisions, data indicate that collisions are more likely to occur when ships are traveling at speeds of 14 knots or greater. This strongly suggests that ships going slower than 14 knots are less likely to collide with large whales. Therefore, NOAA Fisheries recommends that speed restrictions in the range of 10–13 knots be used, where appropriate, feasible, and effective, in areas where reduced speed is likely to reduce the risk of ship strikes and facilitate whale avoidance.*

In 2013, the International Maritime Organization (IMO) amended the Traffic Separation Scheme (TSS) in the Santa Barbara Channel and the approach to the Ports of Los Angeles and Long Beach. Traffic Separation Schemes are maritime traffic management systems used to regulate vessel traffic in busy waterways, and to minimize the risk of head-on collisions. The TSS amendment reduced the width of the separation zone from two nautical miles to one nautical mile by shifting the inbound lane shoreward and away

from known whale concentrations (NOAA 2013). The outbound lane remained unchanged. Narrowing the separation zone is expected to reduce co-occurrence of ships and whales while maintaining navigational safety.

3.3.2.7 Wildlife Movement Corridors

The Conservation Element of the City of Los Angeles General Plan addresses wildlife corridors, the purpose of which is to facilitate the movement of animals between large habitat areas. The Harbor does not provide any such corridors. However, some marine fish species move into and out of the Harbor for spawning, or as part of their life cycle.

3.3.2.8 Invasive Species

There are at least 196 nonnative aquatic species in the Los Angeles and Long Beach Harbor (CDFG 2008). The occurrence of nonnative species is also discussed above under each habitat type. Nonnative species can become invasive, competing with or preying upon indigenous species, thereby altering the local ecology. This may cause economic impacts as well. Invasive species in the Port Complex include a Japanese brown alga (*Sargassum muticum*), New Zealand bubble snail, Japanese mussel (*Musculista senhousia*), an isopod (*Sphaeroma quoyanum*), and yellowfin goby. Another species of *Sargassum* (*S. horneri*) was discovered in Long Beach Harbor during annual subtidal surveys in 2003 (MBC 2009b).

The primary sources of invasive organisms are believed to be hull fouling (organisms that grow on the exterior surfaces of ships) and the discharge of ballast water from cargo vessels (CDFG 2008). Other potential sources include fisheries, natural dispersal, aquatic plant shipments, discarded seafood, pet releases, discarded bait, aquaculture escape, biocontrol, cargo, scientific escape, and habitat restoration (CDFG 2008).

When comparing results of the 2008 harbor-wide surveys to the 2000 surveys, the same fish and alga taxa were collected or observed, but there were fewer non-indigenous riprap invertebrate species (12) and soft-bottom associated infauna and epifauna species (10). The number of cryptogenic species (those with unknown origin) was similar between the two periods for infauna/epifauna (35 species in 2000 and 32 in 2008), but increased for riprap invertebrates (13 species in 2000 and 31 in 2008) (SAIC 2010). The authors of the report noted that this could have resulted from increased knowledge and distinction of cryptogenic species made in the last five years. Overall, however, the percentage of introduced and cryptogenic species identified in the 2008 study was similar to that reported for the 2000 study (SAIC 2010).

The aquarium strain of *Caulerpa* (*Caulerpa taxifolia*) is an invasive algal species that has infested more than 30,000 acres in the Mediterranean Sea and is listed as a federal noxious weed under the U.S. Plant Protection Act. *Caulerpa* was found in two Southern California locations in 2000. This species has never been identified in the Los Angeles-Long Beach Port Complex but is of particular concern because it is a fast-growing green alga native to tropical waters, where it typically grows in isolated patches. However, in areas outside its native range, *Caulerpa* can grow rapidly and quickly overtake native species. Species of *Caulerpa* are used in the aquarium trade and can enter coastal marine waters through disposal of the plants or aquarium water into storm drains or coastal waters. In the Mediterranean, *Caulerpa* has caused ecological devastation by overwhelming local seaweed species and altering fish distributions. Its rampant growth

also has resulted in huge economic losses by harming tourism, pleasure boating, fishing, and the diving industry. Due to its potential to create severe ecological and economic losses, a *Caulerpa* survey must be completed in accordance with the *Caulerpa* Control Protocol prior to specific underwater disturbances (such as bulkhead repair, dredging, and placement of navigational aids) (NMFS and CDFG 2008).

3.3.2.9 Significant Ecological Areas

The County of Los Angeles has established Significant Ecological Areas (SEAs) to preserve a variety of biological communities for public education, research, and other non-disruptive outdoor uses. SEAs limit but do not preclude development that is compatible with the biological community. Policies and regulations for SEAs do not apply within city boundaries. The closest designated SEA, and the only SEA located in the Harbor, is the Terminal Island SEA, which is limited to the Pier 400 California least tern nesting site (County of Los Angeles 1980, 2012). There are no designated Marine Protected Areas (MPAs) within the Harbor.

3.3.2.10 Essential Fish Habitat

In accordance with the 1996 amendments to the Magnuson-Stevens Fishery Management and Conservation Act, an assessment of EFH was prepared for the proposed Project and alternatives, which includes impacts of dredging and pile installation along Berths 214–220. (See Appendix C3). The proposed project area is located in an area designated as EFH for federally managed species under two Fishery Management Plans (FMPs): the Coastal Pelagics Management Plan and the Pacific Groundfish Management Plan. Of the 95 species included under these plans, 24 are known to occur in the Port Complex and could potentially be affected by the proposed Project or alternatives. However, most of these 24 species have been collected only sporadically and in very low numbers, and habitat near the proposed project site is not suitable for these species. The species with the highest potential to be affected by the proposed Project or alternatives are identified in Table 3.3-5.

Table 3.3-5: Managed Fish/Invertebrate Species Most Likely to Occur off the YTI Terminal in Los Angeles Harbor Based on Past Occurrences

Common Name	Potential Habitat Use	Larval Occurrence [a, b, d]	Juvenile/Adult Occurrence [b, c, d, e]
Coastal Pelagics			
Northern anchovy	Open water.	Abundant	Abundant
Pacific sardine	Open water.	Uncommon	Common
Pacific (chub) mackerel	Open water, juveniles off sandy beaches and around kelp beds.	--	Uncommon
Jack mackerel	Open water, young fish over shallow banks and juveniles around kelp beds.	Rare	Uncommon
Market squid	Open water; rare near bays, estuaries, and river mouths.	Rare	--

Table 3.3-5: Managed Fish/Invertebrate Species Most Likely to Occur off the YTI Terminal in Los Angeles Harbor Based on Past Occurrences

Common Name	Potential Habitat Use	Larval Occurrence [a, b, d]	Juvenile/Adult Occurrence [b, c, d, e]
Pacific Groundfish			
English sole	Soft bottom habitats.	Rare	Uncommon
Pacific sanddab	Soft bottom habitats.	Rare	Common
Butter sole	Soft bottom habitats.	Rare	--
Black rockfish	Along breakwater, near deep piers and pilings; associated with kelp, eelgrass, and high relief reefs.	--	Rare
Bocaccio	Multiple habitat associations, including soft and hard bottom, kelp, eelgrass, etc.	--	Rare
Brown rockfish	Multiple habitat associations but prefer hard substrata and rocky interfaces.	--	Rare
Calico rockfish	Multiple habitat associations but prefer hard substrata and rocky interfaces.	--	Rare
California scorpionfish	Benthic, on soft and hard bottoms, as well as around structures.	--	Uncommon
Grass rockfish	Common on hard substrate, kelp, and eelgrass habitats.	--	Rare
Kelp rockfish	Common on hard substrate, kelp; reported along breakwater.	--	Rare
Olive rockfish	Common around hard substrate, kelp; reported along breakwater.	--	Rare
Vermilion rockfish	Juveniles over soft-bottom and kelp, adults associated with hard substrate.	--	Uncommon
Lingcod	Multiple habitat associations but prefer hard substrata and rocky interfaces.	--	Rare
Cabezon	Multiple habitat associations but prefer hard substrata and rocky interfaces.	Rare	Rare
Pacific hake	Common offshore, juveniles in open water.	Rare	--
Leopard shark	Multiple habitat associations, including soft bottoms, and near structures, kelp, and eelgrass.	N/A	Rare
Spiny dogfish	Pelagic and on muddy bottoms.	N/A	Rare
Big skate	Soft bottom habitat.	N/A	Rare
California skate	Soft bottom habitat.	N/A	Uncommon

Table 3.3-5: Managed Fish/Invertebrate Species Most Likely to Occur off the YTI Terminal in Los Angeles Harbor Based on Past Occurrences

Common Name	Potential Habitat Use	Larval Occurrence [a, b, d]	Juvenile/Adult Occurrence [b, c, d, e]

Sources: [a] MBC et al. (2007); [b] MEC and Associates (2002); [c] MBC (2009a, 2009b); [d] SAIC (2010); [e] MEC (1999).
N/A = Not applicable, internal fertilization. Abundant > Common > Uncommon > Rare.
Note - Most rockfish larvae not identifiable to species.

Two coastal pelagic fish—northern anchovy and Pacific sardine—are likely to occur in the proposed project vicinity. Northern anchovy is among the most common and abundant fish species in the Port Complex. In 2006, anchovy larvae were present in the Port Complex during two seasonal periods: a greater peak in March–July and a lesser peak in October–December (MBC et al. 2007). Juvenile and adult anchovies have consistently been collected during fish sampling near the proposed project site (MEC and Associates 2002; SAIC 2010). Northern anchovy are found from the surface to depths of 1,017 feet, though juveniles are generally more common inshore and in estuaries (Davies and Bradley 1972).

Pacific sardine were not abundant during 2006 ichthyoplankton sampling throughout the Port Complex; two sardine larvae were collected in the Outer Harbor in April 2006 (MBC et al. 2007). This epipelagic species (occurring in about the upper 200 meters of the ocean) occurs in loosely aggregated schools and is less common than northern anchovy near the proposed project site (MEC and Associates 2002; SAIC 2010; Wolf et al. 2001).

Jack mackerel (*Trachurus symmetricus*) and Pacific mackerel (*Scomber japonicus*) have been collected in the Harbor, but in much lower frequency and numbers than northern anchovy and Pacific sardine.

Although no mature market squid (*Doryteuthis opalescens*) have been reported in recent surveys, market squid paralarvae were collected in Inner and Outer Harbor areas in 2006 (MBC et al. 2007). All coastal pelagics are associated with the water column (as opposed to the seafloor like many of the groundfish); however, female squid also lay egg masses on sandy bottoms during spawning (at depths of about 16–180 feet, with most occurring between 66 and 115 feet) (PFMC 2011a).

In 2005, krill (Euphausiids) were added as a managed unit under the Coastal Pelagic Species FMP, and their harvest is prohibited in U.S. waters (PFMC 2011a). This is intended to ensure that, to the extent practicable, fisheries will not develop that could put krill stocks at risk and the other marine resources that depend on krill. EFH for krill varies by species, but the waters of the Port Complex are considered EFH.

In 2010, jacksmelt (*Atherinopsis californiensis*) and Pacific herring (*Clupea pallasii pallasii*) were added as "Ecosystem Component Species" to the Coastal Pelagics FMP (PFMC 2011a). Ecosystem Component Species must: (1) be a non-target stock/species; (2) not be subject to overfishing, approaching overfished, or overfished and not likely to become subject to overfishing or overfished in the absence of conservation and management measures; and (3) not generally retained for sale or personal use, although

"occasional" retention is not by itself a reason for excluding a species from the Ecosystem Component category. The incidental catch of these two species will continue to be monitored by the Pacific Fishery Management Council (PFMC). The Port Complex is near the southern extent for Pacific herring (Miller and Lea 1972), and it has not been collected during harbor-wide fish studies (MEC 1988; MEC and Associates 2002; SAIC 2010). Jacksmelt were collected in relatively small numbers in 1986–1987, 2000, and 2008, and were most abundant in shallow-water mitigation areas (MEC 1988; MEC and Associates 2002; SAIC 2010).

None of the species covered under the Pacific Groundfish FMP are considered abundant in the area of the proposed Project (PFMC 2011b). However, many are associated with hard substrate, kelp, and/or eelgrass (*Zostera marina*), and these habitats are sampled less frequently than soft bottoms. Pacific sanddab (*Citharichthys sordidus*) is considered common in the vicinity of the proposed Project because it was collected by trawl in all three of the harbor-wide biological studies, though not in great numbers (MEC 1988; MEC and Associates 2002; SAIC 2010). One individual was collected in 1986, 51 were collected in 2000, and 171 were collected in 2008. English sole (*Parophrys vetulus*) has also been collected during all three trawl studies, but in relatively low numbers: one individual in 1986, three in 2000, and 24 in 2008. Larvae of English sole were also collected in 2008. English sole prefer soft bottoms from 60 to 1,000 feet, while Pacific sanddab are found between 30 and 1,800 feet (Miller and Lea 1972).

California skate (*Raja inornata*) and big skate (*R. binoculata*) have been collected by trawl during the biological surveys of the Harbor, although only 23 California skate were collected in 2008, and no big skate were collected. Like English sole, California skate has been collected in all three harbor-wide biological surveys, whereas big skate was only collected in 2000. Both species prefer soft-bottom habitat, although California skate occurs in much deeper waters (60 to 2,200 feet) than big skate (10 to 360 feet) (Miller and Lea 1972).

California scorpionfish (*Scorpaena guttata*) is another species collected in all three harbor-wide surveys, with 11 individuals in 2008. Vermilion rockfish (*Sebastes miniatus*) was only collected during the 2000 (4 individuals) and 2008 (20 individuals) harbor-wide surveys. Vermilion rockfish occur between 20 and 1,440 feet, but are most common between 165 and 495 feet. Juveniles are common in shallower water (20 to 120 feet), where they hover over sand patches near algae or structures, including pier pilings (Love et al. 2002). The remaining species in Table 3.3-5 have only been collected sporadically and in low numbers.

3.3.2.11 Wetlands and Other Special Habitats

Wetlands

Wetlands are considered "special aquatic sites" under the Clean Water Act (CWA) (40 CFR 230.41), and impacts on wetlands are regulated by USACE. The definition of wetlands varies among state and federal agencies, but USACE uses a three-parameter method that includes assessing vegetation, hydrology, and soils (Environmental Laboratory 1987). Wetlands commonly present in estuarine or marine habitats are salt marshes dominated by pickleweed (*Salicornia virginica*) and other salt-tolerant plant species. No wetlands under state or USACE jurisdiction are present at or near the proposed project site. The closest wetland is the Anchorage Road Mitigation Site, which is about 0.6 mile from the proposed project site.

Eelgrass Beds

Eelgrass beds are also considered "special aquatic sites" under the CWA (40 CFR 230.43). Eelgrass is a rooted aquatic plant that inhabits shallow soft-bottom habitats in quiet waters of bays and estuaries, as well as sheltered coastal areas (Dawson and Foster 1982). Eelgrass can form dense beds that provide substrate, food, habitat, and nursery grounds for a variety of marine organisms. Most eelgrass beds in bays or estuaries are found in water less than 20 feet deep with light being the primary limiting factor. Surveys of the Harbor in 2000 and 2008 documented eelgrass along Inner Cabrillo Beach, about 2.8 miles from the proposed project site, and in three beds in the Pier 300 Shallow Water Habitat/Seaplane Lagoon area (MEC and Associates 2002; SAIC 2010). The closest of these eelgrass beds is about one mile from the YTI Terminal, but it is separated from the proposed project site by Terminal Island.

Shallow Water

In addition to supporting the growth of eelgrass, protected shallow water areas (less than 20 feet deep) provide nursery habitat for fish and foraging habitat for fish-eating birds. Two created shallow water areas are located in Los Angeles Harbor. The Cabrillo Shallow Water Habitat inside the San Pedro Breakwater is approximately three miles from the YTI Terminal, and the Pier 300 Shallow Water Habitat/Seaplane Lagoon area is approximately one mile from the YTI terminal, but it is separated from the proposed project area by Terminal Island.

Kelp Beds

Kelp canopy is considered a Habitat Area of Particular Concern (HAPC) in the Pacific Groundfish FMP. In Southern California, the primary canopy-forming kelp species is giant kelp (*Macrocystis pyrifera*), which can form dense beds in shallow areas with rocky or hard substrate bottoms. In 2000 and 2008, giant kelp beds were present in the Outer Harbor along the breakwaters; on the outer riprap of Pier 400; at the entrance to the East Channel, Main Channel, and Fish Harbor; and on the containment dike for the Cabrillo Shallow Water Habitat (MEC and Associates 2002; SAIC 2010). Kelp beds provide nursery areas for many species of fish, and act as feeding areas for fish and seabirds. Total canopy coverage was estimated at 24.8 acres in spring 2000 and 14.2 acres in fall 2000 (MEC and Associates 2002). Canopy coverage of giant kelp at these locations in 2008, however, was estimated at 77.8 acres in spring 2008 and 50.4 acres in fall 2008 (SAIC 2010). The nearest kelp beds to the proposed project site are near the Main Channel entrance (adjacent to the USCG Base and Berth 72) and are more than 1.8 miles from the YTI Terminal. Because the majority of giant kelp distribution in the Port Complex is located at the outer breakwaters and riprap structures in the Outer Harbors that face harbor entrances (SAIC 2010), giant kelp is not expected to occur in areas adjacent to the proposed Project.

Mudflats

The shoreline at and near the proposed project site is rock riprap with wharves. No mudflats, which are also considered a "special aquatic site" under the CWA (40 CFR 230), are present at the proposed project site. The nearest known mud flat habitats are located at Berth 78 along the west side of Main Channel (approximately 1.4 miles from the proposed project site) and at the Salinas de San Pedro Salt Marsh (approximately 2.6 miles from the proposed project site).

3.3.3 Applicable Regulations

3.3.3.1 Clean Water Act

The CWA (33 USC 1251 et seq.) provides for the restoration and maintenance of the physical, chemical, and biological integrity of waters of the United States. Specifically, Section 401, Section 402, and Section 404 may be applicable to various elements of the proposed Project.

Through the authority of the State Water Resources Control Board (SWRCB), the state administers requirements and permitting under Sections 401 and 402 of the CWA through agreement with the U.S. Environmental Protection Agency (EPA). If any activity may result in the discharge of dredge or fill material into a water body, a Section 401 water quality certification or waiver from the Regional Water Quality Control Board (RWQCB) is necessary for issuance of a Section 404 permit. Section 402 of the CWA created the National Pollutant Discharge Elimination System (NPDES) to enforce effluent limitations. The NPDES program prohibits the point-source discharge of pollutants unless an NPDES discharge permit has been obtained. The ultimate goal of the NPDES program is the complete elimination of all non-stormwater discharges. The NPDES program was expanded in 1987 to regulate non-point source stormwater discharges (runoff) originating from municipal and industrial sources. Compliance with the Section 402 NPDES General Construction Permit for Storm Water Discharges Associated with Construction Activity (including the development of a Storm Water Pollution Prevention Plan [SWPPP]) issued by the SWRCB) for projects that will disturb one or more acres may also be required for the proposed Project. These regulations are discussed in greater detail in Section 3.15, Water Quality, Sediments, and Oceanography.

Under the EPA and USACE implementing regulations (40 CFR 230 and 33 CFR 320–332), USACE evaluates and may issue Section 404 permits for discharge of dredged or fill materials into waters of the United States, including wetlands and other special aquatic sites, provided the proposed discharge complies with the regulations. As described in Section 2.6, the proposed Project and the alternatives are not expected to require a Section 404 permit or a Section 404(b)(1) analysis. However, a Section 401 Water Quality Certification or waiver from the RWQCB would be required. Dredging in navigable waters is defined as "work" and requires a permit under Section 10 of the Rivers and Harbors Appropriations Act (33 USC 403; see Section 3.3.3.2, below). The transportation of dredged materials to approved ocean disposal sites is regulated under Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (MPRSA; see Section 3.3.3.9, below). Disposal of dredged material at the LA-2 Ocean Dredged Material Disposal Site (ODMDS) would be conducted only if the dredged material met the permitted volume and sediment quality requirements for that site. Effects from sediment disposal at LA-2 were evaluated during the site designation process (EPA 1988), and subsequently evaluated in consideration of higher maximum annual disposal volume (EPA and USACE 2005) and were determined to be insignificant. Disposal of dredge material from the proposed Project (or alternative) could occur at a Confined Disposal Facility (CDF) or another approved upland location. The Berths 243–245 CDF was previously authorized under CWA Section 404 by USACE for the Port of Los Angeles Channel Deepening Project (USACE Permit No. SPL-2008-00662-AOA).

A sediment characterization study was performed at Berths 212 to 224 in 2013 to determine the suitability of sediments from the proposed dredge footprint for unconfined

aquatic disposal (AMEC 2013; Appendix F, Sediment Characterization Report). Sediments were collected and tested using standard EPA/USACE protocols according to an approved Sampling and Analysis Plan (SAP). Eight core samples were collected within the proposed dredge footprint and combined into two samples (Composite Areas A and B) (see Figure 3.15-3). Area A was at Berths 214–216, and Area B was at Berths 217–220. Testing indicated that sediment contaminant levels from the dredge footprint were relatively low, with only a few minor exceedances of Effects Range-Low (ERL) levels, concentrations above which effects on biota could occasionally occur (see Table 3.15-1). No concentrations exceeded Effects Range-Median (ERM) levels that represent a probable effects range within which effects to biota could frequently occur. In addition to chemical analysis, toxicity testing on sediments from the two composites showed no statistically or ecologically significant effects, while tissue bioaccumulation results were well below U.S. Food and Drug Administration (FDA) action levels and the levels of concern reported in the Environmental Residue Effects Database (ERED) (Appendix F, Sediment Characterization Report).

The majority of sediments within the Berths 212–224 footprint complied with the chemistry, toxicity, and bioaccumulation suitability requirements for ocean disposal (Title 40 CFR Parts 220–228; Appendix F). Concentrations of most metals and PCBs, when detected, were higher in Composite Area A than in Area B. After review of the results, sediments from the bottom portion of Composite Area A were tested for sediment metals, PAHs, chlorinated pesticides, pyrethroids, and PCBs. Results from this second phase of testing indicated generally lower levels of sediment contaminants, suggesting the higher levels were associated with unconsolidated surface (top-layer) sediments of Composite Area A (AMEC 2014). Therefore, the majority of dredged material (21,800 cubic yards) would be suitable for placement at the LA-2 ODMDS, and approximately two feet of surface sediments from Composite Area A (5,200 cubic yards) would be placed within the Berth 243–245 CDF or another approved upland location.

3.3.3.2 Rivers and Harbors Appropriations Act of 1899

Sections 9 and 10 of the Rivers and Harbors Appropriations Act (33 USC 401 et seq.) regulate work and structures in, over, and under navigable waters of the United States, including dredging, filling, and bridges. Section 9 pertains to bridges and causeways and is administered by USCG. Under Section 10, USACE issues permits for work (e.g., dredging) and structures (e.g., cranes, sheet piles, king piles) in, over, and under navigable waters.

3.3.3.3 Federal Endangered Species Act

The ESA (16 USC 1531 et seq.) protects threatened and endangered species, as well as the ecosystems upon which they depend. Section 9 prohibits such take, and defines take as to harm, harass, pursue, hunt, shoot, wound, kill, trap, capture, or collect or to attempt to engage in any such conduct. Take, when incidental to otherwise lawful activities can be authorized under Section 7 when there is a federal nexus (e.g., federal funding, license, or authorization) and under Section 10 when there is no federal nexus. USFWS and NMFS share responsibilities for administering the ESA. Whenever actions authorized, funded, or carried out by federal agencies could adversely affect listed species or designated critical habitat, the federal lead agency must consult with USFWS and/or

NMFS under Section 7. The Biological Opinion issued at the conclusion of that consultation may include a statement authorizing incidental take.[2]

3.3.3.4 Magnuson-Stevens Fishery Conservation and Management Act

The 1996 amendments to the Magnuson-Stevens Fishery Management and Conservation Act (16 USC 1801 et seq.) require federal agencies that fund, permit, or carry out activities that may affect EFH to consult with NMFS and respond in writing to the conservation recommendations provided by NMFS. In addition, NMFS is required to comment on any state agency activities that would affect EFH.

3.3.3.5 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 USC 703 et seq.), as amended, provides for the protection of migratory birds by making it illegal to possess, pursue, hunt, take, or kill any migratory bird species, unless specifically authorized by a regulation implemented by the Secretary of the Interior, such as designated seasonal hunting. The act also applies to removal of nests occupied by migratory birds during the breeding season. Under certain circumstances, a depredation permit can be issued to allow limited and specified take of migratory birds.

3.3.3.6 California Endangered Species Act

The CESA (California Fish and Game Code Section 2050 et seq.) provides for the protection of rare, threatened, and endangered plants and animals, as recognized by the CDFW, and prohibits the taking of such species without authorization by CDFW under Section 2081 of the Fish and Game Code. State lead agencies must consult with CDFW during the California Environmental Quality Act (CEQA) process if state-listed threatened or endangered species are present and could be affected by a proposed project. For projects that could affect species that are both state and federally listed, compliance with the federal ESA will satisfy the CESA if CDFW determines that the federal incidental take authorization is consistent with the state Fish and Game Code (Section 2080.1).

3.3.3.7 Ballast Water Discharge Regulations:

The California Marine Invasive Species Act of 2003 renewed and expanded on the Ballast Water Management for Control of Nonindigenous Species Act of 1999 to address the threats posed by the introduction of nonindigenous species. The law charged the California State Lands Commission with oversight and administration of the state's program to prevent or minimize the release of nonindigenous species from vessels that are 300 gross registered tons and above. To advance this goal, the commission's Marine Invasive Species Program uses an inclusive, multi-faceted approach to: develop sound, science-based policies in consultation with technical experts and stakeholders; track and analyze ballast water and vessel biofouling management practices of the California commercial fleet; enforce laws and regulations to prevent introductions; and facilitate outreach to promote information exchange among scientists, legislators, regulators, and other stakeholders.

[2] The ESA does not allow incidental take of listed plants or their critical habitat.

Both USCG (Ballast Water Management) and EPA (Vessel General Permit) regulate ballast water discharges, and both agencies currently require ballast water exchange for most vessels operating in U.S. waters. In addition, California requires ballast water exchange on coastwise voyages (e.g., between Los Angeles and Oakland). However, at present, the discharge standards in California are more stringent than federal regulations (see Table 3.3-6). In accordance with governing statutes and regulations, vessels have four options to comply with California's performance standards: (1) retention of all ballast water on board, (2) use of potable water as an alternative ballast water management method, (3) discharge to a shore-based ballast water reception and treatment facility, and (4) treatment of all ballast prior to discharge by a shipboard ballast water treatment system. Performance standards for ballast water discharge are: (1) no detectable living organisms >50 microns (µm) in minimum dimension; (2) <0.01 living organisms per milliliter (ml) of organisms 10–50 µm in minimum dimension; and (3) multiple standards for bacteria and viruses. The performance standards for vessels with ballast water capacities of 1,500–5,000 metric tons will apply in 2016, while standards for vessels with capacities of <1,500 metric tons and >5,000 metric tons will apply in 2018. The State Legislature delayed implementation of the performance standards in 2013 because the state lacks the scientific protocols and capacity to measure compliance (Scianni et al. 2013), and no shipboard ballast water treatment systems are currently available to meet all of California's performance standards for the discharge of ballast water (CSLC 2013).

Table 3.3-6: Current Performance Standards for Ballast Water Treatment Prior to Discharge

Organism Size Class	IMO D-2/USCG/EPA	California
>50 mm in min. dimension	<10 viable organisms per m^3	No detectable living organisms
10–50 mm in min. dimension	<10 viable organisms per ml	<0.1 viable organisms per ml
Bacteria		$<10^3$ bacteria/100 ml
Viruses		$<10^4$ bacteria/100 ml
E. coli	<250 cfu/100 ml	<126 cfu/100 ml
Intestinal enterococci	<100 cfu/100 ml	<330 cfu/100 ml
Toxicogenic *V. cholerae*	<1 cfu/100 ml	<1 cfu/100 ml

cfu = colony forming unit.

Note: USCG and EPA have adopted the International Maritime Organization (IMO) D-2 Standards. California standard for Jan. 1, 2020 is zero detectable living organisms for all size classes.

3.3.3.8 Marine Mammal Protection Act

The MMPA (16 USC 1361 et seq.) prohibits the taking (including harassment, disturbance, capture, and death) of any marine mammals, except as set forth in the act. NMFS and USFWS administer the MMPA. Marine mammal species that may be found in the Harbor are under the jurisdiction of NMFS.

3.3.3.9 Marine Protection, Research, and Sanctuaries Act of 1972

The MPRSA (33 USC 1401 et seq.) regulates the transportation of dredged material for the purpose of ocean disposal, prohibits ocean disposal of certain wastes without a

permit, and prohibits the disposal of certain materials entirely. Prohibited materials include those that contain radiological, chemical, or biological warfare agents, high-level radiological wastes, and industrial waste. The MPRSA has jurisdiction over all U.S. ocean waters in and beyond the territorial sea (within 12 nautical miles of the nearest shoreline), vessels flying the U.S. flag, and vessels leaving U.S. ports. Section 102 of the MPRSA authorizes EPA to promulgate environmental criteria for evaluation of all disposal permit actions, to retain review authority over USACE MPRSA Section 103 permits, and to designate ocean disposal sites for dredged material disposal.

3.3.4 Impacts and Mitigation Measures

3.3.4.1 Methodology

Impacts on biota were assessed by estimating the amount of habitat that would be gained/lost or disturbed through analysis of water quality and sediment analyses (see Section 3.15, Water Quality, Sediments, and Oceanography), evidence from similar, past projects in the Port, biological resources that may be present or may use the area adjacent to the existing YTI Terminal, and from preparer expertise and judgment. The assessment of impacts is based on the assumption that the proposed Project (and each alternative) would include the following:

- A Section 401 (of the CWA) Water Quality Certification would be obtained from the RWQCB for construction dredging activities that contains conditions including standard Waste Discharge Requirements (WDRs).
- A Rivers and Harbors Act Section 10 permit would be obtained from USACE for dredging and in-water construction activities in waters of the United States.
- An MPRSA Section 103 permit would be required for ocean transport and disposal of qualifying material at a designated ocean site (LA-2).
- No discharge of dredged or fill material to waters of the United States requiring a Section 404(b)(1) analysis is anticipated. In addition, no upland disposal in which a 404 permit would be needed for return water is anticipated.
- During dredging, an integrated, multi-parameter monitoring program would be implemented by LAHD's Environmental Management Division in compliance with both USACE and RWQCB permit requirements, wherein dredging impacts are measured in situ. The objective of the monitoring program will be adaptive management of the dredging operation, whereby potential exceedances of water quality objectives can be measured and dredging operations subsequently modified. If potential exceedance levels are approached, LAHD's Environmental Management Division would immediately meet with the construction manager to discuss modifications of dredging operations to reduce turbidity and to keep it at acceptable levels. This could include alteration of dredging methods, and/or implementation of additional Best Management Practices (BMPs) such as a silt curtain (which may be required by permit conditions).
- Coverage under the General Construction Activity Storm Water Permit (GCASP) for the onshore portions of the proposed Project (and alternatives) will be obtained by LAHD as the Legally Responsible Person that will delegate

applicable responsibilities to the tenant. The associated SWPPP will contain the following measures:

- Equipment will be inspected regularly (daily) during construction, and any leaks found will be repaired immediately.
- Refueling of vehicles and equipment will occur in a designated, contained area.
- Drip pans will be used under stationary equipment (e.g., diesel fuel generators), during refueling, and when equipment is maintained.
- Drip pans that are in use will be covered during rainfall to prevent washout of pollutants.
- Appropriate containment structures will be constructed and maintained to prevent off-site transport of pollutants from spills and construction debris.

- Monitoring will occur to verify that the BMPs are implemented and kept in good working order.
- Sediments suitable for unconfined aquatic disposal from the proposed dredging area would be potentially disposed of at the LA-2 ODMDS, used in the Los Angeles Harbor Berths 243–245 CDF, or at another approved upland location. Sediments unsuitable for unconfined aquatic disposal would be disposed of in the CDF. Ocean disposal at LA-2 would require USACE and EPA authorization under the MPRSA.
- The tenant would implement the stormwater discharge permit (such as the General Industrial Activities Stormwater Permit [GIASP]). LAHD will incorporate Standard Urban Stormwater Management Plan/Low Impact Development (SUSMP/LID) measures into the proposed project design for review and approval by the City of Los Angeles Department of Building and Safety. These are described in detail in Section 3.15, Water Quality, Sediments, and Oceanography.
- Spill Prevention, Control, and Countermeasure Regulations would be implemented. The Oil Spill Prevention, Control, and Countermeasure (SPCC) regulations require that LAHD has in place measures that help ensure oil spills do not occur, but, if they do, that there are protocols in place to contain the spill and neutralize the potential harmful impacts. An SPCC plan and an Oil Spill Contingency Plan (OSCP) would be prepared that would be reviewed and approved by the RWQCB (for the SPCC) or the CDFW Office of Spill Prevention and Response, in consultation with other responsible agencies. The SPCC and OSCP plans would detail and implement spill prevention and control measures.

CEQA Baseline

Section 15125 of the CEQA Guidelines requires EIRs to include a description of the physical environmental conditions in the vicinity of a project that exist at the time of the NOP. These environmental conditions normally would constitute the baseline physical conditions by which the CEQA lead agency determines if an impact is significant. The NOP for the proposed Project was published in April 2013. For purposes of this Draft EIS/EIR, the CEQA baseline takes into account the throughput for the 12-month calendar year preceding NOP publication (January through December 2012) in order to provide a

representative characterization of activity levels throughout the complete calendar year preceding release of the NOP. In 2012, the YTI Terminal encompassed approximately 185 acres under its long-term lease, supported 14 cranes (10 operating), and handled approximately 996,109 TEUs and 162 vessel calls. The CEQA baseline conditions are also described in Section 2.7.1 and summarized in Table 2-1.

The CEQA baseline represents the setting at a fixed point in time. The CEQA baseline differs from the No Project Alternative (Alternative 1) in that the No Project Alternative addresses what is likely to happen at the proposed project site over time, starting from the existing conditions. Therefore, the No Project Alternative allows for growth at the proposed project site that could be expected to occur without additional approvals, whereas the CEQA baseline does not.

NEPA Baseline

For purposes of this Draft EIS/EIR, the evaluation of significance under NEPA is defined by comparing the proposed Project or other alternative to the NEPA baseline. The NEPA baseline conditions are described in Section 2.7.2 and summarized in Table 2-1. The NEPA baseline condition for determining significance of impacts includes the full range of construction and operational activities the applicant could implement and is likely to implement absent a federal action, in this case the issuance of a USACE permit.

Unlike the CEQA baseline, which is defined by conditions at a point in time, the NEPA baseline is not bound by statute to a "flat" or "no-growth" scenario. Instead, the NEPA baseline is dynamic and includes increases in operations for each study year (2015, 2016, 2017, 2020, and 2026), which are projected to occur absent a federal permit. Federal permit decisions focus on direct impacts of the proposed Project to the aquatic environment, as well as indirect and cumulative impacts in the uplands determined to be within the scope of federal control and responsibility. Significance of the proposed Project or the alternatives under NEPA is defined by comparing the proposed Project or the alternatives to the NEPA baseline.

The NEPA baseline, for purposes of this Draft EIS/EIR, is the same as the No Federal Action Alternative. Under the No Federal Action Alternative (Alternative 2), no dredging, dredged material disposal, in-water pile installation, or crane installation/extension would occur. Expansion of the TICTF and extension of the crane rail would also not occur. The No Federal Action Alternative includes only backlands improvements consisting of slurry sealing, deep cold planning, asphalt concrete overlay, restriping, and removal, relocation, or modification of any underground conduits and pipes necessary to complete repairs. These activities do not change the physical or operational capacity of the existing terminal.

The NEPA baseline assumes that by 2026 the terminal would handle up to approximately 1,692,000 TEUs annually, accommodate 206 annual ship calls at two berths, and be occupied by 14 cranes (10 operating).

3.3.4.2 Thresholds of Significance

The significance criteria have been developed using the *L.A. CEQA Thresholds Guide* (City of Los Angeles 2006). They were modified to better assess impacts of the proposed Project and alternatives. Consequently, criterion BIO-2 has been modified to delete locally designated species (because none are present) and to include state and federally

designated habitats (e.g., EFH, mudflats, and wetlands), criterion BIO-3 has been modified to cover species other than sensitive species, and criterion BIO-4 has been deleted because it is now included in BIO-2. Criterion BIO-5 is now BIO-4 and has been modified to address only disruption of local biological communities, and a new criterion, BIO-5, has been added for permanent loss of marine habitat, which is evaluated under construction impacts. Aerial deposition impacts are addressed in Section 3.15, Water Quality, Sediments, and Oceanography. Impacts of the proposed Project and alternatives on biological resources are considered to be significant if the proposed Project would result in any of the following:

BIO-1: The loss of individuals, or the reduction of existing habitat, of a state or federally listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or the loss of federally designated critical habitat

BIO-2: A substantial reduction or alteration of a state, federally, or locally designated natural habitat, special aquatic site, or plant community, including wetlands

BIO-3: Interference with wildlife movement/migration corridors that may diminish the chances for long-term survival of a species

BIO-4: A substantial disruption of local biological communities (e.g., from construction impacts or the introduction of noise, light, or invasive species)

BIO-5: A permanent loss of marine habitat (from proposed Project/alternative construction)

3.3.4.3 Impact Determination

Proposed Project

Impact BIO-1: The proposed Project would not cause a loss of individuals or habitat of a state- or federally listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or the loss of federally listed critical habitat.

Construction

State or federally listed and other sensitive species in the Harbor that could use the water surface and shoreline and potentially be displaced or affected during construction include: two endangered bird species (California least tern and Belding's savannah sparrow); one threatened bird species (western snowy plover); 14 other bird species with state and/or federal protection or designation (see Table 3.3-3), and two MMPA protected species (California sea lion and Pacific harbor seal). California sea lions are common in the Harbor, and harbor seals occasionally can be seen resting on riprap or buoys in various locations throughout the Harbor. Established roosting areas for birds occur along the breakwaters, and particularly the Middle Breakwater, which is isolated from human access. However, the proposed Project would not affect these locations because work is proposed well away from them (a distance of approximately three miles). California least terns, elegant terns, and Caspian terns nested on Pier 400 in 2012, which is more than 2.5 miles from the proposed project site. Therefore, tern nesting would not be affected by the

proposed Project. No critical habitat for any federally listed species is present at the proposed project site.

Dredging and in-water construction (pile installation) could affect water-associated birds and marine mammals through temporary increases in noise, vibration, and turbidity, as well as the potential for displacement of individuals from the work area. However, these birds and marine mammals would be able to use other areas in the Harbor if construction activities occurred when they were present and if the disturbances caused them to avoid the work area.

Dredging activities and the resultant temporary turbidity have the potential to affect foraging by bird species in the general area, such as elegant, Caspian, and least terns. However, impacts would be temporary, limited to the construction areas, and conditions would return to normal after conclusion of dredging activities. Moreover, high levels of turbidity and total suspended solids are usually not measured during dredging operations in Southern California (Anchor Environmental 2003). In addition, implementation of required water quality monitoring during dredging according to the requirements of the RWQCB, as well as implementation of standard dredging BMPs via adaptive management of the dredging, would reduce impacts.

Based on water quality monitoring data from other Harbor dredge projects using suction and clamshell dredge equipment (Jones & Stokes 2007a, 2007b), water quality effects are expected to be transitory, lasting for less than one tide cycle following active dredging, and covering an area generally within 1,000 feet of the activity, and often less than 300 feet. Turbidity may also be temporarily increased during installation of piles. Water quality impacts from dredging are detailed in Section 3.15, Water Quality, Sediments, and Oceanography. However, the extent would generally be much less than the area affected by dredging, likely affecting no more than a few hundred feet from the activity.

Foraging in the vicinity of the proposed Project could also continue with no adverse effects on bird species; California least terns have been observed foraging in dredge plumes in Long Beach Harbor (Moore pers. comm. 2010). Also, all three tern species prefer to forage in shallower waters, such as the waters of the Cabrillo Shallow Water Habitat, which provide higher foraging value than those in the channel off the YTI Terminal. During 2001 and 2002, this region of the Inner Harbor was found to be among the least used of 29 areas surveyed in the Harbor for foraging by California least terns (Keane Biological Consulting 2003). As a result, dredging and in-water construction are not likely to affect tern foraging. As summarized in Section 3.15, Water Quality, Sediments, and Oceanography, dredging is not likely to substantially increase turbidity and/or total suspended solids in the waters along the proposed project site. Results from water quality monitoring during dredging would be used to evaluate the potential for resuspension of potentially contaminated sediments to affect sensitive species. If results were to indicate that contaminated sediments were being resuspended and causing turbidity to increase, applicable BMPs, such as modifications to dredging equipment or use of silt curtains (which has been required in recent dredging WDRs), would be implemented.

Potential biological impacts from disposal of dredged sediments would depend on the disposal method. However, for all in-water disposal options, potential impacts include water quality impacts from turbidity or contaminants and smothering of resident fishes and invertebrates. Impacts from disposal at the LA-2 were evaluated during the site

designation process (EPA 1988) and subsequently evaluated in consideration of higher maximum annual disposal volume (EPA and USACE 2005).

Sediments would be disposed of at the LA-2 ODMDS, placed at the Berths 243–245 CDF, or disposed of at another approved upland location. Sediments from the proposed dredging area were tested using standard EPA/USACE protocols (according to an approved SAP) prior to dredging to determine the suitability of the material for unconfined, aquatic disposal or other disposal alternatives. The majority of sediments within the Berths 212–224 footprint complied with the chemistry, toxicity, and bioaccumulation suitability requirements for ocean disposal (Title 40 CFR Parts 220–228; Appendix F). The majority of dredged material (21,800 cubic yards) would be suitable for placement at the LA-2 ODMDS, and approximately two feet of surface sediments from Composite Area A (5,200 cubic yards) would be placed within the Berths 243–245 CDF or another approved upland location. Biological impacts due to construction and fill of the CDF were evaluated in the Final Supplemental EIS/Final Supplemental EIR for the Port of Los Angeles Channel Deepening Project (USACE and LAHD 2009). This evaluation included mitigation for habitat loss at the Berths 243–245 CDF. Any temporary water quality impacts would be minimized by pre-dredge screening, water quality monitoring, and adaptive management and use of BMPs.

The proposed improvements to Berths 214–220 would include the installation of sheet piles and king piles to accommodate the dredging activities. A king pile is steel pile that is used to connect sheet piles at junctions in the sheet pile wall. The king piles would be installed approximately 35 feet below the mudline, and sheet and king piles would be installed over approximately 2,600 linear feet along the berth. Installation of the piles would be accomplished using a combination of vibratory and impact-hammer, starting with vibratory, and then transitioning to impact at a certain depth. The size and type of pilings affect the sound volume produced during pile driving. For instance, larger piles generally produce higher sound volume than smaller ones. In addition, the extent and intensity of noise effects would also depend on the underwater geography and water depth in the vicinity of the piling.

Sound transmission in the underwater environment can be affected by local bathymetry, substrates, currents, and stratification of the water column. Based on underwater studies of gray whale behavior, a disturbance threshold (Level B harassment) of 160 dB_{RMS} (decibels Root Mean Square) has been identified for marine mammals based on previous research on cetaceans (*Federal Register* 2006). Exposure to sound at this level would likely cause avoidance, but not injury, for marine mammals. The current Level A harassment (injury) threshold for non-explosive sounds is 180 dB_{RMS} for cetaceans and 190 dB_{RMS} for pinnipeds.

Table 3.3-7 summarizes typical underwater noise levels produced by the installation of sheet piles. The size of king piles can vary. The table shows the typical underwater noise level produced by installation of a 12-inch steel king pile and a 24-inch sheet pile. The distance to the Level A and Level B thresholds is shown as well based on an underwater attenuation rate of 4.5 dB per doubling of distance. This is the attenuation rate recommended by NMFS.

Table 3.3-7: Summary of Underwater Sound Levels Produced by Sheet and King Pile Installation

Pile Type	Installation Method	Underwater Sound Level (dB re: 1 micropascal) at 10 meters		Distance to Level A for Cetaceans (180 dB) (m)	Distance to Level A for Pinnipeds (190 dB) (m)	Distance to Level B (160 dB) (m)
		Peak	RMS			
24-inch steel sheet	Vibratory	182	165	<10	<10	22
24-inch steel sheet	Impact	205	190	46	10	1,000
12-inch steel H	Vibratory	165	150	<10	<10	<10
12-inch steel H	Impact	195	183	<10	<10	341

Source: ICF Jones & Stokes, and Illingworth & Rodkin, Inc. (2009).

The data in Table 3.3-7 indicate that sheet pile and king pile installation is anticipated to result in disturbance (Level B harassment) to marine mammals in the vicinity of construction operations and could potentially result in Level A harassment during impact driving of sheet piles and king piles.

No state or federal ESA-listed marine mammals are expected to occur in the proposed project area. California sea lions have been observed in waters surrounding the proposed project site, and harbor seals may also be present. Noise from impact pile driving during pile installation could cause seals and sea lions to avoid construction areas during pile driving, but would not result in the loss of individuals or habitat.

Operation

Operation of new and upgraded terminal facilities at the proposed project site would not adversely affect any of the special-status bird species listed in Tables 3.3-2 and 3.3-3. Those species that currently use the proposed project site for foraging or resting could continue to do so because the proposed Project would not appreciably change the industrial activities at the proposed project site or cause a loss of habitat for those species. Operation of the backland facilities (e.g., cranes, railyard, and container transfers) would not measurably change the numbers or species of common birds in the project area and, thus, would not affect foraging.

The increase in vessel traffic of up to 44 vessels annually would cause a short interval of disturbance throughout the route from Angel's Gate to Berths 212–224, but would not result in a loss of habitat or individuals for sensitive birds that use the water surface for resting or foraging. Underwater sound from these vessels, or tugboats used to maneuver them to the berth, would add to the existing vessel traffic noise in the Harbor. A doubling in the number of vessels (noise sources) in the Harbor would be necessary to increase the overall underwater sound level by 3 dBA (FHWA 1978). Because of the small increase in vessels calling at the YTI Terminal relative to the total number of vessels calling in the Port of Los Angeles (2,180 in 2012), the proposed Project would

not result in a measurable change in overall noise. Additionally, transits would be of short duration and distance, few individuals would be affected (large numbers are not present in the Harbor), and harbor seals and sea lions would be expected to avoid sound levels that could cause damage to their hearing. Therefore, this increase in vessels would not adversely affect sensitive species in the Outer Harbor or the approach to the YTI terminal.

Vessels approaching Angel's Gate would pass through nearshore waters, and sound from their engines and drive systems could disturb marine mammals that happen to be nearby. However, few whales and dolphins would be affected because the animals are generally sparsely distributed offshore, and are not abundant in the Port Complex (Forney et al. 1995; SAIC 2010). These animals would likely move away from the sound as it increased in intensity from the approaching vessel, and exposure would be of short duration (Blackwell et al. 2004). Pinnipeds would be expected to avoid sound levels that could cause damage to their hearing, and overall underwater noise levels would not be measurably increased. Noise levels associated with vessel traffic, including near heavily used ferry terminals, generally range between 120 and 143 dB (WSDOT 2010; ICF and Illingworth & Rodkin 2009), which is below the injury threshold of 180 dB_{RMS} for cetaceans and 190 dB_{RMS} for pinnipeds.

Container ships transiting the coastal waters of Southern California could potentially cause harm from vessel collisions with endangered, threatened, or species of concern, such as marine mammals and sea turtles. However, there is a low probability of strikes. The proposed Project would result in a relatively minor increase in overall vessel calls to the Port, and recent data suggests increases in ship strikes likely result from higher abundance of whales in nearshore waters and higher vessel speeds. As discussed in Section 3.3.2.6, there are few reports of marine mammal mortality and sea turtles resulting from vessel strikes in Southern California each year. Although the likelihood of such a collision is low, such collisions do occur and may cause an impact on federally listed species, such as blue whales. Therefore, any increase in vessel traffic caused by the proposed Project may incrementally increase the potential for vessel strikes. No critical habitat for any listed species is present in the vicinity of the YTI terminal; therefore, no critical habitat would be affected by operation of the proposed Project.

CEQA Impact Determination

As described above, construction of the proposed Project is not likely to result in the loss of individuals or the reduction of existing critical habitat of a state or federally listed endangered, threatened, rare, protected, candidate, or sensitive species or a Species of Special Concern. In-water construction would cause localized activity, noise, and turbidity that could affect birds and marine mammals. However, these impacts would be temporary and limited to the waters in the vicinity of construction activities. Implementation of required water quality monitoring during dredging according to the requirements of the RWQCB, and implementation of standard dredging BMPs via adaptive management of the dredging, would keep these impacts to a less-than-significant level.

Sediments would be disposed of at the LA-2 ODMDS, placed at the Berths 243–245 CDF, or disposed of at another approved upland location. Sediments from the proposed dredging area were tested using standard EPA/USACE protocols (according to an approved SAP) prior to dredging to determine the suitability of the material for

unconfined, aquatic disposal or other disposal alternatives. The majority of sediments within the Berths 212–224 footprint complied with the chemistry, toxicity, and bioaccumulation suitability requirements for ocean disposal (Title 40 CFR Parts 220–228; Appendix F). The majority of dredged material (21,800 cubic yards) would be suitable for placement at the LA-2 ODMDS, and approximately two feet of surface sediments from Composite Area A (5,200 cubic yards) would be placed within the Berths 243–245 CDF or another approved upland location. Biological impacts due to construction and fill of the CDF were evaluated in the Final Supplemental EIS/Final Supplemental EIR for the Port of Los Angeles Channel Deepening Project (USACE and LAHD 2009). This evaluation included mitigation for habitat loss at the Berths 243–245 CDF. Impacts from disposal at the LA-2 disposal site were evaluated during the site designation process (EPA 1988), and subsequently evaluated in consideration of higher maximum annual disposal volume (EPA and USACE 2005). Any temporary water quality impacts would be minimized by pre-dredge screening, water quality monitoring, and adaptive management and use of BMPs.

King and sheet pile driving is anticipated to result in disturbance (Level B harassment) to marine mammals (particularly harbor seals and sea lions) in the vicinity of pile-driving operations. Impacts would be significant; however, impacts on marine mammals resulting from noise associated with pile driving would be reduced with implementation of MM BIO-1. This would ensure that marine mammals would be readily able to avoid pile-driving areas, and no injury to marine mammals from pile-driving sounds would be expected.

An estimated 44 additional vessel calls per year above the CEQA baseline ship calls of 162 to the Port would result from the proposed Project by the year 2026. This increase could occur as early as 2015. Terminal activity under the proposed Project would be greater than the CEQA baseline; however, operational activities would result in no loss of habitat for rare, threatened, endangered, protected, or candidate species, or species of special concern. No impacts on critical habitat would occur because no critical habitat is present in the in the vicinity of the YTI terminal. Increased vessel activity from the proposed Project would result in increased noise levels. However, impacts are not considered significant because this would not lead to the loss of individuals or habitat of sensitive species. The increase in vessel traffic would also increase the likelihood of a vessel collision with a marine mammal or sea turtle, which could result in injury or mortality. This impact is considered less than significant under CEQA because of the low probability of vessel strikes; however, any increase in vessel traffic caused by the proposed Project may incrementally increase the potential for vessel strikes. Implementation of MM AQ-9 would reduce the potential for vessel collision with marine mammals and sea turtles.

Mitigation Measures

MM BIO-1: **Avoid marine mammals.** Although it is expected that marine mammals will voluntarily move away from the area at the commencement of the vibratory or “soft start” of pile-driving activities, as a precautionary measure, pile-driving activities occurring as part of the sheet pile and king pile installation will include establishment of a safety zone, and the area surrounding the operations will be monitored for pinnipeds and cetaceans by a qualified marine mammal observer. A 300-meter-radius safety zone will be established around the pile-driving site and monitored

for marine mammals. The pile-driving site will move with each new pile, therefore the 300-meter safety zone will move accordingly.

Prior to commencement of pile driving, observers on shore or by boat will survey the safety zone to ensure that no marine mammals are seen within the zone before pile driving of a pile segment begins. If a marine mammal is observed within 10 meters of pile-driving operations, pile driving will be delayed until the marine mammal moves out of the 10-meter zone. If a marine mammal in the 300-meter safety zone is observed, but more than 10 meters away, the contractor will wait at least 15 minutes to commence pile driving. If the marine mammal has not left the 300-meter safety zone after 15 minutes, pile driving can commence with a "soft start." This 15-minute criterion is based on a study indicating that pinnipeds dive for a mean time of 0.50 to 3.33 minutes; the 15-minute delay will allow a more than sufficient period of observation to be reasonably sure the animal has left the proposed project vicinity.

If marine mammals enter the safety zone after pile driving of a segment has begun, pile driving will continue. The qualified observer will monitor and record the species and number of individuals observed, and make note of their behavior patterns. If the animal appears distressed, and if it is operationally safe to do so, pile driving will cease until the animal leaves the area. Prior to the initiation of each new pile-driving episode, the area will again be thoroughly surveyed by the qualified observer.

MM AQ-9: **Vessel Speed Reduction Program (VSRP).** Air quality mitigation measure MM AQ-9 (in Section 3.2, Air Quality and Meteorology) requires that starting January 1, 2017 and thereafter, 95% of ships calling at the YTI Terminal will be required to comply with the expanded VSRP at 12 knots between 40 nm from Point Fermin and the Precautionary Area. This mitigation measure would reduce the potential for vessel collision with marine mammals and sea turtles.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Construction of the proposed Project would result in upland, in-water, and over-water construction activities not included in the NEPA baseline. As described above, construction of the proposed Project is not likely to result in the loss of individuals or the reduction of existing federally listed species or designated critical habitat, or other federally protected species (e.g., marine mammals, sea turtles, migratory birds, or federally managed fish species). In-water construction would cause localized activity, noise, and turbidity that could affect birds and marine mammals. However, these impacts would be temporary and limited to the waters in the vicinity of construction activities. Implementation of required water quality monitoring during dredging according to the requirements of the RWQCB, and implementation of standard dredging BMPs via

adaptive management of the dredging, would keep these impacts to a less-than-significant level.

Sediments would be disposed of at the LA-2 ODMDS, placed at the Berths 243–245 CDF, or disposed of at another approved upland location. Sediments from the proposed dredging area were tested using standard EPA/USACE protocols (according to an approved SAP) prior to dredging to determine the suitability of the material for unconfined, aquatic disposal or other disposal alternatives. The majority of sediments within the Berths 212–224 footprint complied with the chemistry, toxicity, and bioaccumulation suitability requirements for ocean disposal (Title 40 CFR Parts 220–228; Appendix F). The majority of dredged material (21,800 cubic yards) would be suitable for placement at the LA-2 ODMDS, and approximately two feet of surface sediments from Composite Area A (5,200 cubic yards) would be placed within the Berths 243–245 CDF or another approved upland location. Biological impacts due to construction and fill of the CDF were evaluated in the Final Supplemental EIS/Final Supplemental EIR for the Port of Los Angeles Channel Deepening Project (USACE and LAHD 2009). This evaluation included mitigation for habitat loss at the Berths 243–245 CDF. Impacts from disposal at the LA-2 disposal site were evaluated during the site designation process (EPA 1988), and subsequently evaluated in consideration of higher maximum annual disposal volume (EPA and USACE 2005). Any temporary water quality impacts would be minimized by pre-dredge screening, water quality monitoring, and adaptive management and use of BMPs.

Sheet and king pile driving is anticipated to result in disturbance (Level B harassment) to marine mammals (particularly harbor seals and sea lions) in the vicinity of pile-driving operations. Impacts would be significant; however, impacts on marine mammals resulting from noise associated with pile driving would be reduced with implementation of MM BIO-1. This would ensure that marine mammals would be readily able to avoid pile-driving areas, and no injury to marine mammals from pile-driving sounds would be expected.

Terminal activity under the proposed Project would be greater than the NEPA baseline; however, operational activities would result in no loss of habitat for federally listed threatened or endangered species, designated critical habitat, or other federally protected species. No impacts on critical habitat would occur because no critical habitat is present in the in the vicinity of the YTI terminal. The number of vessels calling at the terminal annually would not change compared to the NEPA baseline, but vessel size would increase, and an additional berth would be available. Therefore, impacts associated with increased vessel collisions as a result of ship calls would not occur under NEPA. Even though impacts due to vessel strikes are considered less than significant, implementation of MM AQ-9 would reduce the potential for vessel collision with marine mammals and sea turtles.

Mitigation Measures

MM BIO-1 would be applied as a standard condition of approval to the proposed Project during construction.

MM AQ-9 would be required for operation of the proposed Project beginning in 2017.

Residual Impacts

Impacts would be less than significant.

Impact BIO-2: The proposed Project would not result in a substantial reduction or alteration of a state, federally, or locally designated natural habitat, special aquatic site, or plant community, including wetlands.

Construction

There are no special aquatic sites or other sensitive natural communities identified at the proposed project site that would be affected by construction of the proposed Project. The depth at the proposed project site (-45 feet mean lower low water [MLLW]) generally precludes the growth of eelgrass, and direct impacts on eelgrass and associated biological communities is not expected. However, in the unlikely event that eelgrass is found in the vicinity of any of the in-water construction areas, a plan would be developed to ensure that there would be no net loss of eelgrass habitat, consistent with the Southern California Eelgrass Mitigation Policy (SCEMP; NMFS 1991 as amended). Based on water quality monitoring data summarized in Impact WQ-1 in Section 3.15, Water Quality, Sediments, and Oceanography, turbidity would be limited to between a few hundred feet and 1,000 feet from dredging operations. The nearest eelgrass beds are more than 2.5 miles from the nearest (southwestern) edge of the proposed dredge and in-water construction area. Results from required water quality monitoring would also be used to document the extent of the dredge plume, and adaptive management measures (such as implementation of BMPs, or compliance with permit conditions such as use of a silt curtain) would be implemented to reduce impacts from turbidity and siltation. Therefore, effects from dredging/pile driving on eelgrass are not expected.

The nearest giant kelp beds to the proposed project site are near the Main Channel entrance (adjacent to USCG Base and Berth 72) and more than 1.8 miles from the YTI Terminal. Because the majority of giant kelp distribution in the Port Complex is located at the outer breakwaters and riprap structures in the Outer Harbors that face harbor entrances (SAIC 2010), giant kelp is not expected to occur in areas adjacent to the proposed Project.

The wetland closest to the YTI Terminal is the Anchorage Road Wetland, which is a mitigation site that has been contoured and enhanced with native plant species to mitigate for the loss of salt marsh habitat in the Northwest Slip (Weston Solutions 2013). This site is about 0.6 mile from the YTI Terminal and is connected to the Inner Harbor through an open culvert. Based on water quality monitoring data summarized in Impact WQ-1, water quality effects are expected to be transitory, lasting for less than one tide cycle following active dredging, and affecting an area generally within 1,000 feet of the activity, and often less than 300 feet. Turbidity may also be temporarily increased during installation of piles. However, the extent would generally be much less than the area affected by dredging, probably affecting a radius of no more than about 100 feet from the activity. Therefore, effects from dredging/pile driving on giant kelp and wetlands are not expected.

There are no mudflats or marshes near the proposed project site that would be affected by proposed project construction. Impacts on EFH during construction would be localized and temporary. Potential biological impacts from disposal of dredged sediments would

depend on the disposal method. Impacts from disposal at the LA-2 disposal site were evaluated during the site designation process (EPA 1988) and subsequently evaluated in consideration of higher maximum annual disposal volume (EPA and USACE 2005). Any temporary water quality impacts would be minimized by pre-dredge screening, water quality monitoring, and adaptive management and use of BMPs.

Operations

Essential Fish Habitat

Operation of proposed project facilities would have minimal effects on EFH. Although the proposed project vessels would add to the number of noise events (through more ship calls under CEQA and through larger ship size under both CEQA and NEPA), they would not substantially add to the overall underwater noise level. The addition of up to 44 ship calls per year under CEQA would not adversely affect FMP species present in the Harbor or in the vicinity of the YTI Terminal because the additional trips proposed would be infrequent. Schooling fish, such as sardines and anchovy, likely would ignore the ship movements and sound, or temporarily move out of the way. Other FMP species are rare in the Harbor, and vessel noise would result in only temporary effects on their distribution in the Port despite a projected additional 44 visits annually compared to the CEQA baseline. In recent history, the Port has witnessed an improvement in fish abundance including EFH for FMP species (MEC and Associates 2002; SAIC 2010) even though there has been increased vessel traffic in the Harbor. Therefore, it is unlikely that additional ship calls would affect FMP species, and additional ship calls would not adversely affect EFH for any species in the Harbor. Runoff from the new facilities would not substantially reduce or alter EFH in harbor waters because water quality standards for protection of marine life would not be exceeded (see Section 3.15, Water Quality, Sediments, and Oceanography).

Natural Habitat or Plant Community

As described above, no SEAs or natural plant communities are present that could be affected by operation of proposed project facilities. No wetlands or mudflats are present at the proposed project site, and those in other areas of the Harbor are not located in or near the channels that would be used by vessels transiting to or from the YTI Terminal. The nearest giant kelp beds to the proposed project site are near the Main Channel entrance (adjacent to the USCG Base and Berth 72) and are more than 1.8 miles from the YTI Terminal. There are no eelgrass beds near the YTI Terminal. Eelgrass beds are located in the Cabrillo Shallow Water Habitat and Pier 300 Shallow Water Habitat/Seaplane Lagoon, and would not be affected by operations at the proposed project site. Runoff from the re-paved areas of the proposed project site would be routed to existing onsite storm drains, treated via BMP devices, and discharged to the Main Channel. The runoff is not expected to adversely affect eelgrass beds present in the Cabrillo Shallow Water Habitat and Pier 300 Shallow Water Habitat/Seaplane Lagoon due to the large separation distance.

CEQA Impact Determination

There are no wetlands, giant kelp beds, or eelgrass beds in the vicinity of the YTI Terminal. Based on water quality monitoring data summarized in Impact WQ-1, water quality effects are expected to be transitory and are not expected to significantly affect any wetlands, kelp beds, or eelgrass beds. There are no mudflats or marshes near the

proposed project site that would be affected by proposed project construction. Impacts on EFH during construction would be localized and temporary and less than significant.

Activity at the terminal under the proposed Project would be greater than the CEQA baseline; however, operational activities on land and in the water would not substantially reduce or alter EFH for the reasons described above, and no significant impacts on EFH would occur under CEQA. No SEAs, natural plant communities, mudflats, eelgrass beds, kelp beds, or wetlands are present. Such impacts, therefore, would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Construction of the proposed Project would result in backlands improvements and in-water and over-water construction activities. Construction of the proposed Project is not expected to affect wetlands, eelgrass, or giant kelp, either from runoff or from turbidity during dredging. The nearest wetlands to the YTI Terminal are 0.6 mile away, the nearest giant kelp beds are at the entrance to the Main Channel, and the nearest eelgrass bed is about 1 mile from the YTI Terminal but separated from the proposed project site by Terminal Island. Based on water quality monitoring data summarized in Impact WQ-1, water quality effects are expected to be transitory and are not expected to significantly affect existing wetlands, kelp beds, or eelgrass beds. There are no mudflats or marshes near the proposed project site that would be affected by proposed project construction. Impacts on EFH during construction would be localized, temporary, and less than significant.

The number of vessel calls under the proposed Project would not increase from the NEPA baseline. However, the ships would be larger under the proposed Project and would accommodate more TEUs. However, operational activities on land and in the water would not substantially reduce or alter EFH for the reasons described above, and no significant impacts on EFH would occur under NEPA. No SEAs, natural plant communities, mudflats, eelgrass beds, or wetlands are present. Therefore, there would be no impact on these habitats or communities under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact BIO-3: The proposed Project would not interfere with wildlife movement/migration corridors.

Construction

No known terrestrial wildlife migration corridors are present at the proposed project site. The only defined migratory species in the Harbor are birds. California least tern, elegant tern, and Caspian tern are migratory bird species that nest at Pier 400; construction of the proposed Project would not interfere with the aerial migration of these species. Movement to and from foraging areas in the Harbor also would not be affected by proposed project construction activities. A number of other water birds that are present at least seasonally in the Harbor are migratory as well. Construction activities within the proposed project site would not block or interfere with migration or movement of any of these species covered under the MBTA because the work would be in a small portion of the harbor area where the birds occur, and the birds could easily fly around or over the work.

Fish species present in the Harbor would be subject to temporary acoustic and possibly water quality impacts during dredging and pile installation. Turbidity and effects related to possible resuspension of contaminants during dredging would be temporary and localized. Implementation of required water quality monitoring during dredging according to the requirements of the RWQCB, as well as implementation of standard dredging BMPs via adaptive management of the dredging, would minimize these impacts. Water quality conditions would quickly return to baseline once dredging and in-water construction are completed (Parish and Weiner 1987; USACE and LAHD 1992; Anchor Environmental 2003).

The sound pressure waves from pile driving could result in temporary avoidance of the construction areas and may cause mortality of fish in the Coastal Pelagics FMP. Pacific sanddab, the only fish species in the Pacific Groundfish FMP that is likely to occur commonly in the proposed project area, could also be affected. However, Coastal Pelagic species are much more abundant in the proposed project area than Pacific Groundfish (SAIC 2010). With implementation of MM BIO-1, the pile driving would initiate with a soft start, which would minimize potential impacts on fish, because they would likely leave the area. Avoidance of the area would be temporary, lasting for a few days at a time. There would be no physical barriers to movement, and the baseline condition for fish and wildlife access would be essentially unchanged. Due to the limited potential impact area and with the implementation of MM BIO-1, this is not considered a substantial disruption.

Overall, the Harbor and specifically the location of the proposed Project are subject to a high degree of ongoing commercial activity, including the movement of large vessels, and frequent maintenance dredging. Project-related construction vessel traffic to and from the Harbor (i.e., tugboats carrying dredged sediments) would not interfere with whale migrations along the coast. These vessels would represent a small proportion of the total Port-related commercial traffic in the area, and each vessel would have a low probability of encountering migrating whales during transit through coastal waters because these animals are generally sparsely distributed offshore and rarely enter the Port Complex (LAHD and USACE 2007).

Potential biological impacts from disposal of dredged sediments would depend on the disposal method. However, impacts from disposal at the LA-2 disposal site were evaluated during the site designation process (EPA 1988) and subsequently evaluated in consideration of higher maximum annual disposal volume (EPA and USACE 2005). Biological impacts due to construction and fill of the CDF were evaluated in the Final Supplemental EIS/Final Supplemental EIR for the Port of Los Angeles Channel Deepening Project (USACE and LAHD 2009). No interference with wildlife movement/migration corridors would occur as part of the proposed Project.

Operations

As discussed above, there are no known terrestrial or marine wildlife migration corridors present at the proposed project site. The only defined migratory species in the Harbor are birds, and operation of the proposed Project would not interfere with the aerial migration of these species. Up to four cranes would be replaced, and up to six cranes would be modified. Because there are already cranes at the terminal and throughout the Port Complex, and because birds are adept at avoiding obstructions, the modification/extension of up to six cranes is not anticipated to impede bird movements. Movement to and from foraging areas in the Harbor also would not be affected by operation of the proposed Project. Fish species present in the Harbor would be subject to temporary acoustic impacts due to ship movements into and out of the YTI terminal. No impacts would occur.

CEQA Impact Determination

Construction of the proposed Project would result in upland, in-water, and over-water construction activities. No known terrestrial wildlife migration corridors are present at the proposed project site. Several migratory bird species (California least tern, Caspian tern, and elegant tern) nest at Pier 400; however, construction activities within the proposed project site would not block or interfere with migration or movement of any of these species covered under the MBTA. Marine mammals and fish species near the proposed project site would be subject to temporary impacts during dredging and pile installation; however, implementation of standard dredging BMPs via adaptive management of the dredging would keep these impacts to a less-than-significant level. Sound pressure from pile driving could cause mortality of fish in the Coastal Pelagics FMP or Pacific sanddab, the only fish species in the Pacific Groundfish FMP that is likely to occur commonly in the proposed project area; however, with implementation of MM BIO-1, the pile driving would initiate with a soft start, which would minimize potential impacts on fish because they would likely leave the area. There would be no physical barriers to movement, and the baseline condition for fish and wildlife access would be essentially unchanged. Proposed Project-related construction vessel traffic to and from the Harbor (i.e., tugboats carrying dredged sediments) would not interfere with whale migrations along the coast. In addition, impacts from disposal at the LA-2 disposal site were evaluated during the site designation process (EPA 1988) and subsequently evaluated in consideration of higher maximum annual disposal volume (EPA and USACE 2005). Biological impacts due to construction and fill of the CDF, as well as expansion and fill of the Cabrillo shallow Water Habitat, were also previously evaluated (USACE and LAHD 2009). Overall, proposed project construction impacts on wildlife movement or migration corridors would be less than significant.

No barriers to wildlife passage would result from operation of the proposed Project. The type of operational activity that would occur within the Harbor (vessel traffic) would

increase to an additional 44 calls per year by 2015, but would not interfere with wildlife movement or migration within the Harbor. Therefore, there would be no impact under CEQA.

Mitigation Measures

MM BIO-1 would be applied as a condition of approval.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Construction of the proposed Project would result in upland, in-water, and over-water construction activities. No known terrestrial wildlife migration corridors are present at the proposed project site. Several migratory bird species (California least tern, Caspian tern, and elegant tern) nest at Pier 400; however, construction activities within the proposed project site would not block or interfere with migration or movement of any of these species or others covered under the MBTA. Marine mammals and fish species near the proposed project site would be subject to temporary impacts during dredging and pile installation; however, implementation of standard dredging BMPs via adaptive management of the dredging would keep these impacts to a less-than-significant level. Sound pressure from pile driving could cause mortality of fish in the Coastal Pelagics FMP or Pacific sanddab, the only fish species in the Pacific Groundfish FMP that is likely to occur commonly in the project area; however, with implementation of MM BIO-1, the pile driving would initiate with a soft start, which would minimize potential impacts on fish because they would likely leave the area. There would be no physical barriers to movement, and the baseline condition for fish and wildlife access would be essentially unchanged. Proposed project–related construction vessel traffic to and from the Harbor (i.e., tugboats carrying dredged sediments) would not interfere with whale migrations along the coast. In addition, impacts from disposal at the LA-2 disposal site were evaluated during the site designation process (EPA 1988) and subsequently evaluated in consideration of higher maximum annual disposal volume (EPA and USACE 2005). Biological impacts due to construction and fill of the CDF were also previously evaluated (USACE and LAHD 2009). Overall, proposed project construction impacts on wildlife movement or migration corridors would be less than significant.

The number of ship calls as part of the proposed Project would not exceed that of the NEPA baseline. No barriers to terrestrial or marine wildlife movement or migration would result from proposed project operations. Therefore, there would be no impact under NEPA.

Mitigation Measures

MM BIO-1 would be applied as a condition of approval.

Residual Impacts

Impacts would be less than significant.

Impact BIO-4: The proposed Project has the potential to introduce nonnative species into the Harbor that could substantially disrupt local biological communities.

Construction

Biological communities, the collection of species inhabiting a particular habitat or ecosystem, can potentially be disrupted by changes in environmental conditions that favor a different assemblage of species, or alter the dynamics among species that make up a biological community. The significance of changes in local conditions depends on the extent and duration of those changes, as well as the species or groups of species affected. Because the terrestrial portions of the proposed project site are largely developed, impacts on terrestrial biological communities would be limited. Plant communities on the backlands site consist of nonnative, ornamental plants. Construction-related impacts on marine biological communities are expected to be temporary, lasting through the construction period and for a short time thereafter. These include physical disturbance, underwater and overwater noise, and turbidity produced during dredging and pile driving.

Physical Disturbance

Where sheet and king piles are installed below the ordinary high water mark (OHWM) or high tide line, some physical disturbance of the underlying sediment would be inevitable, and a small conversion of habitat area (from soft bottom to hard substrate) would occur where piles are installed. Benthic habitat at these sites would be disturbed and individual invertebrates would be crushed. Sediment displaced during pile driving would bury surface organisms in the immediate vicinity (i.e., within an approximately one-foot diameter around each pile). Sediment recolonization is expected to occur following completion of construction, so this impact would be limited in both time and space and would not constitute a substantial disturbance of biological communities.

Under the proposed Project, approximately 2,600 linear feet of sheet and king piles would be installed for the dredging at Berths 214–220. Even though these piles would not rise very high above the seafloor, new hard substrate from these pilings could contribute to productivity in the Harbor, while pilings would also add structure in the water column that could be used by invertebrates and fishes. Prior to installation of in-water structures, eelgrass surveys would be conducted as required under the SCEMP. Although eelgrass is not likely to grow in the waters adjacent to the YTI Terminal (because the depth at the proposed construction site [-45 feet MLLW] is generally too deep for eelgrass growth), if it is found in the vicinity of any of the structures prior to construction, a plan would be developed to ensure that there would be no net loss of eelgrass habitat, consistent with the SCEMP.

As discussed above, special-status and other sensitive species in the Harbor that could use the water surface and shoreline and potentially be displaced or affected during construction include: the harbor seal and California sea lion, two endangered bird species (California least tern and Belding's savannah sparrow), one threatened bird species (western snowy plover), and 14 other bird species with state and/or federal protection or designation (see Table 3.3-3). Physical disturbances as a result of proposed project construction activities could temporarily disrupt foraging and other activities of these species; however, no substantial disruption to birds and wildlife would result from proposed project construction.

Direct impacts would occur on benthic organisms living within the sediments removed as part of the dredging activity, although these communities would quickly re-establish. Dredging results in mortality and injury of benthic invertebrates, and can cause temporary, adverse effects on benthic organisms and fish through impacts on water quality. Increased turbidity can adversely affect fish and other aquatic life by impairing vision and sense of smell, injuring gills, reducing water transparency, and covering sessile organisms. If anoxic sediments are disturbed, dissolved oxygen may also be reduced in the water column during dredging in the vicinity of the dredge operation. Water quality effects of dredging depend on the quality of sediments, currents, and type of dredge equipment used. Based on water quality monitoring data (summarized in Impact WQ-1), water quality effects are expected to be transitory, lasting for less than one tide cycle following active dredging, and covering an area generally within 1,000 feet of the activity, and often less than 300 feet.

Potential biological impacts from disposal of dredged sediments would depend on the disposal method. However, for all in-water disposal options, potential impacts include: water quality impacts from turbidity or contaminants, and smothering of resident fishes and invertebrates. Impacts from disposal at the LA-2 disposal site were evaluated during the site designation process (EPA 1988) and subsequently evaluated in consideration of higher maximum annual disposal volume (EPA and USACE 2005). Biological impacts due to construction and fill of the CDF were evaluated in the Final Supplemental EIS/Final Supplemental EIR for the Port of Los Angeles Channel Deepening Project (USACE and LAHD 2009). Any temporary water quality impacts would be minimized by pre-dredge screening, water quality monitoring, and adaptive management and use of BMPs.

Noise

As described under Impact BIO-2, pile driving creates underwater sound. Although this sound is not expected to cause injury to marine mammals, it may be of a sufficient volume and range to cause some acoustic impacts on fish. Acoustic impacts may include avoidance of the area, injury, or death. The extent of acoustic impacts would depend on the size and type of pilings used, and the pile-driving methods used. Impact pile driving may cause some fish mortality, particularly at the onset. Because smaller fish are more susceptible to acoustic injury, the species most likely to suffer mortality would be northern anchovy, Pacific sardine, and topsmelt. These species play important roles in the cycling of energy and nutrients in the Harbor, which has been designated as EFH for both northern anchovy and Pacific sardine. A peak sound level of 180 dB_{PEAK} has been identified as an injury threshold for small fish. Impact driving of steel sheet piles would create sound levels of about 195–205 dB_{PEAK} to a radius of up to 33 feet from each pile (ICF and Illingworth & Rodkin 2009). However, due to the limited potential impact area, this is not considered a substantial disruption. Additionally, with implementation of MM BIO-1, the pile driving would initiate with a soft start, which would minimize potential impacts on fish and are expected to avoid or leave the area.

Marine mammals, such as California sea lions and harbor seals, in the proposed project area at the time of construction could be temporarily disturbed by construction activities; however, any individuals present would likely avoid the work area. As described under Impact BIO-1, construction activities are not likely to interfere with marine mammal foraging because the disturbances would be temporary and limited to relatively small

areas off the YTI Terminal. These temporary behavioral effects on marine mammals would not measurably affect biological communities.

Light

Shade from construction vessels, and lights to support construction activities at night, would have temporary influences on the distribution of water column species. Certain zooplankton, fish, and squid are attracted to light. Other species may be attracted by concentrations of zooplankton and squid associated with night lighting. Conversely, daytime shading from construction vessels or localized turbidity during in-water construction may reduce algal productivity. Certain fish species are attracted to shade and cover that construction vessels provide, while vibration and activity may frighten certain species from the area. However, because construction activities and locations would be constantly changing, the effects would be similar to those that occur under normal Port operations with vessels constantly coming and going, and night lighting provided for Port operations. Therefore, no substantial disruption of biological communities would occur.

Invasive Species

Construction activities have the potential to introduce or redistribute invasive species if those species are present in the construction area and are disturbed by boat anchors or other equipment, or if in-water equipment or construction vessels bring those species into the proposed project area. However, the potential for introduction during construction activity would be essentially the same as under normal Port operations. The invasive green alga, *Caulerpa*, has the potential to spread by fragmentation. Prior to in-water work (including dredging), an underwater survey for the invasive alga *Caulerpa* would be conducted to ensure that no *Caulerpa* is present at the proposed project site. In the unlikely event that *Caulerpa* is detected during preconstruction surveys, an eradication program would be implemented per the requirements of the *Caulerpa* Control Protocol (NMFS and CDFG 2008). Construction would commence only after the area is certified to be free of this invasive species. Since 2002 *Caulerpa* surveys have been conducted in the Port Complex as a standard procedure prior to sediment-disturbing activities, and no *Caulerpa* has been found. Considering the *Caulerpa* survey requirement and absence of *Caulerpa* to date, and with implementation of the aforementioned *Caulerpa* protocols, the potential for proposed underwater construction activities to spread this species is unlikely.

Operations

Vessel traffic at the proposed project site would have minimal direct effects on marine organisms as a result of propeller wash (USACE and LAHD 1992). An increase in vessel traffic would adversely affect organisms in the water column, such as fish and plankton, as each vessel passes. The disturbance would cause fish to move at least a short distance and could damage some individual planktonic organisms through turbulence. Turbidity from the propeller wash could form a small plume behind each vessel. However, this would dissipate rapidly, similar to dredging impacts described in Impact WQ-1. Local biological communities would not be substantially disrupted, however, because the physical disturbance would occur in a small area, over a short duration (a few minutes at each location along the route from Angel's Gate to the proposed project site), and relatively infrequently (an additional 44 ship calls per year under CEQA). The Harbor historically has had a highly active environment with many ships, tugs, and work boats

moving along the channels. Additional vessel calls would not substantially change this environment.

Accidental spills of fuel or other vessel fluids during operation could occur as a result of a vessel collision, although the likelihood is considered remote because Port pilots are used to navigate the Harbor, vessels are required to travel in the Harbor at slow speeds, and tugs are used to slowly guide vessels to and from the berths. SPCC regulations require that LAHD have in place measures that help ensure oil spills do not occur, but, if they do, that there are protocols in place to contain the spill and neutralize the potential harmful impacts. An SPCC plan and an OSCP would be prepared that would be reviewed and approved by the RWQCB or the CDFW Office of Spill Prevention and Response, in consultation with other responsible agencies. The SPCC plan and OSCP would detail and implement spill prevention and control measures. However, container shipping vessels hold larger amounts of fuels than construction-related vessels. If an accident occurs and fuels are spilled into harbor or ocean waters, the fuel could harm biological resources, depending on the extent of the spill. Based on compliance with applicable regulations, and the nature and frequency of past spill events (see Section 3.9, Hazards and Hazardous Materials), impacts from accidental spills are highly unlikely.

Accidental spills of pollutants during terminal operations on land would be small because large quantities of such substances would not be used. Also, as discussed in Section 3.15, Water Quality, Sediments, and Oceanography, compliance with standard laws and requirements would ensure that terminal facilities include containment and other countermeasures that would prevent upland spills from reaching navigable waters. In addition, oil spill contingency plans are required to address spill cleanup measures after a spill has occurred. Furthermore, the site drainage system would include BMP devices to process site runoff prior to discharge (to the Main Channel) in accordance with SUSMP and LID requirements (see Section 3.15 for further information). These measures reduce the likelihood of upland spills from terminal operations.

Runoff of pollutants to the Harbor from the improved facilities on existing land would have negligible effects on marine biological communities (fish, benthos, plankton) because water quality standards for protection of marine life would not likely be exceeded (see Section 3.15). Such runoff could occur during dry weather and from storm events during the winter rainy season.

The amount of ballast water discharged into the Main Channel area and, thus, the potential for introduction of invasive exotic species (LAHD 1999) could increase because more and larger container ships would use the Port as a result of the proposed Project. These vessels would come primarily from outside the U.S. Exclusive Economic Zone (EEZ; extending 200 nautical miles from the coastline) and would be subject to regulations to minimize the introduction of nonnative species in ballast water as described in Section 3.3.3.7. In addition, container ships coming into the Port loaded would be taking on local water while unloading and discharging when reloading. This would also diminish the opportunity for discharge of nonnative species. Thus, it is unlikely but possible that ballast water discharges during cargo transfers in the Port would contain nonnative species.

Nonnative invertebrate species can also be introduced via vessel hulls. The California State Lands Commission (CSLC) has issued a report on commercial vessel fouling in California (CSLC 2006), recommending that the state legislature broaden the state

program and adopt regulations to prevent non-indigenous species introductions by ship fouling. Of particular concern is the introduction of the alga *Caulerpa taxifolia*. However, as discussed in Section 3.3.2.8, this species is most likely introduced from disposal of aquarium plants and water and is spread by fragmentation rather than from ship hulls or ballast water. Therefore, risk of introduction is associated with movement of plant fragments from infected to uninfected areas through activities such as dredging and/or anchoring. LAHD conducts surveys, consistent with the *Caulerpa* Control Protocol (NMFS and CDFG 2008) prior to every water-related construction project to verify that *Caulerpa* is not present. This species has not been detected in the Port Complex and has been eradicated from known localized areas of occurrence in Southern California. Therefore, there is little potential for additional vessel operations from the proposed Project to introduce these species.

Undaria pinnatifida, which was discovered in the Port Complex in 2000 (MEC and Associates 2002), and *Sargassum filicinum* (or *S. horneri*), discovered in October 2003 (MBC 2003), may be introduced and/or spread as a result of hull fouling or ballast water and, therefore, might have the potential to increase in the Harbor via vessels traveling between ports in the EEZ. Invertebrates that attach to vessel hulls could be introduced in a similar manner.

The proposed Project would result in an increase of an additional 44 vessels per year as early as 2015 (compared to 162 ship calls in the CEQA baseline year at the YTI Terminal), which represents an approximately two percent increase in vessel traffic compared to the total number of vessels entering the Port (approximately 2,180 vessels in 2012). Considering the small discharge of non-local water from container ships (see above) and the ballast water regulations currently in effect, the potential for introduction of additional exotic species via ballast water would be low from vessels entering from outside the EEZ. The potential for introduction of exotic species via vessel hulls would be increased in proportion to the increase in number of vessels. However, vessel hulls are generally coated with antifouling paints and cleaned at intervals to reduce the frictional drag from growths of organisms on the hull (Global Security 2007), which would reduce the potential for transport of exotic species. For these reasons, the proposed Project has a low potential to increase the introduction of nonnative species into the Harbor that could substantially disrupt local biological communities, but such effects could still occur.

CEQA Impact Determination

As described above, construction activities at the proposed project site, particularly dredging and pile driving, could cause short-term impacts on individuals (e.g., marine mammals and fishes, including those with designated EFH) in the immediate vicinity of construction activities. However, no substantial disruption of biological communities would result from proposed project construction, and impacts are considered less than significant. In addition, with implementation of MM BIO-1, the pile driving would initiate with a soft start, which would minimize impacts on fish and marine mammals near construction activities because they would likely leave the area.

Potential biological impacts from disposal of dredged sediments would depend on the disposal method. Impacts from disposal at the LA-2 disposal site were evaluated during the site designation process (EPA 1988) and subsequently evaluated in consideration of higher maximum annual disposal volume (EPA and USACE 2005). Biological impacts

due to construction and fill of the CDF were evaluated in the Final Supplemental EIS/Final Supplemental EIR for the Port of Los Angeles Channel Deepening Project (USACE and LAHD 2009). Any temporary water quality impacts would be minimized by pre-dredge screening, water quality monitoring, and adaptive management and use of BMPs.

Impacts from construction activities that have the potential to introduce or redistribute invasive species would be less than significant. All construction impacts that could substantially disrupt local biological communities resulting from the proposed Project would be less than significant.

A remote potential exists for an accidental vessel spill that could harm biological resources in the Harbor or ocean during operation of the proposed Project. Based on compliance with applicable regulations, and the nature and frequency of past spill events (see Section 3.9, Hazards and Hazardous Materials), impacts from accidental spills are considered less than significant. Upland spills from terminal operations are not expected to result in significant impacts for the reason discussed above. Although terminal operations would be more intensive than the CEQA baseline, proposed project operations would not substantially disrupt biological communities through runoff of contaminants in the vicinity of the proposed project site. Existing runoff and storm drain discharge controls, as well as conditions of all proposed Project-specific permits, would be implemented (see Section 3.15, Water Quality, Sediments, and Oceanography). The presence of new terminal structures (such as cranes) or increased vessel traffic would not substantially disrupt biological communities in the Harbor, for the reasons described above.

The proposed Project would increase the annual ship calls relative to the CEQA baseline. Operation of the proposed project facilities has the potential to result in the introduction of nonnative species into the Harbor via ballast water or vessel hulls and thus could substantially disrupt local biological communities. Impacts, therefore, would be significant under CEQA.

Mitigation Measures

MM BIO-1 would be applied as a condition of approval. No feasible mitigation is currently available to totally prevent introduction of invasive species via vessel hulls or ballast water due to the lack of a proven technology. The Ports of Los Angeles and Long Beach, California State Lands Commission, and University of Maryland are collaborating with American President Lines to test a shipboard ballast water treatment system designed to remove nonnative species from ballast water and prevent their introduction into harbor waters. New technologies are being explored, and, if methods become available in the future, they would be implemented as required at that time.

Residual Impacts

Although impacts from construction would be less than significant, operational impacts from the potential introduction of invasive species via vessel hulls and ballast water would be significant and unavoidable.

NEPA Impact Determination

Construction of the proposed Project would result in upland, in-water, and over-water construction activities. As described above, construction activities at the proposed

project site, particularly pile driving, could cause short-term impacts on aquatic species (e.g., marine mammals, invertebrates, and fish) in the immediate vicinity of pile driving. However, no substantial disruption of biological communities would result from proposed project construction, and impacts are considered less than significant. In addition, with implementation of MM BIO-1, the pile driving would initiate with a soft start, which would minimize impacts on fish and marine mammals near construction activities because they would leave the area.

Potential biological impacts from disposal of dredged sediments would depend on the disposal method. Impacts from disposal at the LA-2 disposal site were evaluated during the site designation process (EPA 1988) and subsequently evaluated in consideration of higher maximum annual disposal volume (EPA and USACE 2005). Biological impacts due to construction and fill of the CDF were evaluated in the Final Supplemental EIS/Final Supplemental EIR for the Port of Los Angeles Channel Deepening Project (USACE and LAHD 2009). Any temporary water quality impacts would be minimized by pre-dredge screening, water quality monitoring, and adaptive management and use of BMPs.

Construction activities that have the potential to introduce or redistribute invasive species would be less than significant. All construction impacts that could substantially disrupt local biological communities resulting from the proposed Project would be less than significant under NEPA.

The number of vessel calls under the proposed Project would not increase from the NEPA baseline. However, the larger ships under the proposed Project would accommodate more TEUs. A remote potential exists for an accidental vessel spill that could harm biological resources in the Harbor or ocean during proposed project operation. Based on compliance with applicable regulations, and the nature and frequency of past spill events (see Section 3.9, Hazards and Hazardous Materials), impacts from accidental spills are considered less than significant. Upland spills from terminal operations are not expected to result in significant impacts for the reason discussed previously. Although terminal operations would be more intensive than the NEPA baseline, proposed project operations would not substantially disrupt biological communities through runoff of contaminants in the vicinity of the proposed project site. Existing runoff and storm drain discharge controls, as well as conditions of all proposed Project-specific permits, would be implemented (see Section 3.15, Water Quality, Sediments, and Oceanography). The presence of new wharf structures (such as cranes) would not substantially disrupt biological communities in the Harbor, for the reasons described above. Such impacts, therefore, would be less than significant.

The proposed Project would not increase the annual ship calls relative to the NEPA baseline. Operation of the proposed project facilities would not result in the introduction of nonnative species into the Harbor via ballast water or vessel hulls and thus would not substantially disrupt local biological communities. Impacts, therefore, would not be significant under NEPA.

Mitigation Measures

MM BIO-1 would be applied as a condition of approval.

Residual Impacts

Impacts would be less than significant.

Impact BIO-5: The proposed Project would not result in a permanent loss of marine habitat.

Construction

No permanent loss of marine habitat would occur because the proposed Project would not result in fill being discharged into the marine environment that could eliminate marine habitat functions. Dredging would temporarily impact benthic habitat within the proposed project area. In addition, sheet pile and king piles would be installed to stabilize the wharf in the proposed project area. These structural elements would be installed within a few feet of the existing wharf. The sheet pile and king piles would protrude slightly above the seafloor and would provide hard substrate usable as habitat by marine organisms.

Operations

No permanent loss of marine habitat would occur due to the proposed Project. Sheet pile and king piles would be installed to stabilize the wharf in the proposed project area. These structural elements would be installed within a few feet of the existing wharf. The sheet pile and king piles would protrude slightly above the seafloor and would provide hard substrate usable as habitat by marine organisms.

CEQA Impact Determination

There would be no permanent loss of marine habitat. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

There would be no permanent loss of marine habitat. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Alternative 1 – No Project

Under Alternative 1, no further LAHD or federal action would occur. LAHD would not implement any terminal improvements. No new cranes would be added, no existing cranes would be modified, no dredging or backland improvements would occur, no crane rail extension would occur, and no expansion of the TICTF on-dock rail yard would occur.

Under the No Project Alternative, the existing YTI Terminal would continue to operate as an approximately 185-acre container terminal. Based on the throughput projections, terminal operations are expected to grow over time as throughput demands increase. Under Alternative 1, cargo ships that currently berth and load/unload at the terminal would continue to do so, but the number of ship calls would increase from 162 to 206 by 2015. Although this alternative would have the same number of vessel calls between 2015 and 2026 as the proposed Project, the size of the vessels would be smaller.

The No Project Alternative would not preclude future improvements to the proposed project site. However, any future changes in use or new improvements with the potential to significantly impact the environment would need to be analyzed in a separate environmental document.

Impact BIO-1: Alternative 1 would not cause a loss of individuals or habitat of a state- or federally listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or the loss of federally listed critical habitat.

Construction

Under Alternative 1, there would be no new construction at the proposed Project site. Therefore, there would be no loss of individuals or habitat of special-status species.

Operation

Under Alternative 1, the number of ship calls at the proposed project site would increase by 44 vessel calls annually in 2015, similar to the proposed Project, increasing the potential for vessel strikes with protected species (as described in Impact BIO-1 for the proposed Project). Thus, increased vessel traffic caused by this alternative may incrementally increase the potential for whale and sea turtle strikes.

CEQA Impact Determination

Because there would be no new construction at the proposed project site resulting in the loss of individuals or habitat of special-status species, no impacts would occur under CEQA. Although this alternative would result in an increase of vessels during operations, impacts related to whale and sea turtle strikes are considered less than significant under CEQA because of the low probability of vessel strikes.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Analysis of the No Project Alternative is required by CEQA. Analysis of this alternative is not required under NEPA. NEPA requires the analysis of a No Federal Action Alternative (Alternative 2 in this document).

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

Impact BIO-2: Alternative 1 would not result in a substantial reduction or alteration of a state, federally, or locally designated natural habitat, special aquatic site, or plant community, including wetlands.

Construction

Under Alternative 1, there would be no new construction at the proposed Project site. Therefore, there would be no loss or reduction of habitat or biological communities.

Operations

Operation of the YTI Terminal under Alternative 1 would not result in a substantial reduction or alteration of special habitat, site, or community, including wetlands. Operations at the terminal would continue, and there would be no disruption of EFH. There are no eelgrass or kelp beds in the vicinity of the YTI Terminal.

CEQA Impact Determination

Because there would be no new construction at the proposed project site resulting in the loss or reduction of biological communities, no impacts would occur under CEQA. Because operation of the YTI Terminal under Alternative 1 would not result in a substantial reduction or alteration of special habitat, site, or community, including wetlands, EFH, and eelgrass, no impacts would occur for operations under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

NEPA Impact Determination

Analysis of the No Project Alternative is required by CEQA. Analysis of this alternative is not required under NEPA. NEPA requires the analysis of a No Federal Action Alternative (Alternative 2 in this document).

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

Impact BIO-3: Alternative 1 would not interfere with wildlife movement/migration corridors.

Construction

Under Alternative 1, there would be no new construction at the proposed project site. Therefore, there would be no interference with wildlife movement or migration corridors.

Operations

There are no wildlife movement or migration corridors at the proposed project site. Thus, no interference with movement or migration as a result of ongoing operations at the proposed project site would occur. Migration by bird species that visit or pass through the area would not be affected by any changes in terminal operations because no new structures would be present that could impede their movement.

CEQA Impact Determination

Because there would be no new construction at the proposed project site resulting in interference with wildlife movement or migration corridors, no impacts would occur under CEQA. Because there are no true wildlife movement or migration corridors at the proposed project site, no impacts from ongoing operations would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

NEPA Impact Determination

Analysis of the No Project Alternative is required by CEQA. Analysis of this alternative is not required under NEPA. NEPA requires the analysis of a No Federal Action Alternative (Alternative 2 in this document).

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

Impact BIO-4: Alternative 1 has the potential to introduce nonnative species into the Harbor that could substantially disrupt local biological communities.

Construction

Under Alternative 1, there would be no new construction at the proposed project site. Therefore, there would be no potential to introduce nonnative species into the Harbor that could disrupt local biological communities.

Operations

Under Alternative 1, operations at the existing YTI Terminal would result in an increase of 44 annual vessel calls by 2015. Although there is no indication that terminal operations result in any disruption to biological communities, the potential for accidental spills would continue. However, compliance with applicable regulations would minimize the potential frequency and consequences of spills (see Section 3.9, Hazards and Hazardous Materials). As described under Impact BIO-4 for the proposed Project, given current ballast water regulations the potential for vessels entering from or going outside the EEZ to introduce additional exotic species via ballast water would be low. Under Alternative 1, there would be additional vessels operating at the YTI Terminal, and the potential for introducing exotic species via vessel hulls would be increased in proportion to the increased number of vessels. Vessel hulls are, however, generally coated with antifouling paints and cleaned at intervals to reduce the frictional drag from growths of organisms on the hull (Global Security 2007), which would reduce the potential for transporting exotic species. Therefore, Alternative 1 has a low potential to increase the introduction of nonnative species into the Harbor that could substantially disrupt local biological communities.

CEQA Impact Determination

Because there would be no construction under this alternative, there would not be any disruption of local biological communities related to construction under CEQA. Because this alternative would result in an increase of vessel calls to the site, the potential for accidental spills would continue. However, based on compliance with applicable regulations, and the nature and frequency of past spill events, impacts from accidental spills are considered less than significant under CEQA.

Although current ballast water regulations limit the potential for vessels to introduce exotic species via ballast water, the potential for introducing exotic species via vessel hulls would be increased in proportion to the increased number of vessels. Even though Alternative 1 has a low potential to increase the introduction of nonnative species into the Harbor that could substantially disrupt local biological communities, such effects could still occur and would be considered significant under CEQA.

Mitigation Measures

As described for the proposed Project, no feasible mitigation is currently available to totally prevent introduction of invasive species via vessel hulls or ballast water due to the lack of a proven technology. New technologies are being explored, and, if methods become available in the future, they would be implemented as required at that time.

Residual Impacts

Impacts from potential introduction of invasive species via vessel hulls and ballast water would be significant and unavoidable.

NEPA Impact Determination

Analysis of the No Project Alternative is required by CEQA. Analysis of this alternative is not required under NEPA. NEPA requires the analysis of a No Federal Action Alternative (Alternative 2 in this document).

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

Impact BIO-5: Alternative 1 would not result in a permanent loss of marine habitat.

Construction

Under Alternative 1, there would be no new construction at the proposed project site. Therefore, there would be no permanent loss of marine habitat.

Operations

Under Alternative 1, operations at the existing YTI Terminal would result in an increase of 44 annual vessel calls by 2015 over existing conditions. However, LAHD would not implement any terminal improvements that would result in the permanent loss of marine habitat.

CEQA Impact Determination

Because there would be no fill or other construction, there would not be any loss of marine habitat that would result in impacts under CEQA. Similarly, under operations, no terminal modifications would occur that would affect marine habitat. Therefore, no impacts on marine habitat would occur under CEQA for either construction or operation of Alternative 1.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

NEPA Impact Determination

Analysis of the No Project Alternative is required by CEQA. Analysis of this alternative is not required under NEPA. NEPA requires the analysis of a No Federal Action Alternative (Alternative 2 in this document).

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

Alternative 2 – No Federal Action

Alternative 2 is a NEPA-required no-action alternative for purposes of this Draft EIS/EIR. This alternative includes the activities that would occur absent a USACE permit and could include improvements that require a local permit. Absent a USACE permit, no dredging, dredged material disposal, in-water pile installation, or crane installation/extension would occur. Expansion of the TICTF and extension of the crane rail also would not occur. The No Federal Action alternative includes only backlands improvements consisting of slurry sealing; deep cold planing; asphalt concrete overlay; restriping; and removal, relocation, or modification of any underground conduits and pipes necessary to complete repairs. These activities would not change the capacity of the existing terminal.

The site would continue to operate as an approximately 185-acre container terminal where cargo containers are loaded to/from vessels, temporarily stored on backlands, and transferred to/from trucks or on-dock rail. Based on the throughput projections, the YTI Terminal is expected to reach its operating capacity of approximately 1,692,000 TEUs with 206 ship calls by 2026.

Impact BIO-1: Alternative 2 would not cause a loss of individuals or habitat of a state- or federally listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or the loss of federally listed critical habitat.

Construction

Under Alternative 2, only minor backland improvements would occur on the existing developed proposed project site. There would be no loss of individuals or habitat of special-status species.

Operation

Under Alternative 2, the number of ship calls at the proposed project site would increase by 44 by 2015 over existing conditions, increasing the potential for vessel strikes with protected species (as described in Impact BIO-1 for the proposed Project and Alternative 1). Thus, increased vessel traffic caused by this alternative may incrementally increase the potential for whale and sea turtle strikes.

CEQA Impact Determination

Because only minor backland improvements would occur on the existing developed proposed project site, there would be no loss of individuals or habitat of special-status species. No impacts would occur under CEQA. Although this alternative would result in an increase of vessels during operations, impacts related to whale and sea turtle strikes are considered less than significant under CEQA because of the low probability of vessel strikes.

Mitigation Measures

No mitigation is required. However, as described under the proposed Project, the potential for impacts under Alternative 2 would be further reduced with implementation of mitigation measure MM AQ-9.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Alternative 2 would include only backlands improvements consisting of slurry sealing; deep cold planing; asphalt concrete overlay; restriping; and removal, relocation, or modification of any underground conduits and pipes necessary to complete repairs. No construction of in-water or over-water features would occur under Alternative 2. The No Federal Action Alternative would involve the same construction activities as would occur under the NEPA baseline. Therefore, there would be no incremental difference between Alternative 2 and the NEPA baseline. As a consequence, Alternative 2 would result in no impact under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

Impact BIO-2: Alternative 2 would not result in a substantial reduction or alteration of a state, federally, or locally designated natural habitat, special aquatic site, or plant community, including wetlands.

Construction

Under Alternative 2, only minor backlands improvements would occur on the existing developed proposed project site. This alternative would not result in the loss of individuals or habitat.

Operations

Operation of the YTI Terminal under Alternative 2 would not result in a substantial reduction or alteration of special habitat, site, or community, including wetlands. Operations at the terminal would continue, and there would be no disruption of EFH. There are no eelgrass or kelp beds in the vicinity of the YTI Terminal.

CEQA Impact Determination

Because only minor backlands improvements would occur on the existing developed proposed project site, there would be no loss of individuals or habitat, and no impacts would occur under CEQA. Because operation of the YTI Terminal under Alternative 2 would not result in a substantial reduction or alteration of special habitat, special aquatic site, or plant community, including wetlands, EFH, and eelgrass, no impacts would occur for operations under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

NEPA Impact Determination

Alternative 2 would include only backlands improvements consisting of slurry sealing; deep cold planing; asphalt concrete overlay; restriping; and removal, relocation, or modification of any underground conduits and pipes necessary to complete repairs. No construction of in-water or over-water features would occur under Alternative 2. The No Federal Action Alternative would involve the same construction activities as would occur under the NEPA baseline. Therefore, there would be no incremental difference between Alternative 2 and the NEPA baseline. As a consequence, Alternative 2 would result in no impact under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

Impact BIO-3: Alternative 2 would not interfere with wildlife movement/migration corridors.

Construction

Under Alternative 2, only minor backlands improvements would occur on the existing developed proposed project site. This alternative would not interfere with wildlife movement or migration corridors.

Operations

There are no wildlife movement or migration corridors at the proposed project site. Thus, no interference with movement or migration as a result of ongoing operations at the proposed project site would occur. Migration by bird species that visit or pass through the area would not be affected by any changes in terminal operations because no new structures would be present that could impede their movement.

CEQA Impact Determination

Because only minor backlands improvements would occur on the existing developed proposed project site, and no significant wildlife corridors exist on or near the site, no impacts would occur under CEQA for construction.

Because there are no wildlife movement or migration corridors at the proposed project site, there would be no interference with movement or migration as a result of ongoing operations at the YTI Terminal under this alternative under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

NEPA Impact Determination

Alternative 2 would include only backlands improvements consisting of slurry sealing; deep cold planing; asphalt concrete overlay; restriping; and removal, relocation, or modification of any underground conduits and pipes necessary to complete repairs. No construction of in-water or over-water features would occur under Alternative 2. The No Federal Action Alternative would involve the same construction activities as would occur under the NEPA baseline. Therefore, there would be no incremental difference between Alternative 2 and the NEPA baseline. As a consequence, Alternative 2 would result in no impact under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

Impact BIO-4: Alternative 2 has the potential to introduce nonnative species into the Harbor that could substantially disrupt local biological communities.

Construction

Under Alternative 2, there would be no dredging or in-water construction, and only minor construction on the existing terminal. Therefore, there would not be any disruption of local biological communities, and no impacts would occur.

Operations

Under Alternative 2, operations at the existing YTI Terminal would result in an increase of 44 annual vessel calls by 2015, similar to the proposed Project and Alternative 1. Although there is no indication that terminal operations result in any disruption to biological communities, the potential for accidental spills would continue. However, compliance with applicable regulations would minimize the potential frequency and consequences of spills (see Section 3.9, Hazards and Hazardous Materials). As described under Impact BIO-4 for the proposed Project, given current ballast water regulations, the potential for vessels entering from or going outside the EEZ to introduce additional exotic species via ballast water would be low. Under Alternative 2, there would be additional vessels operating at the YTI Terminal, and the potential for introducing exotic species via vessel hulls would be increased in proportion to the increased number of vessels. Vessel hulls are, however, generally coated with antifouling paints and cleaned at intervals to reduce the frictional drag from growths of organisms on the hull, which would reduce the potential for transporting exotic species. Therefore, Alternative 2 has a

low potential to increase the introduction of nonnative species into the Harbor that could substantially disrupt local biological communities.

CEQA Impact Determination

Because there would be no dredging or in-water construction, and only minor construction on the existing terminal, there would not be any disruption of local biological communities related to construction, and no impacts would occur under CEQA.

Because Alternative 2 would result in an increase of 44 annual vessel calls by 2015 over existing conditions, the potential for accidental spills would continue. However, based on compliance with applicable regulations, and the nature and frequency of past spill events, impacts from accidental spills are considered less than significant under CEQA.

Although current ballast water regulations limit the potential for vessels to introduce exotic species via ballast water, the potential for introducing exotic species via vessel hulls would be increased in proportion to the increased number of vessels. Even though Alternative 2 has a low potential to increase the introduction of nonnative species into the Harbor that could substantially disrupt local biological communities, such effects could still occur and would be considered significant under CEQA.

Mitigation Measures

As described for the proposed Project, no feasible mitigation is currently available to totally prevent introduction of invasive species via vessel hulls or ballast water due to the lack of a proven technology. New technologies are being explored, and, if methods become available in the future, they would be implemented as required at that time.

Residual Impacts

Impacts from potential introduction of invasive species via vessel hulls and ballast water would be significant and unavoidable.

NEPA Impact Determination

Alternative 2 would include only backlands improvements consisting of slurry sealing; deep cold planing; asphalt concrete overlay; restriping; and removal, relocation, or modification of any underground conduits and pipes necessary to complete repairs. No construction of in-water or over-water features would occur under Alternative 2. The No Federal Action Alternative would involve the same construction activities as would occur under the NEPA baseline. Therefore, there would be no incremental difference between Alternative 2 and the NEPA baseline. As a consequence, Alternative 2 would result in no impact under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

Impact BIO-5: Alternative 2 would not result in a permanent loss of marine habitat.

Construction

Under Alternative 2, there would be no fill, and there would not be any loss of marine habitat. Therefore, there would be no permanent loss of marine habitat.

Operations

The No Federal Action alternative is limited to backlands improvements consisting of slurry sealing, deep cold planing, asphalt concrete overlay, restriping, and removal, relocation, or modification of any underground conduits and pipes necessary to complete repairs. There would be no permanent loss of marine habitat. Under Alternative 2, operations at the existing YTI Terminal would result in an increase of 44 annual vessel calls by 2015. However, LAHD would not implement any terminal improvements that would result in the permanent loss of marine habitat.

CEQA Impact Determination

Because there would be no fill, there would not be any loss of marine habitat; therefore, no construction impacts would occur under CEQA. Similarly, under operations, no terminal modifications would occur that would affect marine habitat. Therefore, no impacts on marine habitat would occur under CEQA for either construction or operation of Alternative 2.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

NEPA Impact Determination

Alternative 2 would include only backlands improvements consisting of slurry sealing; deep cold planing; asphalt concrete overlay; restriping; and removal, relocation, or modification of any underground conduits and pipes necessary to complete repairs. No construction of in-water or over-water features would occur under Alternative 2. The No Federal Action Alternative would involve the same construction activities as would occur under the NEPA baseline. Therefore, there would be no incremental difference between Alternative 2 and the NEPA baseline. As a consequence, Alternative 2 would result in no impact under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

Alternative 3 – Reduced Project: Improve Berths 217–220 Only

This alternative includes the same activities as the proposed Project except that it excludes dredging and pile driving at Berths 214–216. The following components of the proposed Project are unchanged under Alternative 3:

- modifying up to six existing cranes;
- replacing up to four existing non-operating cranes with four operating cranes;
- dredging 6,000 cy from a depth of -45 to -47 feet MLLW (with an additional 2 feet of overdredge depth, for a total depth of -49 feet MLLW), and installing 1,200 linear feet of sheet piles and king piles to support and stabilize the existing wharf structure at Berths 217–220;
- disposing of dredged material at LA-2, the Berths 243–245 CDF, or another approved upland location;
- extending the existing 100-foot gauge landside crane rail to Berths 217–220;
- performing ground repairs and maintenance activities in the backlands area; and
- expanding the TICTF on-dock rail by adding a single rail loading track.

Under this alternative, there would be three operating berths after construction, similar to the proposed Project, but Berths 214–216 would remain at their existing depth. This alternative would require less dredging (by approximately 21,000 cy) and pile driving and a shorter construction period than the proposed Project. Based on the throughput projections, this alternative is expected to operate at its capacity of approximately 1,913,000 TEUs by 2026, similar to the proposed Project. However, while the terminal could handle similar levels of cargo, the reduced project alternative would not achieve the same level of efficient operations as achieved by the proposed Project. This alternative would not accommodate the largest vessels (13,000 TEUs). The depth achieved at Berths 217–220 would only be capable of handling vessels up to 11,000 TEUs, requiring additional vessels to call on the terminal to meet future growth projections up to the capacity of the terminal. Therefore, under this alternative, 232 vessels would call on the terminal in 2020 and 2026, compared to 206 vessels for the proposed Project. Additionally, because of the higher number of annual vessel calls, this alternative would result in a maximum of five peak day ship calls (over a 24-hour period) compared to four for the proposed Project.

Impact BIO-1: Alternative 3 would not cause a loss of individuals or habitat of a state- or federally listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or the loss of federally listed critical habitat.

Construction

Construction of Alternative 3 is not likely to result in the loss of individuals or the reduction of existing federally listed critical habitat of a state or federally listed endangered, threatened, rare, protected, candidate, or sensitive species or a Species of Special Concern. In-water construction would cause localized activity, noise, and turbidity that could affect birds and marine mammals. Similar to the proposed Project, sheet and king pile driving is anticipated to result in disturbance (Level B harassment) to

marine mammals (particularly harbor seals and sea lions) in the vicinity of pile-driving operations.

As described under Impact BIO-1 for the proposed Project, sediments would be disposed of at the LA-2 ODMDS, placed at the Berths 243–245 CDF, or disposed of at another approved upland location, which have been previously permitted and approved. Any temporary water quality impacts would be minimized by pre-dredge screening, water quality monitoring, and adaptive management and use of BMPs.

Operations

Under Alternative 3, the number of ship calls at the YTI Terminal would increase from both the CEQA and NEPA baselines in 2020 and 2026, increasing the potential for vessel strikes with protected species (as described in Impact BIO-1 for the proposed Project).

CEQA Impact Determination

Because Alternative 3 involves in-water construction, it would cause localized activity, noise, and turbidity that could affect birds and marine mammals. However, these impacts would be temporary and limited to the waters in the vicinity of construction activities. Implementation of required water quality monitoring during dredging according to the requirements of the RWQCB, as well as standard dredging BMPs via adaptive management of the dredging, would keep these impacts to a less-than-significant level under CEQA. Impacts associated with sheet and king pile installation would be considered significant under CEQA. However, impacts on marine mammals resulting from noise associated with pile driving would be reduced to less-than-significant levels with implementation of MM BIO-1. This would ensure that marine mammals would be readily able to avoid pile-driving areas, and no injury to marine mammals from pile-driving sounds would be expected.

Impacts associated with disposal of sediments have been previously assessed and mitigated for disposal options for the LA-2 ODMDS, Berths 243–245 CDF, or another approved upland location. Any temporary water quality impacts would be minimized by pre-dredge screening, water quality monitoring, and adaptive management and use of BMPs. Thus, impacts would be less than significant.

Under Alternative 3, the number of ship calls at the YTI Terminal would increase by 70 from the CEQA baseline in 2020 and 2026. Although any increase in vessel traffic caused by Alternative 3 may incrementally increase the potential for whale or sea turtle strikes under CEQA, impacts are considered less than significant because of the low probability of vessel strikes.

Mitigation Measures

MM BIO-1 would be applied as a condition of approval to Alternative 3 during construction.

As described under the proposed Project, the potential for impacts under Alternative 3 would be reduced with implementation of MM AQ-9.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

As described above, construction of Alternative 3 is not likely to result in the loss of individuals or the reduction of existing federally listed critical habitat of a state- or federally listed endangered, threatened, rare, protected, candidate, or sensitive species or a Species of Special Concern. In-water construction would cause localized activity, noise, and turbidity that could affect birds and marine mammals. However, these impacts would be temporary and limited to the waters in the vicinity of construction activities. Implementation of required water quality monitoring during dredging and standard dredging BMPs would keep these impacts to a less-than-significant level under NEPA. Impacts associated with sheet and king pile installation would be considered significant under NEPA. However, impacts on marine mammals resulting from noise associated with pile driving would be reduced to less-than-significant levels with implementation of MM BIO-1. This would ensure that marine mammals would be readily able to avoid pile-driving areas, and no injury to marine mammals from pile-driving sounds would be expected.

As described under Impact BIO-1 for the proposed Project, sediments would be disposed of at the LA-2 ODMDS, placed at the Berths 243–245 CDF, or disposed of at another approved upland location, which have been previously permitted and approved. Any temporary water quality impacts would be minimized by pre-dredge screening, water quality monitoring, and adaptive management and use of BMPs.

Under Alternative 3, the number of ship calls at the YTI Terminal would increase by 26 vessels from the NEPA baseline in 2020 and 2026 to 232, increasing the potential for vessel collisions with protected species. Although any increase in vessel traffic caused by Alternative 3 may incrementally increase the potential for whale or sea turtle strikes under NEPA, impacts are considered less than significant because of the low probability of vessel strikes.

Mitigation Measures

MM BIO-1 would be applied as a condition of approval to Alternative 3 during construction.

As described under the proposed Project, the potential for impacts under Alternative 3 would be further reduced with implementation of MM AQ-9.

Residual Impacts

Impacts would be less than significant.

Impact BIO-2: Alternative 3 would not result in a substantial reduction or alteration of a state, federally, or locally designated natural habitat, special aquatic site, or plant community, including wetlands.

Construction

There are no special aquatic habitats or other sensitive natural communities identified at the YTI Terminal that would be affected by construction of Alternative 3. As described for the proposed Project, Alternative 3 would have no direct or indirect impact on eelgrass, kelp beds, wetlands, EFH, mudflats, or other associated biological communities.

Based on water quality monitoring data summarized in Impact WQ-1 for the proposed Project, water quality effects, including turbidity are expected to be transitory, lasting for less than one tide cycle following active dredging, and covering an area generally within 1,000 feet of the activity, and often less than 300 feet. However, the extent would generally be much less than the area affected by dredging, probably affecting a radius of no more than a few hundred feet from the activity. Results from required water quality monitoring would be used to document the extent of the dredge plume, and adaptive management measures (such as implementation of BMPs or compliance with permit conditions such as use of a silt curtain) would be implemented to reduce impacts from turbidity and siltation.

Similarly, potential impacts from disposal of dredged sediments would be similar to those described for the proposed Project, and have previously been permitted and evaluated. Any temporary water quality impacts would be minimized by pre-dredge screening, water quality monitoring, adaptive management, and use of BMPs. Fill would not be allowed at special aquatic sites, including wetlands, eelgrass beds, or kelp beds.

Operations

Operation of the YTI Terminal under Alternative 3 would not result in a substantial reduction or alteration of special habitat, special aquatic site, or plant community, including wetlands. Operations at the terminal would continue, and there would be no disruption of EFH.

CEQA Impact Determination

There are no sensitive natural communities or habitat in the vicinity of the YTI Terminal. Water quality effects are expected to be temporary and transitory, and are not expected to significantly affect biological communities. Thus, impacts during construction would be less than significant under CEQA.

As described above, operation of the YTI Terminal under Alternative 3 would not have the potential to result in a substantial reduction or alteration of special habitat, special aquatic site, or plant community. Impacts from operations would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Construction of Alternative 3 would result in backlands improvements, and in-water and over-water construction activities. Construction of Alternative 3 is not expected to affect eelgrass or kelp, either from runoff of from turbidity during dredging. The nearest kelp beds to the YTI Terminal are located at the entrance to the Main Channel, and the nearest eelgrass beds are at Inner Cabrillo Beach. Based on water quality monitoring data summarized in Impact WQ-1 in Section 3.15, Water Quality, Sediments, and Oceanography, water quality effects are expected to be transitory and are not expected to significantly affect kelp or eelgrass beds. There are no mudflats or marshes near the YTI

Terminal that would be affected by construction of Alternative 3. Impacts on EFH during construction would be localized and temporary and less than significant.

Operation of the YTI Terminal under Alternative 3 would not result in a substantial reduction or alteration of special habitat, special aquatic site, or plant community, including wetlands, relative to the NEPA baseline. Although operations at the terminal would continue and would exceed operations under the NEPA baseline, there would be no disruption of EFH. Impacts on EFH would be less than significant; no impacts on other natural habitats, special aquatic sites, or plant communities would occur.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact BIO-3: Alternative 3 would not interfere with wildlife movement/migration corridors.

Construction

Construction impacts associated with Alternative 3 would be similar to those described under Impact BIO-3 for the proposed Project. The only migratory species in the Harbor are birds. California least terns, elegant terns, and Caspian terns nested on Pier 400 in 2012, which is more than 2.5 miles from the YTI Terminal, and numerous other migratory bird species have been observed in the Port. Construction of Alternative 3 would not interfere with bird migration or movement of birds within the Port because the work would be in a small portion of the harbor area where the birds occur, and the birds could easily fly around or over the work.

Fish species present in the Harbor would be subject to temporary acoustic and possibly water quality impacts during dredging and pile installation. Turbidity and effects related to possible resuspension of contaminants during dredging would be temporary and localized. Implementation of required water quality monitoring during dredging and standard dredging BMPs would reduce these impacts. Water quality conditions would quickly return to baseline once dredging is completed (Parish and Weiner 1987; USACE and LAHD 1992; Anchor Environmental 2003).

The sound pressure waves from pile driving could result in temporary avoidance of the construction areas as well as cause mortality of fish in the Coastal Pelagics FMP or Pacific sanddab, the only species in the Pacific Groundfish FMP that is common in the proposed project area. With implementation of MM BIO-1, the pile driving would initiate with a soft start, which would minimize potential impacts on fish, because they would leave the area. Avoidance of the area would be temporary, lasting for a few days at a time. There would be no physical barriers to movement, and the baseline condition for fish and wildlife access would be essentially unchanged. Due to the limited potential impact area and with the implementation of MM BIO-1, this is not considered a substantial disruption.

Overall, the Harbor and, specifically, the channel adjacent to the YTI Terminal are subject to a high degree of ongoing commercial activity, including the movement of large

vessels, and frequent maintenance dredging. Project-related construction vessel traffic to and from the Harbor (i.e., tugboats carrying dredged sediments) would not interfere with whale migrations along the coast, because these vessels would represent a small proportion of the total Port-related commercial traffic in the area, and each vessel would have a low probability of encountering migrating whales during transit through coastal waters because these animals are generally sparsely distributed offshore and rarely enter the Port Complex (LAHD and USACE 2007).

Potential impacts from disposal of dredged sediments would depend on the disposal method. However, impacts from disposal at the LA-2 disposal site were evaluated during the site designation process (EPA 1988), and subsequently evaluated in consideration of higher maximum annual disposal volume (EPA and USACE 2005). Biological impacts due to construction and fill of the CDF were evaluated in the Final Supplemental EIS/Final Supplemental EIR for the Port of Los Angeles Channel Deepening Project (USACE and LAHD 2009). No interference with wildlife movement/migration corridors would occur as part of Alternative 3.

Operations

Under Alternative 3, up to four cranes would be replaced, and up to six cranes would be modified. There are no wildlife movement or migration corridors at the proposed project site that could be affected by operations. Because there are already cranes at the terminal and throughout the Port Complex, and because birds are adept at avoiding obstructions, the modification/extension of up to six cranes is not anticipated to impede bird movements.

CEQA Impact Determination

California least terns, elegant terns, and Caspian terns nested on Pier 400 in 2012, which is more than 2.5 miles from the Alternative 3 site; however, construction activities within the site would not block or interfere with migration or movement of any of these species covered under the MBTA. Fish species near the Alternative 3 site would be subject to temporary impacts during dredging and in-water construction; however, implementation of standard dredging BMPs via adaptive management of the dredging would keep these impacts to a less-than-significant level. Sound pressure from pile driving could cause mortality of fish in the Coastal Pelagics FMP or Pacific sanddab, the only fish species in the Pacific Groundfish FMP that is likely to occur commonly in the proposed project area; however, with implementation of MM BIO-1, the pile driving would initiate with a soft start, which would minimize potential impacts on fish because they would leave the area. There would be no physical barriers to movement, and the baseline condition for fish and wildlife access would be essentially unchanged. Construction vessel traffic to and from the Harbor (i.e., tugboats carrying dredged sediments) would not interfere with whale migrations along the coast. In addition, impacts from disposal at the LA-2 disposal site were evaluated during the site designation process (EPA 1988) and subsequently evaluated in consideration of higher maximum annual disposal volume (EPA and USACE 2005). Biological impacts due to construction and fill of the CDF, as well as expansion and fill of the Cabrillo Shallow Water Habitat, were also previously evaluated (USACE and LAHD 2009). Overall, construction of Alternative 3 would not result in significant impacts on wildlife movement or migration corridors.

Because there are no wildlife movement or migration corridors at the proposed project site, there would be no interference with movement or migration as a result of ongoing operations at the Alternative 3 site. No impacts would occur under CEQA.

Mitigation Measures

MM BIO-1 would be applied as a condition of approval.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Construction of Alternative 3 would result in upland, in-water, and over-water construction activities not included in the NEPA baseline. No known terrestrial wildlife migration corridors are present in the vicinity of the YTI Terminal. California least terns, elegant terns, and Caspian terns nested on Pier 400 in 2012, which is more than 2.5 miles from the Alternative 3 site; however, construction activities within the site would not block or interfere with migration or movement of any migratory species covered under the MBTA. Fish species near the YTI Terminal would be subject to temporary impacts during dredging and in-water construction; however, implementation of standard dredging BMPs would keep these impacts to a less-than-significant level. Sound pressure from pile driving could cause mortality of fish in the Coastal Pelagics FMP or Pacific sanddab, the only fish species in the Pacific Groundfish FMP that is likely to occur commonly in the proposed project area; however, with implementation of MM BIO-1, the pile driving would initiate with a soft start, which would minimize potential impacts on fish. There would be no physical barriers to movement, and the baseline condition for fish and wildlife access would be essentially unchanged. Construction vessel traffic to and from the Harbor (i.e., tugboats carrying dredged sediments) would not interfere with whale migrations along the coast. In addition, impacts from disposal at the LA-2 disposal site were evaluated during the site designation process (EPA 1988) and subsequently evaluated in consideration of higher maximum annual disposal volume (EPA and USACE 2005). Biological impacts due to construction and fill of the CDF, as well as expansion and fill of the Cabrillo Shallow Water Habitat, were also previously evaluated (USACE and LAHD 2009). Overall, construction of Alternative 3 would not result in significant impacts on wildlife movement or migration corridors.

Because there are no wildlife movement or migration corridors at the proposed project site, there would be no interference with movement or migration as a result of ongoing operations at the proposed project site. No operational impacts would occur under NEPA.

Mitigation Measures

MM BIO-1 would be applied as a condition of approval.

Residual Impacts

Impacts would be less than significant.

Impact BIO-4: Alternative 3 has the potential to introduce nonnative species into the Harbor that could substantially disrupt local biological communities.

Construction

Biological communities, the collection of species inhabiting a particular habitat or ecosystem, can potentially be disrupted by changes in environmental conditions that favor a different assemblage of species or alter the dynamics among species that make up a biological community. The significance of changes in local conditions depends on the extent and duration of those changes, as well as the species or groups of species affected. Because the terrestrial portions of the proposed project site are largely developed, impacts on terrestrial biological communities would be limited. Plant communities on the backlands site consist of nonnative, ornamental plants. Construction-related impacts on marine biological communities are expected to be temporary, lasting through the construction period and for a short time thereafter. These include physical disturbance, underwater and overwater noise, and turbidity produced during dredging and pile driving.

The types of impacts on biological communities would be similar to those described under Impact BIO-4 for the proposed Project, but the extent and duration of these impacts would be reduced. For example, disturbance to the seafloor would be reduced because only 1,200 linear feet of sheet and king piles would be installed, and only 6,000 cubic yards of sediment would be dredged.

Operations

Under Alternative 3, there would be additional vessels operating at the YTI Terminal compared to both the CEQA and NEPA baselines. Therefore, there would be an increased potential for the introduction of nonnative species. As described under Impact BIO-4 for the proposed Project, given current ballast water regulations, the potential for vessels entering from or going outside the EEZ to introduce additional exotic species via ballast water would be low. The potential for introducing exotic species via vessel hulls would be increased in proportion to the increased number of vessels. However, vessel hulls are generally coated with antifouling paints and cleaned at intervals to reduce the frictional drag from growths of organisms on the hull (Global Security 2007), which would reduce the potential for transport of exotic species.

CEQA Impact Determination

As described above, construction activities in the Alternative 3 site, particularly pile driving could cause short-term impacts on individuals (e.g., marine mammals and fishes, including those with designated EFH) in the immediate vicinity of pile driving. However, no substantial disruption of biological communities would result from construction of Alternative 3, and impacts are not considered significant. In addition, with implementation of MM BIO-1, the pile driving would initiate with a soft start, which would minimize impacts on fish and marine mammals near construction activities because they would leave the area. Furthermore, night construction, if required, would not result in significant impacts on biological resources.

Potential biological impacts from disposal of dredged sediments would depend on the disposal method. Impacts from disposal at the LA-2 disposal site were evaluated during the site designation process (EPA 1988) and subsequently evaluated in consideration of

higher maximum annual disposal volume (EPA and USACE 2005). Biological impacts due to construction and fill of the CDF were evaluated in the Final Supplemental EIS/Final Supplemental EIR for the Port of Los Angeles Channel Deepening Project (USACE and LAHD 2009). Any temporary water quality impacts would be minimized by pre-dredge screening, water quality monitoring, and adaptive management and use of BMPs.

Construction activities that have the potential to introduce or redistribute invasive species would be less than significant. All construction impacts that could substantially disrupt local biological communities resulting from Alternative 3 would be less than significant under CEQA.

Under Alternative 3, there would be 232 vessels operating at the YTI Terminal in 2026 compared with 162 under the CEQA baseline, thereby increasing the potential for the introduction of nonnative species. Although Alternative 3 has a low potential to increase the introduction of nonnative species into the Harbor that could substantially disrupt local biological communities, such effects could still occur. Impacts from the potential introduction of invasive species via vessel hulls and ballast water would be significant under CEQA.

Mitigation Measures

MM BIO-1 would be applied as a standard condition of approval for construction.

As described for the proposed Project, no feasible mitigation is currently available to totally prevent introduction of invasive species via vessel hulls or ballast water due to the lack of a proven technology. New technologies are being explored, and, if methods become available in the future, they would be implemented as required at that time.

Residual Impacts

Impacts from the potential introduction of invasive species via vessel hulls and ballast water would be significant and unavoidable.

NEPA Impact Determination

Construction of Alternative 3 would result in limited upland, in-water, and over-water construction activities not included in the NEPA baseline. As described above, construction activities at the YTI Terminal, particularly pile driving, could cause short-term impacts on individuals (e.g., marine mammals and fishes, including those with designated EFH) in the immediate vicinity of pile driving. However, no substantial disruption of biological communities would result from construction of Alternative 3, and impacts would be less than significant. In addition, with implementation of MM BIO-1, the pile driving would initiate with a soft start, which would minimize impacts on fish and marine mammals near construction activities.

Potential biological impacts from disposal of dredged sediments would depend on the disposal method. Impacts from disposal at the LA-2 disposal site were evaluated during the site designation process (EPA 1988), and subsequently evaluated in consideration of higher maximum annual disposal volume (EPA and USACE 2005). Biological impacts due to construction and fill of the CDF were evaluated in the Final Supplemental EIS/Final Supplemental EIR for the Port of Los Angeles Channel Deepening Project (USACE and LAHD 2009). Any temporary water quality impacts would be minimized

by pre-dredge screening, water quality monitoring, and adaptive management and use of BMPs.

Construction activities that have the potential to introduce or redistribute invasive species would be less than significant. All construction impacts that could substantially disrupt local biological communities resulting from Alternative 3 would be less than significant.

Under Alternative 3, there would be additional vessels operating at the YTI Terminal (232 in 2026 compared with 206 in the NEPA baseline); therefore, there would be an increased potential for introduction of nonnative species. Although Alternative 3 has a low potential to increase the introduction of nonnative species into the Harbor that could substantially disrupt local biological communities, such effects could still occur. Impacts from the potential introduction of invasive species via vessel hulls and ballast water would be significant under NEPA.

Mitigation Measures

MM BIO-1 would be applied as a condition of approval for construction.

As described for the proposed Project, no feasible mitigation is currently available to totally prevent introduction of invasive species via vessel hulls or ballast water due to the lack of a proven technology. New technologies are being explored, and, if methods become available in the future, they would be implemented as required at that time.

Residual Impacts

Impacts from the potential introduction of invasive species via vessel hulls and ballast water would be significant and unavoidable.

Impact BIO-5: Alternative 3 would not result in a permanent loss of marine habitat.

Construction

No loss of marine habitat would occur because Alternative 3 would not result in fill being discharged into the marine environment that could eliminate marine habitat functions. Although sheet and king piles would protrude slightly above the seafloor and immediately adjacent to the existing wharf infrastructure (see Figure 2-8), they would provide hard substrate usable as habitat by marine organisms.

Operation

Under Alternative 3, there would be three operating berths after construction, similar to the proposed Project, but Berths 214–216 would remain at their existing depth. Although sheet pile and king piles would be installed to stabilize the wharf in the proposed project area, these structural elements would be installed within a few feet of the existing wharf. The sheet pile and king piles would protrude slightly above the seafloor and would provide hard substrate usable as habitat by marine organisms. There would be no permanent loss of marine habitat under Alternative 3.

CEQA Impact Determination

There would be no loss of marine habitat during construction or operations. Therefore, impacts would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

There would be no loss of marine habitat during construction or operation. Therefore, impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

3.3.4.4 Summary of Impact Determinations

Table 3.3-8 summarizes the CEQA and NEPA impact determinations of the proposed Project and its alternatives related to Biological Resources, as described in the detailed discussions above. This table is meant to allow easy comparison among the potential impacts of the proposed Project and its alternatives with respect to this resource. Identified potential impacts may be based on federal, state, and City of Los Angeles significance criteria, LAHD criteria, and the scientific judgment of the report preparers.

For each impact threshold, the table describes the impact, notes the CEQA and NEPA impact determinations, describes any applicable mitigation measures, and notes the residual impacts (i.e., the impact remaining after mitigation). All impacts, whether significant or not, are included in this table. Note that impact descriptions for each of the alternatives are the same as for the proposed Project, unless otherwise noted.

Table 3.3-8: Summary Matrix of Potential Impacts and Mitigation Measures for Biological Resources Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts	Impact Determination	Mitigation Measures	Impacts after Mitigation
Proposed Project	**BIO-1**: The proposed Project would not cause a loss of individuals or habitat of a state- or federally listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or the loss of federally listed critical habitat.	CEQA: Significant NEPA: Significant	**MM BIO-1**: Avoid marine mammals, would be applied as a condition of approval. **MM AQ-9:** Vessel Speed Reduction Program (VSRP) would further reduce any potential for impact.	CEQA: Less than significant NEPA: Less than significant
	BIO-2: The proposed Project would not result in a substantial reduction or alteration of a state, federally, or locally designated natural habitat, special aquatic site, or plant community, including wetlands.	CEQA: Less than significant NEPA: Less than significant	No mitigation is required.	CEQA: Less than significant NEPA: Less than significant
	BIO-3: The proposed Project would not interfere with wildlife movement/migration corridors.	CEQA: Less than significant NEPA: Less than significant	**MM BIO-1** would be applied as a condition of approval.	CEQA: Less than significant NEPA: Less than significant
	BIO-4: The proposed Project has the potential to introduce nonnative species into the Harbor that could substantially disrupt local biological communities.	CEQA: Significant NEPA: Significant	**MM BIO-1** would be applied as a condition of approval for construction. No feasible mitigation is available to reduce impacts from operations to less than significant levels.	CEQA: Significant and unavoidable NEPA: Significant and unavoidable
	BIO-5: The proposed Project would not result in a permanent loss of marine habitat.	CEQA: Less than significant NEPA: Less than significant	No mitigation is required.	CEQA: Less than significant NEPA: Less than significant

Table 3.3-8: Summary Matrix of Potential Impacts and Mitigation Measures for Biological Resources Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts	Impact Determination	Mitigation Measures	Impacts after Mitigation
Alternative 1 – No Project	**BIO-1:** Alternative 1 would not cause a loss of individuals or habitat of a state- or federally listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or the loss of federally listed critical habitat.	CEQA: Less than significant	No mitigation is required.	CEQA: Less than significant
		NEPA: Not applicable	Mitigation not applicable	NEPA: Not applicable
	BIO-2: Alternative 1 would not result in a substantial reduction or alteration of a state, federally, or locally designated natural habitat, special aquatic site, or plant community, including wetlands.	CEQA: No impact	No mitigation is required.	CEQA: No impact
		NEPA: Not applicable	Mitigation not applicable	NEPA: Not applicable
	BIO-3: Alternative 1 would not interfere with wildlife movement/migration corridors.	CEQA: No impact	No mitigation is required.	CEQA: No impact
		NEPA: Not applicable	Mitigation not applicable	NEPA: Not applicable
	BIO-4: Alternative 1 has the potential to introduce nonnative species into the Harbor that could substantially disrupt local biological communities.	CEQA: Significant	No feasible mitigation is available to reduce impacts from operations to less than significant levels.	CEQA: Significant and unavoidable
		NEPA: Not applicable	Mitigation not applicable	NEPA: Not applicable
	BIO-5: Alternative 1 would not result in a permanent loss of marine habitat.	CEQA: No impact	No mitigation is required.	CEQA: No impact
		NEPA: Not applicable	Mitigation not applicable	NEPA: Not applicable

Table 3.3-8: Summary Matrix of Potential Impacts and Mitigation Measures for Biological Resources Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts	Impact Determination	Mitigation Measures	Impacts after Mitigation
Alternative 2 – No Federal Action	**BIO-1:** Alternative 2 would not cause a loss of individuals or habitat of a state- or federally listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or the loss of federally listed critical habitat.	CEQA: Less than significant NEPA: No impact	**MM AQ-9** would further reduce any potential for impact.	CEQA: Less than significant NEPA: No impact
	BIO-2: Alternative 2 would not result in a substantial reduction or alteration of a state, federally, or locally designated natural habitat, special aquatic site, or plant community, including wetlands.	CEQA: No impact NEPA: No impact	No mitigation is required.	CEQA: No impact NEPA: No impact
	BIO-3: Alternative 2 would not interfere with wildlife movement/migration corridors.	CEQA: No impact NEPA: No impact	No mitigation is required.	CEQA: No impact NEPA: No impact
	BIO-4: Alternative 2 has the potential to introduce nonnative species into the Harbor that could substantially disrupt local biological communities.	CEQA: Significant NEPA: No impact	No feasible mitigation is available.	CEQA: Significant and unavoidable NEPA: No impact
	BIO-5: Alternative 2 would not result in a permanent loss of marine habitat.	CEQA: No impact NEPA: No impact	No mitigation is required.	CEQA: No impact NEPA: No impact
Alternative 3 – Reduced Project: Improve Berths 217–220 Only	**BIO-1**: Alternative 3 would not cause a loss of individuals or habitat of a state- or federally listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or the loss of federally listed critical habitat.	CEQA: Significant NEPA: Significant	**MM BIO-1** would be applied as a condition of approval. **MM AQ-9** would further reduce any potential for impact	CEQA: Less than significant NEPA: Less than significant
	BIO-2: Alternative 3 would not result in a substantial reduction or alteration of a state, federally, or locally designated natural habitat, special aquatic site, or plant community, including wetlands.	CEQA: Less than significant NEPA: Less than significant	No mitigation is required.	CEQA: Less than significant NEPA: Less than significant

Table 3.3-8: Summary Matrix of Potential Impacts and Mitigation Measures for Biological Resources Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts	Impact Determination	Mitigation Measures	Impacts after Mitigation
	BIO-3: Alternative 3 would not interfere with wildlife movement/migration corridors.	CEQA: Less than significant NEPA: Less than significant	**MM BIO-1** would be applied as a condition of approval.	CEQA: Less than significant NEPA: Less than significant
	BIO-4: Alternative 3 has the potential to introduce nonnative species into the Harbor that could substantially disrupt local biological communities.	CEQA: Significant NEPA: Significant	**MM BIO-1** would be applied as a condition of approval for construction. No feasible mitigation is available to reduce operational impacts to less than significant levels	CEQA: Significant and unavoidable NEPA: Significant and unavoidable
	BIO-5: Alternative 3 would not result in a permanent loss of marine habitat.	CEQA: Less than significant NEPA: Less than significant	No mitigation is required.	CEQA: Less than significant NEPA: Less than significant

3.3.4.5 Mitigation Monitoring

Two mitigation measures—one for biology (MM BIO-1) and one for air quality (MM AQ-9)—are applicable to the proposed Project and Alternative 3. MM BIO-1 is a standard condition of approval applicable to the proposed Project and Alternative 3:

The monitoring program for mitigation measure MM AQ-9 can be found in Section 3.2.4.6 (in Section 3.2, Air Quality and Meteorology).

BIO-1: The proposed Project would not cause a loss of individuals or habitat of a state- or federally listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or the loss of federally listed critical habitat. **BIO-3:** The proposed Project would not interfere with wildlife movement/migration corridors. **BIO-4:** The proposed Project has the potential to introduce nonnative species into the Harbor that could substantially disrupt local biological communities.	
Mitigation Measure	**MM BIO-1:** Avoid marine mammals. Although it is expected that marine mammals will voluntarily move away from the area at the commencement of the vibratory or "soft start" of pile-driving activities, as a precautionary measure, pile-driving activities occurring as part of the sheet pile and king pile installation will include establishment of a safety zone, and the area surrounding the operations will be monitored for pinnipeds and cetaceans by a qualified marine mammal observer. A 300-meter-radius safety zone will be established around the pile-driving site and monitored for marine mammals. The pile-driving site will move with each new pile, therefore the 300-meter safety zone will move accordingly. Prior to commencement of pile driving, observers on shore or by boat will survey the safety zone to ensure that no marine mammals are seen within the zone before pile driving of a pile segment begins. If a marine mammal is observed within 10 meters of pile driving operations, pile driving will be delayed until the marine mammal moves out of the 10-meter zone. If a marine mammal in the 300-meter safety zone is observed, but more than 10 meters away, the contractor will wait at least 15 minutes to commence pile driving. If the marine mammal has not left the 300-meter safety zone after 15 minutes, pile driving can commence with a "soft start." This 15-minute criterion is based on a study indicating that pinnipeds dive for a mean time of 0.50 to 3.33 minutes; the 15-minute delay will allow a more than sufficient period of observation to be reasonably sure the animal has left the proposed project vicinity. If marine mammals enter the safety zone after pile driving of a segment has begun, pile driving will continue. The qualified observer will monitor and record the species and number of individuals observed, and make note of their behavior patterns. If the animal appears distressed, and if it is operationally safe to do so, pile driving will cease until the animal leaves the area. Prior to the initiation of each new pile-driving episode, the area will again be thoroughly surveyed by the observer.
Timing	During construction.
Methodology	LAHD will include MM BIO-1 in the contract specifications for construction. LAHD will monitor implementation of mitigation measures during construction.
Responsible Parties	LAHD.
Residual Impacts	Less than significant.

3.3.5 Significant Unavoidable Impacts

For the proposed Project and Alternatives 1 through 3, Impact BIO-4—introduction of nonnative species that substantially disrupt local biological communities—potential impacts would remain significant and unavoidable because no feasible mitigation is currently available.