Section 3.2
Biological Resources

SECTION SUMMARY

This section identifies the biological resources at the Project site and analyzes the effects of the Proposed Project on biological resources at, and adjacent to, the Project site. The Project site is described in Section 2.5 of Chapter 2, Project Description, and presented on Figure 2-3. The primary features of the Proposed Project that could affect biological resources include wharf repairs, piling removal and driving, and vessel operations.

Section 3.2, Biological Resources, covers the following:

- The environmental setting of the Proposed Project, including the terrestrial and aquatic habitats and biological communities;
- Local, state, and federal regulations and policies regarding biological resources that are applicable to the Proposed Project;
- The methodology used to determine whether the Proposed Project adversely affect biological resources at the Project site or in the Project area;
- Vessel collisions with marine mammals and sea turtles;
- Essential Fish Habitat (EFH) and managed species in the Proposed Project vicinity;
- An impact analysis of the Proposed Project; and
- Mitigation measures proposed to reduce significant impacts.

The Initial Study/Notice of Preparation (IS/NOP) for the Proposed Project concluded that impacts related to CEQA Guidelines Appendix G checklist issues IV b) through f) would be either less than significant or there would be no impact. Accordingly, the analysis in this Draft EIR considers only checklist issue IV "a), *Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?"*

Key Points of Section 3.2

The Proposed Project would include repairing the existing wharf at Berth 191 and driving piles to improve the vessel fendering system. Although impact driving of piles is not expected to result in a Level A injury or Level B harassment to seals or sea lions in the general vicinity of the pile driving activity, or to affect managed fish species adversely, the possibility exists of a significant impact. Accordingly, Mitigation Measure (MM) BIO-1 would be made a part of the Proposed Project and would reduce potential impacts to less than significant.

MM BIO-1: Protect 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 will include establishment of a safety zone, by a qualified marine mammal professional, and the area surrounding the operations (including the safety zones) will be monitored for marine mammals by a qualified marine mammal observer[1]. The pile driving site will move with each new pile; therefore, the safety zones will move accordingly.

Impacts from construction activities that have the potential to introduce or redistribute invasive species would be less than significant because the construction area would be surveyed to determine the presence of *Caulerpa* before in-water construction activities. The Proposed Project and the two build alternatives (Reduced Project Alternative [Alternative 2] and Product Import Terminal Alternative [Alternative 3]) would increase the annual ship calls by no more than 24 vessels relative to the CEQA baseline of 1,863 vessel calls port-wide. Accordingly, compliance with the vessel speed reduction program would limit the potential for vessel collisions with marine mammals and sea turtles, and impacts would be less than significant.

[1] Marine mammal professional qualifications shall be identified based on criteria established by the Los Angeles Harbor Department (LAHD) during the construction bid specification process. Upon selection as part of the construction award winning team, the qualified marine mammal professional shall develop site specific pile-driving safety zone requirements, which shall follow the National Oceanic and Atmospheric Administration (NOAA) Fisheries Technical Guidance Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (NOAA Fisheries 2018) in consultation with the Acoustic Threshold White paper prepared for this purpose by LAHD (LAHD 2017a). Final pile-driving safety zone requirements developed by the selected marine mammal professional shall be submitted to LAHD Construction and Environmental Management Divisions prior to commencement of pile-driving.

3.2.1 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 near the Proposed Project site. The primary features of the Proposed Project and alternatives that could affect these resources are associated with in-water construction and operation (described in Section 2.5). Construction would include repairing the existing wharf by replacing damaged wharf deck paving, replacing up to 10 timber pilings, repairing up to 30 concrete piles, and repairing various timber structural members. Operation of the Proposed Project would include the arrival and departure of up to 24 oceangoing dry bulk vessels per year.

3.2.2 Environmental Setting

The Port of Los Angeles (Port) is part of the larger Los Angeles-Long Beach Port Complex in San Pedro Bay. The Port consists of approximately 7,500 acres of land and water, approximately 3,200 acres of which is open-water habitat. In addition to extensive industrial cargo facilities, the Port supports commercial water-related activities such as cruise ships, sportfishing and commercial fishing, recreational boating, and maritime support facilities.

The Port has been an active port for over 100 years and has undergone significant physical changes associated with its development, including the construction of the San Pedro and Middle Breakwaters, deepening of navigational channels and basins, and creation of new land, via dredging and filling former marshes and open-water areas, to support cargo terminals and other Port facilities. These changes have resulted in basin, channel, dock/piling, riprap, and open-water habitats. The Port also includes isolated pockets of salt and freshwater wetlands, mudflats, and sandy beach. The Port is in a highly urbanized setting, surrounded by industrial, commercial, and residential areas.

Harbor waters are subjected to continuous vessel traffic and periodic construction activities such as wharf construction, dredging, and filling. Commercial vessels and recreational boats produce high levels of underwater noise. For example, ambient noise in San Francisco Bay/Oakland Harbor has been estimated at 120 to 155 dB_{PEAK} (the peak sound pressure level in decibels) (ICF and Illingworth &Rodkin 2009), and a baseline hydroacoustic study in Cerritos Channel (connecting 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 ocean along the central California coast has been estimated at 74 to 100 dB_{PEAK}.

Biological resources in the Port have been described in several environmental documents, including the Los Angeles and Long Beach Deep Draft Navigation Improvement Environmental Impact Statement (EIS)/ Environmental Impact Report (EIR) (United States Army Corps of Engineers (USACE) and LAHD 1992), the Pier 400 Container Terminal and Transportation Corridor Project (USACE and LAHD 1999), and regular biological surveys (MEC 1988; MEC and Associates 2002; SAIC 2010; MBC 2016; Wood E&IS 2021). The 2000 study (MEC and Associates 2002) was the first survey that specifically discussed non-native taxa that have been introduced over time into the Port.

Over the years, the Ports of Los Angeles and Long Beach have worked with the state and federal resource agencies to conduct periodic biological surveys within the Port Complex to assess biological conditions of the various harbor habitats; the most recent evaluation

was conducted in 2018-2019 (Wood E&IS 2021). Based on those assessments, the resource agencies and the Ports determine marine habitat values and evaluate the potential impacts of Port projects on marine resources. The periodic surveys have documented an increase in habitat value over time and have supported a division of the Port Complex into Inner Harbor, Outer Harbor, and Outer Harbor Deep and Shallow habitats. Although it is still valuable habitat, the Inner Harbor is considered by the resource agencies to have lower habitat value to wildlife than the Outer Harbor habitats, primarily because of restricted water circulation and legacy pollution. This area is designated as "Constrained Harbor Habitat" in the Port's habitat mitigation bank enabling instrument (LAHD 2017b). In the Port of Los Angeles, the Inner Harbor includes much of the harbor north of the Vincent Thomas Bridge, including the East Basin, where the Proposed Project is located, the East Channel, and a few small blind slips along the Main Channel.

Marine resources along the California coast, and within the Port fluctuate on both a seasonal basis due to changes in factors such as water temperature and rainfall, and on a longer-term basis due to large-scale oceanographic processes. The most notable trends affecting biological communities within the Port Complex are the long-term climate patterns, such as "El Niño" and "La Niña" measured by the Oceanic Niño Index (ONI), and the more recently recognized phenomenon of marine heatwaves that can evolve and persist in the Northeastern Pacific Ocean (Jacox et al. 2019). Substantial improvements in water quality in the Port occurred following enactment of the Clean Water Act of 1972, as documented by a series of environmental studies known as the Harbor's Environmental Project performed by the University of Southern California (USC) in the 1970s and mid-1980s. Further improvements in marine resources have occurred since that time (MEC and Associates 2002; SAIC 2010; MBC 2016; Wood E&IS 2021), although changes have been more gradual than in the previous period. The types of habitats (shallow and deep pelagic, soft-bottom benthic, and riprap and piling) in the Port, and most of the species associated with those habitats, have remained fairly stable over time, as described below. Perhaps the most significant recent changes have been the expansion of eelgrass (*Zostera marina*) habitat at Inner Cabrillo Beach and the Pier 300 Shallow Water Habitat/Seaplane Lagoon, and the expansion of giant kelp beds along the Outer Harbor breakwaters and piers (MEC and Associates 2002; SAIC 2010; MBC 2016; Wood E&IS 2021).

Information on sensitive plant and animal species that could potentially occur in the Project area is available from the California Natural Diversity Database (CNDDB) and California Native Plant Society (CNPS) (San Pedro and Long Beach Quadrangles). The CNDDB includes 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]).

Based on the information from the sources summarized above, as well as the results from a site visit conducted in late 2020, data from the biological surveys conducted in 2000 through 2018, particularly the 2018 Biological Surveys (Wood E&IS 2021), accurately reflect current environmental conditions at the Project site because those conditions have remained reasonably stable. Site-specific data from the 2018 surveys' sampling locations (stations) adjacent to Berths 191-194 are used to characterize the biological communities. Data from biological surveys prior to 2000 are used for context.

3.2.3 Terrestrial Habitats

Much of the Project site and most adjacent areas are developed and paved, although the paving on site is substantially deteriorated. Accordingly, very little vegetation or terrestrial habitat exists on site and there is little or no suitable habitat for native animal species. Vegetation on the site consists entirely of isolated stands of introduced ornamentals (palms, eucalyptus, and bougainvillea) that have escaped cultivation, and grasses (non-native), weeds, and shrubs (e.g., tarweeds, dandelions, castor bean) growing from unpaved areas and gaps in the deteriorated pavement and barriers.

The majority of terrestrial wildlife species that have the potential to occur within the area are adapted to human-disturbed landscapes. These include various common insects; native lizards; and a variety of native and non-native small mammals, including Norway rat (*Rattus norvegicus*), black rat (*R. rattus*), house mouse (*Mus musculus*), Virginia opossum (*Didelphis virginiana*), and feral cats (*Felis catus*) (LAHD 2012). Bats are known to occur in the Port, where they roost under bridges; building crevices and eaves are also potential habitats for bats. Yuma and Mexican free-tailed bats (*Myotis yumanensis* and *Tadarida brasiliensis*, respectively) are the most likely to occur (Port of Long Beach and Caltrans 2010).

A number of upland bird species may be found at and near the Project site. Rock pigeon (*Columba livia*) and barn swallow (*Hirundo rustica*) were the most abundant upland bird species in the 2018 Biological Surveys (Wood E&IS 2021); other abundant species included American crow (*Corvus brachyrynchos*), European starling (*Sturnus vulgaris*), and common raven (*Corax corax*). These common species are adapted to urban and disturbed habitats. Rock pigeon and European starling are non-native species.

Several of the above-mentioned bird species may nest at the site. For example, the 2013 and 2018 biological surveys (MBC 2016, Wood E&IS 2021) observed nesting in various parts of the Port by rock pigeons, house sparrows, American crows, cliff swallows, and barn swallows. Swallows, sparrows, and rock pigeons often nest under eaves and dock structures, and hummingbirds, starlings, warblers, finches, and house sparrows commonly nest in shrubs and palm trees (LAHD 2012); all of these features are present at or near the Proposed Project site.

Several raptors occur in the Port, including American kestrel (*Falco sparverius*), Cooper's hawk (*Accipiter cooperii*), red-tailed hawk (*Buteo jamaicensis*), peregrine falcon (*Falco peregrinus*), and osprey (*Pandion haliaetus*) (MBC 2016, Wood E&IS 2021). In the Port area, American kestrels typically nest in cavities of structures or under dead palm tree leaves (Port of Long Beach and Caltrans 2010). Peregrine falcons have been reported as nesting on several bridges in Los Angeles-Long Beach Harbor (MEC and Associates 2002, SAIC 2010). Hawks and ospreys have generally not been observed nesting in the Port, the only observation being of an osprey nesting (although not near the Project site) during the 2018 Biological Surveys (Wood E&IS 2021).

3.2.4 Marine Habitats

Benthic Environments

Soft-Bottom Habitats

Benthic organisms are those associated with seafloor sediments; animals 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. Fish primarily associated with

the soft-bottom habitat are known as demersal fish. 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 benthic organisms in areas that were once largely devoid of marine life. Currently at least 369 species of infaunal invertebrates and 121 species of epifaunal invertebrates occur in the Port Complex (Wood E&IS 2021).

As summarized in a Harbor Environmental Projects report (HEP, 1980) and Wood E&IS (2021), sampling studies in the 1950s through the 1970s showed that the pollution-tolerant polychaetes *Cossura candida* and *Tharyx parvus* were the most abundant benthic infaunal organism. An assessment of dominant species in the Port Complex in 2000 (MEC and Associates 2002) found that *T. parvus* was no longer among the ten most abundant species, although a number of other pollution-tolerant species were still abundant at Inner Harbor stations. That study's data indicated a gradient of increasing environmental stress (enrichment/contamination) from the Outer Harbor to the Inner Harbor and from basins to slips. The 2008 Biological Surveys (SAIC 2010) documented relatively similar abundances between the Inner Harbor and Outer Harbor, but found that abundances at Outer Harbor shallow-water stations were markedly higher than those in deeper water. Furthermore, the benthic assemblages at Inner Harbor stations were distinctly different from those at Outer Harbor stations, being characterized by higher proportions of pollution-tolerant species. The 2013 Biological Surveys (MBC 2016) found that, for the first time, a pollution-sensitive crustacean, the amphipod *Amphideutopus oculatus*, was the most abundant benthic infaunal species in the Port Complex, which was also the case in the 2018 Biological Surveys (Wood E&IS 2021). Over time, therefore, benthic assemblages throughout the Port Complex have indicated a trend towards increasingly healthy environmental conditions.

At the Project site, the benthic habitat consists of the sediments at the bottom of the East Basin, which the most recent harbor-wide biological surveys (Wood E&IS 2021) characterized as sandy silt. The benthic community at station LA6, in the East Basin Channel just west of Berth 191, was made up of 57 distinct species or higher taxa, dominated by polychaete worms, crustaceans (mostly amphipods), and molluscs (small clams and snails). The most abundant species were the polychaetes *Cossura* sp. A, *Mediomastus* sp., and *Euchone limnicola*, the crustacean *Eochelidium* sp.A, and the Asian clam *Theora lubrica* (a non-native species). The biomass of infauna at Station LA6 in 2018 was 0.9 g/m^2 in spring and 4.7 g/m^2 in summer (Wood E&IS 2021).

Crustaceans (shrimp and crabs) constitute most of the epifaunal invertebrate species and over 90 percent of the total abundance in the Port Complex. The 2018 Biological Surveys collected 960 organisms belonging to 22 species at Station LA6 (Wood E&IS 2021). Target shrimp (*Sicyonia penicillata*), blackspot and Alaska bay shrimp (*Crangon* spp.), tunicates (e.g., *Ciona* sp.), and swimming crabs (*Portunus xanthusi*) were the most abundant species.

Two species of demersal fish, white croaker (*Genyonemus lineatus*) and queenfish (*Seriphus politus*), have dominated the demersal fish assemblage in the Port Complex since sampling began in the 1970s (MEC and Associates 2002; SAIC 2010; MBC 2016; Wood E&IS 2021). Other consistently abundant species include white surfperch (*Phanerodon furcatus*), California tonguefish (*Symphurus atricauda*), speckled sanddab (*Citharichthys stigmaeus*), barred sand bass (*Paralabrax nebulifer*), staghorn sculpin (*Leptocottus armatus*), California halibut (*Paralichthys californicus*), specklefin midshipman (*Porichthys myriaster*), and shiner surfperch. More recently, California

lizardfish (*Synodus lucioceps*) has been among the most abundant demersal species. Several recreationally important species, such as California halibut and barred sand bass, are common in the Port Complex.

The 2018 Biological Surveys collected 59 species and over 28,000 individuals of demersal fish in the Port Complex. However, relatively few fish were collected in the Project area: in four sampling events, 14 species and 168 fish were collected at Station LA6 (Wood E&IS 2021). The most abundant demersal species collected by otter trawl were queenfish, barred sand bass, and white croaker.

Hard Substrate Habitats

Hard surfaces in the waters of the Los Angeles Harbor include rock dikes and riprap (shoreline protection composed of boulders, cobbles, and recycled concrete); concrete, steel, and timber pilings; sheet piling; and concrete or timber seawalls. Wharf structures and piers, with their thousands of pilings and miles of shoreline protection, form extensive hard substratum supporting a rich community of marine organisms. Given the prevalence of riprap in the harbor, the invertebrate and algal communities inhabiting these hard surfaces are known in biological surveys of the Port Complex as the "riprap biota." The shoreline of the Project site consists entirely of riprap and wharf pilings.

Riprap and piling biota were sampled throughout the Port Complex, including in the Inner Harbor, in the 2018 Biological Surveys (Wood E&IS 2021). On these substrates, the upper intertidal zone is typically characterized by barnacles and bare rock and the mid-lower intertidal and the subtidal zones by a diverse assemblage of marine organisms, including mussels, red algae, and many species that cannot withstand the harsh conditions of the upper intertidal, such as green and brown algae, amphipods, sabellid and spirorbid worms, bryozoans, brittle stars, urchins, and tunicates. The piling community at the East Basin station (LAPP4) was dominated by tunicates, bryozoans, sponges, and brown algae. Inner Harbor riprap was largely bare rock; the dominant organisms were bryozoans, anemones, sponges, barnacles, the green alga *Ulva*, coralline red algae, and two species of the brown alga *Sargassum*. Although giant kelp (*Macrocystis pyrifera*) is common on the riprap in the Outer Harbor, it is not found in the Inner Harbor, including the East Basin (Wood E&IS 2021).

Water Column Habitats

The water column habitat at the Project site consists of the waters of the East Basin. 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. Unlike the benthic and riprap biota, the organisms that live in the water column tend to swim or be carried by currents over wide areas. Accordingly, the abundance and species composition of the water column community tends to vary considerably in time and space, and the organisms collected in a sample at a given point and time are not necessarily resident there.

The water column community of the East Basin was characterized by ichthyoplankton and fish sampling conducted at station LA6 during the 2018 Biological Surveys (Wood E&IS 2021). Juvenile and adult fish are characterized as either pelagic, meaning they swim freely throughout the water column, or demersal, meaning they live primarily near the bottom. The two types of fish are sampled with different gear: a lampara net (a type of seine widely used by the commercial fishing industry) for pelagic fish and bottom trawls for demersal (bottom-living) fish.

Plankton and Ichthyoplankton

The phytoplankton and zooplankton communities of the Port Complex are generally not sampled in routine biological surveys, having been thoroughly described in earlier studies (e.g., HEP 1980, from which the following summary is taken). Phytoplankton consists largely of diatoms such as *Chaetoceros* spp. and *Skeletonema costatum*, unicellular flagellates, and dinoflagellates such as *Prorocentrum micans*, *Dinophysis caudata*, and *Noctiluca scintillans*. In basins and slips, runoff of nutrients from the land and restricted circulation sometimes lead to bloom conditions, in which phytoplankton grow to dense concentrations before being dispersed by wind and current or subsiding after depleting the nutrients. In the late summer and fall, these episodes can result in so-called "red tides" in which the water is discolored by high concentrations of dinoflagellates. The zooplankton community in the Port Complex is dominated by copepods such as *Acartia* spp., *Oithona* spp., and *Paracalanus parvus*, and by cladocerans. These organisms feed on phytoplankton and are in turn consumed by fish larvae, suspension-feeding invertebrates such as ctenophores, shrimp, anemones, and corals, and plankton-eating adult fish such as anchovies and sardines.

The ichthyoplankton is dominated by species that are also common in the Port Complex as adults. During the 2018 Biological Surveys, the mean densities of fish eggs harbor-wide were highest during the spring survey (568 eggs/100 m^3) and lowest during the summer survey (182 eggs/100 m^3) (Wood E&IS 2021); egg densities at station LA5 were lower than the harbor-wide mean. Most fish eggs are unidentifiable to species, although a few of the eggs at Station LA6 were identified as turbot and anchovy eggs.

As in previous studies (MEC and Associates 2002, SAIC 2010, MBC 2016), the most abundant larval fish taxa in the 2018 Biological Surveys were gobies (the genera *Clevelandia*, *Ilypnus*, *Quietula*, *Lepidogobius*, *Tridentiger*, and *Acanthogobius*); blennies, northern anchovy (*Engraulis mordax*), and white croaker (*Genyonemus lineatus*) were also prominent in the ichthyoplankton. These harbor-wide patterns were generally true at sampling station LA6, although gobies and blennies comprised a greater proportion of the larval fish than harbor-wide (Wood E&IS 2021).

Juvenile and Adult Fish

The Port Complex provides habitat for more than 130 species of juvenile and adult fish; some of them are transient visitors and some are permanent residents (MEC 1988, MEC and Associates 2002, Allen and Pondella 2006, SAIC 2010, MBC 2016, Wood E&IS 2021). The pelagic fish assemblage in the Port Complex has been consistently dominated by northern anchovy; it typically accounts for over two-thirds of the individuals (MEC and Associates 2002, SAIC 2010, MBC 2016), although in the 2018 Biological Surveys it was the second-most abundant pelagic fish and accounted for only one-quarter of the abundance (Wood E&IS 2021). Other commonly-caught pelagic species include topsmelt (*Atherinops affinis*; the most abundant pelagic fish in 2018), jacksmelt (*Atherinopsis californiensis*), California grunion (*Leuresthes tenuis*), Pacific sardine (*Sardinops sagax*), Pacific mackerel (*Scomber japonicus*), and jack mackerel (*Trachurus symmetricus*). Sampling for pelagic fish conducted during the 2018 Biological Surveys at Station LA6, in the East Basin near Berths 191-194, captured a total of 222 fish, all but 3 of which were topsmelt (Wood E&IS 2021).

Water Birds

Numerous water-associated birds use the Port Complex both as residents and as seasonal visitors. The 2018 biological survey recorded 64 species in the Port Complex that depend on marine habitats and another 23 species of upland birds (Wood E&IS 2021). Gulls,

aerial fish foragers (terns and pelicans), and waterfowl (grebes, cormorants, ducks) were the dominant groups observed throughout the Port Complex, as was the case in previous biological surveys (MEC and Associates 2002, SAIC 2010, MBC 2016). Large and small shorebirds, wading/marsh birds, upland birds, and raptors were also present, but in much smaller numbers. The most abundant species, in order of decreasing abundance, were western gull (*Larus occidentalis*), western grebe (*Aechmophorus occidentalis*), elegant tern (*Thalasseus elegans*), rock pigeon (*Columba livia*, an upland bird), Brandt's cormorant (*Phalacrocorax penicillatus*), brown pelican (*Pelecanus occidentalis californicus*), double-crested cormorant (*P. auritus*), Heermann's gull (*L. heermanni*), surf scoter (*Melanitta perspicillata*), and great blue heron (*Ardea herodias*).

In the East Basin near the Project site (survey zone 27a in Wood E&IS 2021), the 2018 Biological Surveys identified a total of 600 individual birds in 12 monthly surveys, mostly western and Heerman's gulls, rock pigeons, great blue herons, and cormorants. The East Basin area generally supported fewer birds than other areas of the Port Complex, likely because of the scarcity of foraging opportunities, and recent studies recorded very few aerial fish foragers (e.g., terns) in Inner Harbor areas such as the East Basin (MBC 2016; Wood E&IS 2021).

Special-Status Species

A number of marine animal species that are considered by federal and state resource agencies to have special status have historically been observed, or have the potential to occur in the Port (Table 3.2-1). These comprise 26 species of birds, 5 species of marine mammals, and one marine reptile species.

Threatened or Endangered Bird Species

Four species of birds (snowy plover, *Charadrius alexandrinus nivosus*; Belding's savannah sparrow, *Passerculus sandwichensis beldingi*; Scripp's murrelet, *Synthliboramphus scrippsi*; and California least tern, *Sternula antillarum browni*) that occur or have occurred in the Port Complex are listed by federal and/or state agencies as threatened or endangered. The federally threatened western snowy plover is a transient migratory visitor; a few individuals have been observed on Pier 400 in the last decade (Keane Biological Consulting 2005a, 2005b), but the species was not observed in the Port during the 2008, 2013, or 2018 biological surveys (SAIC 2010, MBC 2016, Wood E&IS 2021). Furthermore, there is no suitable nesting habitat (i.e., sandy beaches) in the vicinity of the Project site.

The state-listed endangered Belding's savannah sparrow is only found in pickleweed marshes (USACE and LAHD 1992). No suitable habitat for this species is present in the area of the Proposed Project, and there have been no sightings of this species in the Port since the early 1970s (and then only as strays).

Scripp's murrelet, a small seabird that nests on the Channel Islands, is occasionally spotted in the Outer Harbor. One was observed in Fish Harbor during the 2013 Biological Surveys (MBC 2016) but none were observed during the 2018 Biological Surveys (Wood E&IS 2021). Because there is no nesting habitat for the species in the Harbor and it is so rarely observed, this species is not considered further in this analysis.

The California least tern was federally listed as fully protected 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 species has been described in the Biological Opinion for the Los Angeles Harbor Development Project (FWS File No. 1-6-92-F-25, USFWS 1992.), and the Deep Draft

Navigation Improvement EIS/EIR (USACE and LAHD 1992), which are incorporated by reference. The following summarizes information on California least terns in the Port.

The California least tern has been known to nest during the summer in the Los Angeles Harbor area since the late 1800s, and regular nest monitoring on Terminal Island started in 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 USACE, and California Department of Fish and Wildlife (CDFW) for management of a 6-hectare (15 acre) California least tern nesting site in the Port. The MOA allows the designated nesting site to be relocated in response to Port development activities, which has occurred several times. From 1970 through 1997, nesting occurred at sites on Terminal Island near what is now the Pier 300 Shallow Water Habitat (Keane Biological Consulting 2013). In 1997, LAHD prepared a new nesting site at the southern tip of Pier 400 (Keane Biological Consulting 2013), and since then all successful California least tern nesting on Terminal Island has occurred at that site. The Pier 300 nesting site was decommissioned in 1998.

California least terns are plunge divers, diving head first into the water to catch small fish, including northern anchovies (*Engraulis mordax*) and topsmelt (*Atherinops affinis*). These schooling prey species are frequently very abundant in open water, although locations of the schools can be highly variable. Studies conducted in the Port have demonstrated that shallow-water areas (less than six meters [20 feet] deep), especially near the nesting site, provide important foraging habitat for the California least tern (Keane Biological Consulting 1997), although in 2019 the birds fed preferentially in deep waters adjacent to the Pier 400 nesting site (Langdon Biological Consulting 2021a). During harbor-wide least tern foraging studies in 2001, 2002, 2014, and 2019, very few foraging flights, dives, and transits were observed in Inner Harbor areas (Keane Biological Consulting 2003; eGIS 2015; Langdon Biological Consulting 2021a). In general, foraging is lowest at areas more distant from the nesting site, such as the East Basin. A foraging study conducted during 2019 observed a total of 834 foraging dives and 1574 foraging flights in the harbor, but only 0.7% of dives and 0.1% of flights occurred near the Project site (Langdon Biological Consulting 2021a).

During the year-long avian surveys conducted as part of the 2013 and 2018 biological surveys, California least terns were observed from April through July, as is typical (MBC 2016; Wood E&IS 2021). Most birds were observed in survey zones immediately adjacent to the Pier 400 nesting colony, or flying over the colony, and none were observed near berths 191-194. During the 2021 nesting season, California least tern monitors recorded 198 nesting pairs and estimated that the least tern colony on Pier 400 produced 91 fledging birds (Langdon Biological Consulting 2021b).

Table 3.2-1. Special Status Species (Designated by NOAA, USFWS, and CDFW) Observed in the Port Area

Species	Agency/Designation (see notes for acronyms)	Notes
Birds		
Belding's Savannah Sparrow (*Passerculus sandwichensis*)	CDFW – SE	Inhabits coastal salt marches of southern California. Not observed in POLA and POLB Biological Surveys performed from 2000 to present (2018-2019).
Black Oystercatcher (*Haematopus palliates*)	USFWS – BCC	Known to nest in the Port Complex. 320 individuals recorded in the Port Complex during the 2018 POLA and POLB Biological Survey. Species observed along Middle Breakwater.
Black Skimmer (*Rhyncops niger*)	USFWS – BCC CDFW – SCC	Year-round species. Known to nest annually at Pier 400. 184 individuals recorded in the Port Complex during the 2018 POLA and POLB Biological Surveys. Most observations at Cabrillo Beach.
Black-crowned Night Heron (*Nycticorax nycticorax*)	CDFW – SA	Year-round species. No nesting was observed during the 2018 POLA and POLB Biological Surveys, but 37 individuals sighted in the Port Complex.
Brant (*Branta bernicla*)	CDFW – SA	Uncommon in the Port, but found regionally. No known nesting has occurred in the Port Complex. 1 individual observed during the 2018 POLA and POLB Biological Surveys.
Brown Pelican (*Pelecanus occidentalis*)	CDFW – FP	No known nesting site in the Port Complex. 2,780 individuals recorded in the Port Complex during the 2018 POLA and POLB Biological Surveys. Primarily observed in Outer Harbor along breakwaters and in shallow water habitats.
Burrowing Owl (*Athene cunicularia*)	USFWS – BCC	Primarily transient. Last observed nesting in Port Complex during the 2008 POLA and POLB Biological Surveys. Not observed during the 2018 POLA and POLB Biological Surveys. However, they are observed transiting occasionally during their migration season.
California Gull (*Larus californicus*)	CDFW – WL	Year-round species, nests in the Port Complex. 261 individuals recorded in the Port Complex during the 2018 POLA and POLB Biological Surveys.
California Least Tern (*Sterna antillarum browni*)	USFWS – FE CDFW – SE, FP	Migratory species. Designated nesting site at Pier 400. 90 individuals recorded in the Port Complex during the 2018 POLA and POLB Biological Surveys. Foraging occurs primarily around Pier 400, the breakwater and shallow water habitats.
Caspian Tern (*Hydroprogne caspia*)	USFWS – BCC	Migratory species. Known to nest at Pier 400 CLT nesting site. 210 individuals recorded in the Port Complex during the 2018 POLA and POLB Biological Surveys. Most observations at Pier 300, Pier 400, and Cabrillo Beach.
Common Loon (*Gavia immer*)	CDFW – SCC	Migratory species. Not known to nest in the Port Complex. 3 individuals observed roosting in the Port Complex during the 2018 POLA and POLB Biological Surveys.

Table 3.2-1. Special Status Species (Designated by NOAA, USFWS, and CDFW) Observed in the Port Area

Species	Agency/Designation (see notes for acronyms)	Notes
Double-crested Cormorant (*Phalacrocorax auratus*)	CDFW – WL	Year-round species. Known to nest in Port Complex. 1,894 individuals recorded in the Port Complex during the 2018 POLA and POLB Biological Surveys. Observed primarily along the Middle Breakwater.
Elegant Tern (*Thalasseus elegans*)	CDFW – WL	Migratory species. Known to nest at the Pier 400 CLT nesting site. 5,127 individuals recorded in the Port Complex during the 2018 POLA and POLB Biological Surveys. Observed regularly foraging at the shallow water habitat at Cabrillo Beach and Seaplane Lagoon during the 2018 POLA Biological Survey.
Great Blue Heron (*Ardea herodias*)	CDFW – SA	Resident species. Known to nest in trees near POLA Main Channel Wilmington marinas. 704 individuals recorded throughout the Port Complex during the 2018 POLA and POLB Biological Surveys.
Great Egret (*Ardea alba*)	CDFW – Sensitive	Resident species but rare, nests in the Port Complex. 6 individuals recorded in the Port Complex during the 2018 POLA and POLB Biological Surveys.
Loggerhead Shrike (*Lanius ludovicianus*)	USFWS – BCC	Migratory species. Last observed in Port Complex during 2000 POLA and POLB Biological Surveys. Not observed in 2018 POLA and POLB Biological Surveys.
Long-billed Curlew (*Numenius americanus*)	USFWS – BCC	Migratory species. Not known to nest in the Port Complex. 2 individuals recorded in the Port complex during the 2018 POLA and POLB Biological Surveys.
Marbled Godwit (*Limosa fedoa*)	USFWS – BCC	Migratory species. 3 individuals recorded in the Port Complex during the 2018 POLA and POLB Biological Surveys. Observed primarily at Cabrillo Beach.
Osprey (*Pandion halieatus*)	CDFW – WL	Migratory species. Known to nest at Pier D-E in POLB. 43 observations in the Port Complex during the 2018 POLA and POLB Biological Surveys.
Peregrine Falcon (*Falco occidentalis*)	USFWS – BCC CDFW – FP	Resident species. Known to nest on Schuyler F. Heim Bridge and former Gerald Desmond Bridge in POLB. 1 individual recorded at Pier 400 during the 2018 POLA and POLB Biological Surveys.
Scripps's Murrelet (*Synthliboramphus scrippsi*)	USFWS – BCC	Ocean-dwelling species rarely observed on land. Not observed in 2018 POLA and POLB Biological Surveys. Last observed in Port Complex during 2013 POLA and POLB Biological Surveys.
Snowy Egret (*Egretta thula*)	CDFW – SA	Known to nest in the Port Complex in 2018. 145 individuals recorded in the Port Complex during the 2018 POLA and POLB Biological Surveys, primarily at Cabrillo Beach.
Tufted Puffin (*Fratercula cirrhata*)	CDFW – SSC	Not observed in the 2018 POLA and POLB Biological Surveys. Last observed in the Port Complex during the 2000 POLA and POLB Biological Surveys.
Western Snowy Plover (*Charadrius nivosus nivosus*)	USFWS – BCC, ESA Threatened	Migratory. Not observed in POLA and POLB Biological Surveys performed from 2000 to present (2018-2019).

Table 3.2-1. Special Status Species (Designated by NOAA, USFWS, and CDFW) Observed in the Port Area

Species	Agency/Designation (see notes for acronyms)	Notes
Whimbrel (*Numenius phaeopus*)	USFWS – BCC	Migratory species, nests in the Port Complex. 42 individuals recorded in the Port Complex during the 2018 POLA and POLB Biological Surveys. Observed primarily at Cabrillo Beach.
White-faced Ibis (*Plegadis chihi*)	CDFW – WL	Resident species. Not observed in 2018 POLA and POLB Biological Surveys. Last observed in the Port Complex during the 2000 POLA and POLB Biological Surveys.
Marine Mammals		
California Sea Lion *(Zalophus californianus)*	USFWS, NMFS – MMPA Protected	Resident species. Common. 587 individuals recorded in the Port Complex during the 2018 POLA and POLB Biological Surveys.
Common Bottlenose Dolphin *(Tursiops truncatus)*	USFWS, NMFS – MMPA Protected	18 individuals recorded in the Port Complex during the 2018 POLA and POLB Biological Surveys.
Common Dolphin (*Delphinus* spp.)	USFWS, NMFS – MMPA Protected	40 individuals recorded in the Port Complex during the 2018 POLA and POLB Biological Surveys.
Gray Whale (*Eschrichtius robustus*)	USFWS, NMFS – MMPA Protected	Transitory. 1 observation recorded in the Port Complex during the 2018 POLA and POLB Biological Surveys.
Harbor Seal *(Phoca vitulina)*	USFWS, NMFS – MMPA Protected	Resident species. Common. 223 individuals recorded in the Port Complex during the 2018 POLA and POLB Biological Surveys.
Other		
Green Sea Turtle *(Chelonia mydas)*	USFWS, NMFS – ESA Protected	Not observed in POLA and POLB Biological surveys performed from 2000 to present (2018). Known in region.

Notes: USFWS = United States Fish and Wildlife Service; NMFS = National Marine Fisheries Service (NOAA Fisheries); CDFW = California Department of Fish and Wildlife; CDF = California Department of Forestry and Fire Protection; MMPA = Marine Mammal Protection Act; ESA = Endangered Species Act; BCC = Bird of Conservation Concern; SA= Special Animal; SSC = Species of Special Concern; FP = Fully Protected; FE = Federally Endangered; WL = Watch List; SE = State Endangered.
Sources: USFWS 2021; NOAA Fisheries 2021a, b; CDFW 2021.

Other Special-Status Bird Species

Twenty-two bird species that are not listed as threatened or endangered but nevertheless have special status designated by either the CDFW (state) or USFWS (federal) have been observed in the Port Complex (Table 3.2-1). Five of those species were observed in the East Basin during the 2018 Biological Surveys (Wood E&IS 2021): California brown pelican, Caspian tern, double-crested cormorant, great blue heron, and black-crowned night heron. Several special-status species are known to nest in the Port Complex, but nesting by those species in the East Basin area has not been observed.

Sea Turtles and Marine Mammals

Sea Turtles

Several endangered or threatened sea turtle species are found in the eastern Pacific Ocean, including loggerhead sea turtles (*Caretta caretta*), green sea turtles (*Chelonia mydas*), leatherback sea turtles (*Dermochelys coriacea*), and olive ridley sea turtles

(*Lepidochelys olivacea*). Although no sea turtles have been observed in the Port Complex during any of the biological surveys over the past 25 years (MEC 1988; MEC & Associates 2002; SAIC 2010; MBC 2016; Wood E&IS 2021), sporadic sightings of sea turtles in Los Angeles-Long Beach Harbor have been reported over the years (LAHD 1997). Accordingly, any of these species may be rare visitors to the Port.

Green sea turtles, federally listed as threatened, also are found in all temperate and tropical waters throughout the world. They are rarely observed in the open ocean, primarily remaining near the coastline and around islands and inhabiting 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 southward (NOAA Fisheries 2021a). 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. 2017). This species is, due to the proximity of the San Gabriel River population to the Port, most likely to be encountered.

The North Pacific distinct population segment of loggerhead sea turtles is federally listed as endangered (NOAA Fisheries & USFWS 1998a), as are leatherback sea turtles (NOAA Fisheries 2012). Olive ridley sea turtles, federally listed as threatened, are found in tropical regions of the Pacific Ocean (NOAA Fisheries & USFWS 1998b).

Marine Mammals

All marine mammals, which include sea otters, pinnipeds (sea lions and seals), and cetaceans (whales and dolphins), are protected under the Marine Mammal Protection Act (MMPA) of 1972; some (Table 3.2-1) are also protected by the Endangered Species Act (ESA) of 1973. Some species of marine mammals forage in the Port, but none breeds there. Of the pinnipeds, only California sea lions (*Zalophus californianus*) and harbor seals (*Phoca vitulina*) were recorded during the biological surveys of the Port Complex (MEC & Associates 2002; SAIC 2010; MBC 2016; Wood E&IS 2021). Sea lions were observed throughout the Port, including in the East Basin, while harbor seals, which were far less abundant than sea lions, were largely limited to Outer Harbor waters and were not observed in the East Basin. Neither of these species is threatened or endangered, and there are no designated significant ecological areas for either species within the Port.

Outside the breakwaters, a variety of marine mammals use nearshore waters. The blue, fin, humpback, sperm, and gray whales ("baleen whales") are all listed as endangered under the ESA, although the Eastern Pacific gray whale population was delisted by NOAA in 1994. The most common whale species in the area is the gray whale (*Eschrichtius robustus*), which migrates from the Bering Sea to Mexico and back each year and generally are found as single individuals or in pods of a few individuals. Gray whales are often seen close to shore, and have very occasionally been seen in the Outer Harbor, including during the 2018 Biological Surveys (Wood E&IS 2021).

Most of the other baleen whale species (principally blue, fin, and humpback) usually occur several miles from shore, in deeper water, and are also generally found as single individuals or in pods of a few individuals. However, the distributions of these species overlap established vessel traffic routes. Calambodikis et al. (2015) documented important whale feeding areas in the Santa Barbara Channel (heavily used by coastal traffic to and from north of the Port of Los Angeles) and offshore waters between Santa Monica Bay and Long Beach (the approaches to Los Angeles Harbor).

Several species of dolphin and porpoises 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 only in the open waters of the Outer Harbor during the 2013 and 2018 biological surveys (MBC 2016; Wood E&IS 2021), but the 2008 Biological Surveys observed a group of bottlenose dolphins near the San Pedro waterfront in the Main Channel (SAIC 2010). None of the biological surveys have observed cetaceans in the East Basin.

Vessel Collisions with Sea Turtles and Marine Mammals

Ship strikes involving marine mammals and sea turtles have been documented for the following listed species in the eastern North Pacific: blue, fin, gray, humpback, and sperm whales, southern sea otter, and loggerhead, olive ridley, leatherback, and green sea turtles (NOAA Fisheries 2021a, b; NOAA Fisheries and USFWS 1998a, 1998b, 1998c, 1998d; Carretta et al. 2009). As Shoeman et al. (2020) point out, large vessels (e.g., oceangoing cargo ships) pose a higher risk of fatal results to these animals.

There are several sources of data on whale strikes, including data presented by NOAA Marine Sanctuaries and NMFS. NOAA Marine Sanctuaries (2021) reports that from 2007 through 2020, approximately 25 whales were believed to have been struck by ships in Southern California. These included 11 fin whales, 6 blue whales, 3 humpback whales, and 1 unidentified whale. Data supplied by NMFS (Greenman 2022) list 16 whales presumed to have been killed or injured in vessel collisions between 2011 and 2020 in Los Angeles, Ventura, and Orange county waters, including 6 fin whales, 3 gray whales, 2 blue whales, 2 humpback whales, 2 sei whales, and one unidentified whale. However, the actual number of whales struck is likely to have been greater because not all strikes are reported or even detected. These incidents likely involved a variety of vessel types, such as containerships, military vessels, fishing and research vessels, general cargo vessels, and private pleasure vessels (Schoeman et al 2020). Recent data suggest that increases in ship strikes are largely attributable to higher abundances of whales in nearshore waters and higher vessel speeds (Schoeman et al 2020).

In Southern California, strikes involving blue whales are of particular concern, in part due to low population numbers compared to historical populations (Redfern et al. 2019) and the high risk of strikes relative to other areas (Rockwood et al. 2017). Blue whales normally pass through the Santa Barbara Channel enroute from breeding grounds in Mexico to feeding grounds farther north. Their migration pattern along the California coast crosses the established shipping channels in and out of California ports, thereby increasing the opportunities for whale/vessel collisions. In the North Pacific, the pre-whaling population is estimated to have been approximately 4,900 individuals; the recent population estimate is approximately 1,500 (Carretta et al. 2021). Along the California coast, there is evidence that blue whale abundance has increased over the past three decades despite vessel strikes (Carretta et al. 2009, 2021), and Redfern et al (2019) estimate that the blue whale population is at 97 percent of its carrying capacity, suggesting that density dependence (not ship strikes) is the primary factor affecting population size. Other potential causes of whale mortality in the region include domoic acid poisoning, mid-frequency acoustic testing, ambient noise, and infectious disease (Abramson et al. 2011).

Reported yearly blue whale mortalities in California attributed to ship strikes have varied widely from year to year, from 0 to 5, with an average of 0.4 per year. However, reported strikes are a minimum figure: modelling by Rockwood et al. (2017) suggests that blue whale mortality from ship strikes substantially exceeds NOAA Fisheries' recommended maximum human-caused mortality limit.

In addition to geographic factors, vessel speed influences whale/ship collision incidences (e.g., NOAA Sanctuaries 2021; Vanderlaan and Taggart 2007; Conn and Silber 2013). Jensen and Silber (2003) reported that of 134 cases of known vessel strikes in U.S. coastal waters (20 of which involved container/cargo ships/freighters), vessel speed was known for 58 cases (43.3%): most were traveling at 13 to 15 knots, but some travelled at 16 to 24 knots. Vanderlaan and Taggart (2007) suggest that the risk of a lethal injury in a whale-ship collision drops substantially at vessel speeds below 12 knots, which is reinforced by Jensen and Silber (2003), who found that only 12.3% of the ship strikes they studied occurred when vessels were traveling at speeds of 10 knots or less.

In 2013, the International Maritime Organization (IMO) amended the Traffic Separation Scheme (TSS) in the Santa Barbara Channel and the approach to the Port Complex. TSS are maritime traffic management systems that regulate vessel traffic in busy waterways, thereby minimizing 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, away from known whale concentrations (the outbound lane remained unchanged). Narrowing the separation zone is expected to reduce co-occurrence of ships and whales while maintaining navigational safety.

Vessel collisions are considered to be a minor source of California sea lion and harbor seal deaths compared to fishery nets, shooting, and hook-and-line fisheries. Stock assessments for bottlenose and common dolphins do not list ship strikes as sources of mortality (Carretta et al. 2021). Sea turtles do suffer mortality from ship strikes, although quantitative data are sparse (Schoeman et al. 2020).

3.2.5 Wildlife Movement Corridors

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

3.2.6 Invasive Species

There are at least 46 non-native aquatic species in the Los Angeles and Long Beach Harbor (Wood E&IS 2021). Non-native species can become invasive, and compete with or prey upon indigenous species, thereby altering the local ecology. This may cause economic impacts as well. Invasive species in the Port Complex include three species of brown algae; four species of bryozoans; two species of anemone; four species of annelid worms; seven species of molluscs; 12 species of crustaceans; 12 species of tunicates; and two species of fish. Most non-native species have varied in abundance and distribution over the past 20 years, some not being collected at all prior to 2013 (Wood E&IS 2021).

The primary sources of invasive aquatic organisms in harbors are believed to be hull fouling (organisms that grow on the exterior surfaces of ships) and the discharge of

ballast water from cargo vessels (CDFW-OSPR 2021). 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 (CDFW-OSPR 2021). Non-native terrestrial species have been introduced either deliberately (e.g., rock doves and ornamental plants) or by accident through being carried in cargo or possessions (e.g., rats and many non-native grasses).

A comparison of the three most recent harbor-wide surveys indicates that the non-native taxa collected or observed over the past 15 years have remained reasonably constant, as has the proportion of the total number of species that are non-native (Wood E&IS 2021). In the case of invertebrates (infauna, epifauna, riprap), introduced species have consistently accounted for approximately three to six percent of the total taxa, in the case of fish from one to three percent, and in the case of kelp and macroalgae, approximately ten percent.

One species of invasive algae has been of particular concern for Southern California in recent years. The aquarium strain of *Caulerpa* (*C. taxifolia*) 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. The species is of particular concern because in areas outside its native range it can grow very rapidly, causing ecological devastation by overwhelming local seaweed species and altering fish distributions. Its rampant growth has also resulted in huge economic losses by harming tourism, pleasure boating, fishing, and the diving industry. Although this species has never been observed in the Port Complex, it is a threat in Southern California, having been found in two Southern California coastal lagoons in 2000. Its potential to create severe ecological and economic losses has prompted regulatory control measures, including the requirement to complete a *Caulerpa* survey in accordance with the *Caulerpa* Control Protocol prior to specific underwater construction activities such as bulkhead and dock repair, dredging, and placement of navigational aids (NOAA Fisheries and CDFW 2021).

3.2.7 Significant Ecological Areas

The County of Los Angeles has established Significant Ecological Areas (SEAs) and Coastal Resource Areas (CRAs) to preserve a variety of biological communities for public education, research, and other non-disruptive outdoor uses. These designations limit, but do not preclude, development that is compatible with the biological community. Policies and regulations for SEAs and CRAs do not apply within city boundaries. There are no SEAs in the vicinity of the Project site; the closest designated CRA to the Project site, and the only CRA located in the Port, is the Terminal Island Pier 400 CRA, which consists of the Pier 400 California least tern nesting site, approximately four miles from the Project site (County of Los Angeles 2015). There are no designated Marine Protected Areas (MPAs) within the Port.

3.2.8 Area Contingency Plan

An Area Contingency Plan (ACP) is a reference document prepared for the use of all agencies engaged in responding to emergencies that may have environmental consequences, such as an oil spill. Numerous agencies have a direct role in the discharge (or substantial threat of discharge) of oil in the Los Angeles-Long Beach area including the U.S. Coast Guard, CDFW, Office of Spill Prevention and Response, and local enforcement authorities (e.g., Los Angeles Port Police). The ACP applicable to the Port Complex lists four ‘environmentally sensitive sites’ within the Port Complex: Cabrillo

Beach Wetlands, Los Angeles Harbor Breakwater, Middle Breakwater, and Long Beach Breakwater. All four are categorized as "extremely sensitive" (Category A), largely because of their importance as seabird and marine mammal habitat.

3.2.9 Essential Fish Habitat

The Proposed Project is located in an area designated as EFH for federally managed species under two Fishery Management Plans (FMPs) developed and administered by the Pacific Fishery Management Council (PFMC): the Coastal Pelagics FMP (PFMC 2016) and the Pacific Coast Groundfish FMP (PFMC 2020). Of the 89 managed fish species (not including Ecosystem Component Species, described below) included under these plans, 21 are known to occur in the Port and could potentially be affected by the Proposed Project or alternatives (Table 3.2-2). Most of those 21 species have been collected only sporadically and in very low numbers in the Port; the more commonly encountered species are considered below.

Coastal Pelagics FMP: Two coastal pelagic fish—northern anchovy (*Engraulis mordax*) and Pacific sardine (*Sardinops sagax*)—commonly occur in the vicinity of the Proposed Project. Northern anchovy is the most widespread and abundant fish species in the Port Complex. In the 2018 Biological Surveys, anchovy larvae were present throughout the Port Complex during all three seasonal sampling periods (Wood E&IS 2021). Juvenile and adult anchovies have consistently been collected during fish sampling at station LA6, near the Proposed Project site (MEC and Associates 2002; SAIC 2010, MBC 2016; Wood E&IS 2021).

Pacific sardine is an epipelagic species (occurring in about the upper 200 meters of the ocean) that forms loosely aggregated schools, mostly offshore (Wolf et al. 2001). Pacific sardine larvae have been uncommon in the Port in previous surveys, in which only occasional individuals have been collected, always in the Outer Harbor, and the same was true for the 2018 Biological Surveys (Wood E&IS 2021). Adult and juvenile Pacific sardine are much less common than northern anchovy in the Port, although in the past it has been one of the ten most abundant pelagic species in the Port Complex (MEC and Associates 2002; SAIC 2010). Fewer than 200 were collected in the 2013 Biological Surveys and a total of 540 were collected in the 2018 Biological Surveys, but none of them were collected in the East Basin in either survey (MBC 2016, Wood E&IS 2021). Accordingly, although the species is considered to be common in the Port Complex it is uncommon near the project site.

In past harbor-wide surveys, jack mackerel (*Trachurus symmetricus*) and Pacific mackerel (*Scomber japonicus*) were collected much less frequently and in much lower numbers than northern anchovy and Pacific sardine. In the 2013 and 2018 biological surveys, however, both species were among the ten most abundant pelagic (i.e., lampara-caught) species (MBC 2016; Wood E&IS 2021) and are therefore considered common. In the 2018 Biological Surveys, most individuals of both species were caught in the Outer Harbor and none were captured in the East Basin.

Table 3.2-2. Managed Fish Species Most Likely to Occur At or Near the Project Site in Los Angeles Harbor Based on Past Occurrences

Common Name	Preferred Habitats	Occurrence in Project Area	
		Larvae	Juvenile/Adult
Coastal Pelagics			
Northern anchovy	Open water.	Abundant	Abundant
Pacific sardine	Open water.	Uncommon	Uncommon
Pacific (chub) mackerel	Open water, juveniles off sandy beaches and around kelp beds.	--	Rare
Jack mackerel	Open water, young over shallow banks and around kelp beds.	Rare	Rare
Pacific Coast Groundfish			
English sole	Soft bottom habitats.	Rare	Uncommon
Pacific sanddab	Soft bottom habitats.	Rare	Uncommon
Butter sole	Soft bottom habitats.	Rare	Rare
Black rockfish	Along breakwaters, deep piers and pilings, kelp, eelgrass, and reefs.	--	Rare
Bocaccio	Multiple habitats, including soft and hard bottom, kelp, eelgrass.	--	Rare
Brown rockfish	Prefer hard substrata and rocky interfaces.	--	Rare
Calico rockfish	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.	--	Rare
Lingcod	Prefer hard substrata and rocky interfaces.	--	Rare
Cabezon	Prefer hard substrata and rocky interfaces.	Rare	Rare
Pacific hake	Offshore, juveniles in open water.	Rare	Rare
Leopard shark	Multiple habitats including soft bottom, kelp, eelgrass, structures.	N/A	Rare
Spiny dogfish	Pelagic and on muddy bottoms.	N/A	Rare

Sources: MBC (2016); MEC (1988); MEC and Associates (2002); SAIC (2010); Wood E&I 2021.
--: Not identified (most rockfish larvae are not identifiable to species). N/A = Not applicable, internal fertilization.
Note: Abundant>Common>Uncommon>Rare.
Note: Ecosystem Component Species are not included in this table.

In 2010, jacksmelt (*Atherinopsis californiensis*) and Pacific herring (*Clupea pallasii pallasii*) were added as "Ecosystem Component Species" (ECS) to the Coastal Pelagics

FMP (PFMC 2016). Ecosystem Component species are not generally targeted or retained for sale, but are infrequently encountered in CPS fisheries. ECS are monitored to ensure that these species are not likely to be subject to overfishing in the absence of CPS management measures. Amendment 15 of the Coastal Pelagics FMP prohibits the development of commercial fisheries for these ECS before the PFMC has had adequate time to assess the scientific information related to the proposed fishery and the potential impact on existing fisheries, fishing communities, and marine ecosystems. The incidental catch of ECS will continue to be monitored by the PFMC.

The Port is near the southern limit of the range of Pacific herring (Miller and Lea 1972), and the species has not been collected during harbor-wide fish studies (MEC 1988; MEC and Associates 2002; SAIC 2010, MBC 2016, Wood E&IS 2021). Jacksmelt were collected in relatively small numbers in 1986–1987, 2000, and 2008, and were most abundant in shallow-water areas of the Outer Harbor (MEC 1988; MEC and Associates 2002; SAIC 2010). In the 2013 Biological Surveys, jacksmelt was the fifth most abundant pelagic species in the Port Complex (MBC 2016) and was caught in modest numbers at stations LA5 and LA15, near the Project site. In the 2018 Biological Surveys, however, only 130 jacksmelt were captured in the entire Port Complex, none of them in the East Basin (Wood E&IS 2021).

In 2016, several more species were added to the Coastal Pelagics FMP as ECS (PFMC, 2016). However, the only ones that are known to occur in or near the Port Complex are topsmelt (*Atherinops affinis*) and California grunion (*Leuresthes tenuis*). Topsmelt and grunions were abundant in pelagic and shallow nearshore samples in the 2018 Biological Surveys (Wood E&IS 2021); grunion were not collected in the East Basin but topsmelt was the only Coastal Pelagic FMP component species captured at Station LA6 in the East Basin.

Pacific Coast Groundfish FMP: None of the species covered under the Pacific Coast Groundfish FMP (PFMC 2020) were collected at Station LA6 during the 2018 Biological Surveys (Wood E&IS 2021) and only a few individuals of the species were collected during previous harbor-wide biological surveys. Accordingly, all of the Pacific Coast Groundfish species are considered rare or uncommon in the area of the Proposed Project.

Pacific sanddab (*Citharichthys sordidus*) can be considered common in the Port Complex as a whole because it was collected in three previous harbor-wide biological surveys, although not in great numbers (MEC 1988; MEC and Associates 2002; SAIC 2010); the species was not collected at all in the 2013 Biological Surveys (MBC 2016) and only one individual was collected in the 2018 Biological Surveys (Wood E&IS 2021).

English sole (*Parophrys vetulus*) has been collected during all five of the cited harbor-wide studies, but in low numbers: 1 individual in 1986, 3 in 2000, 24 in 2008, 2 in 2013 and 1 in 2018. Larvae of English sole were collected in 2008, probably not in 2013 (unidentified Paralichthyidae larvae were collected but could not be identified to genus or species), and not in 2018.

California scorpionfish (*Scorpaena guttata*) is another managed species collected in all five harbor-wide surveys, including 11 individuals in 2008, 29 in 2013, and 50 in 2018.

Vermilion rockfish (*Sebastes miniatus*) was collected during the 2000 (4 individuals), 2008 (20 individuals), 2013 (45 individuals), and 2018 (11 individuals) biological surveys. Although adult vermilion rockfish occur between 20 and 1,440 feet, they are most common between 165 and 495 feet, meaning that the Port is at the very shallow end of their depth preference. 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).

One gopher rockfish (*Sebastes carnatus*) and one brown rockfish (*S. auriculatus*) were captured in the 2018 Biological Surveys, neither near the Project site. These species have been collected in previous harbor-wide surveys, but never more than a few individuals.

Two Pacific Groundfish Ecosystem Component Species, California skate (*Raja inornata*) and big skate (*R. binoculata*), have been collected during harbor-wide biological surveys. In 2008, only 23 California skate were collected, none in vicinity of the Proposed Project; in 2013, 62 individuals were collected, seven in the vicinity of the Proposed Project; and in 2018, six individuals were collected, none in the vicinity of the Proposed Project. No big skate have been collected since the 2000 studies. Both species prefer soft-bottom habitat, although California skate prefers much deeper water (60 to 2,200 feet) than big skate (10 to 360 feet) (Miller and Lea 1972).

The remaining species in Table 3.2-3 have only been collected sporadically in the Port Complex, generally as single or a few individuals.

3.2.10 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 Project site. The closest wetland is the Anchorage Road Salt Marsh, which is a small wetland that was contoured and enhanced in 2010 with pickleweed and other native plant species to mitigate for the loss of pickleweed habitat in the Northwest Slip (Weston Solutions 2013). This site is about one mile from the Project site.

Eelgrass Beds

Eelgrass beds are 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.

Eelgrass has been mapped in the Port Complex during all of the harbor-wide biological surveys (MEC and Associates 2002; SAIC 2010; MBC 2016; Wood E&IS 2021). The 2018 harbor-wide surveys (Wood E&IS 2021) documented a maximum of 86 acres of eelgrass (*Zostera marina*), over 95% of it in extensive beds along Inner Cabrillo Beach (about two miles from the Project site) and in the Pier 300 Shallow Water Habitat/Seaplane Lagoon area (about 1.5 miles from the Project site). The closest eelgrass is located in the marinas of the East Basin, about one-quarter-mile east of the Project site, and small patches occur along Berths 170-174 and in Slip 1, approximately one-half mile west of the Project site. Most of the eelgrass in the Port occurs in water depths of less than 10 feet, and the 2018 surveys found none in water deeper than 25 feet. No eelgrass

has been documented at the Project site, and water depths there (approximately 30 – 35 feet at the wharf face) are likely too great to support it, as insufficient light penetrates.

Shallow Water

Shallow-water areas (less than 20 feet deep) in the Port Complex 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 Berths 191-194, and the Pier 300 Shallow Water Habitat/Seaplane Lagoon area is approximately one mile from Berths 191-194.

Kelp Beds

Kelp canopy is considered a Habitat Area of Particular Concern (HAPC) in the Pacific Coast Groundfish FMP. Kelp beds provide nursery areas for many species of fish, and act as feeding areas for fish and seabirds. 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. Beds of giant kelp have been mapped in all four harbor-wide studies. They occur exclusively in the Outer Harbor, where water circulation is favorable to the growth of the species, and are concentrated along the outer breakwaters and on riprap and rock dikes protecting Outer Harbor channels, piers, and submerged sediment storage sites (MEC and Associates 2002; SAIC 2010; MBC 2016; Wood E&IS 2021). The 2018 Biological Surveys mapped a maximum of 118 acres of kelp canopy in the Port Complex, which was substantially more than in 2008 and 2000, but approximately 10% less than in 2013 (Wood E&IS 2021).

The nearest kelp beds to the Project site are near the Main Channel entrance (adjacent to Berth 72) and are about three miles from Berths 191-194. Giant kelp is not expected to occur in or near the Project site because protected locations do not experience the vigorous water circulation that kelp depends upon.

Mudflats

Mudflats are considered a "special aquatic site" under the CWA (40 CFR 230). The shoreline at and near the Project site is rock riprap, and no mudflats are present at or near the Project site. The nearest known mud flats are located at Berth 78 along the west side of Main Channel (approximately two miles from the Project site) and at the Salinas de San Pedro Salt Marsh (approximately three miles from the Project site).

3.2.11 Applicable Regulations

3.2.12 Ballast Water Discharge and Biofouling Regulations

At the federal level, the United States Coast Guard (USCG)'s Ballast Water Management Program (33 CFR 151 Part D) and the United States Environmental Protection Agency (USEPA)'s Vessel General Permit (VGP) regulate ballast water discharges. The VGP requires vessels subject to its provisions to comply with the USCG program. The Vessel Incidental Discharge Act (VIDA), passed by Congress in December, 2018, authorizes EPA to establish technology-based performance standards for ballast water treatment systems and USCG to begin enforcing those standards. VIDA specifically pre-empts state programs and allows USCG to establish a phased schedule to meet performance standards. The USCG program requires that vessels engaged in international trade operating in U.S. waters do one of the following: have an on-board ballast water

management system, refrain from discharging ballast water, use potable water for ballast, discharge ballast water to a shore side treatment facility, or conduct offshore ballast water exchange (this last option is available only until the performance standard compliance schedule is phased in, generally at each ship's next major dry docking). Ballast water treatment systems (BWTs) must be approved by USCG.

California State Lands Commission (CSLC) administers the State Marine Invasive Species Program in collaboration with the CDFW Office of Spill Prevention and Response (OSPR) and the State Water Resources Control Board. Regulations establish procedures, performance standards and reporting requirements for ballast water and biofouling management (2 CCR 2270 - 2298). California state law requires ballast water and biofouling management for ships that arrive at California ports unless safety is threatened. A Ballast Water Management Report must be submitted in advance of each arrival at a California port. If a voyage is greater than 24 hours, the Ballast Water Management Report must be submitted 24 hours in advance of arrival. If the voyage is less than 24 hours, the Ballast Water Management Report must be submitted prior to departing the port of departure. Additionally, the Marine Invasive Species Program Annual Vessel Reporting Form must be submitted to the CSLC at least 24 hours in advance of the first arrival of each calendar year. A BallastWater Management Plan and Ballast Water Logbook must be maintained on board the vessel and made available for inspection.

To conform with VIDA, the State Legislature recently amended California's ballast water management requirements, effective on 1 January 2022. The legislation includes the following main changes:

- Incorporates the federal ballast water discharge standards set forth in section 151.2030(a) of Title 33 of the Code of Federal Regulations (CFR), and the corresponding implementation schedule outlined in 33 CFR 151.2035(b), into California law;
- Delays the compliance dates for the more stringent interim and final California ballast water discharge performance standards to 2030 and 2040, respectively, due to a lack of available ballast water treatment technologies to enable vessels to meet the California standards at this time;
- Establishes operational monitoring and recordkeeping requirements for vessels that use a ballast water treatment system to meet ballast water discharge performance standards; and
- Authorizes CSLC staff to collect ballast water and sediment samples for research purposes in addition to compliance assessment.

California Biofouling Regulations

Vessels that are newly delivered or have a regularly scheduled out-of-water maintenance on or after January 1, 2018, must maintain a Biofouling Management Plan and Biofouling Record Book, and manage biofouling on wetted surfaces and niche areas. These requirements are enforced by the CSLC.

3.2.13 Clean Water Act

The Clean Water Act (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 USEPA. As the Proposed Project would result in the discharge of dredge or fill material into waters of the United States, 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.

3.2.14 Rivers and Harbors Appropriations Act of 1899

Section 10 of the Rivers and Harbors Appropriations Act (33 USC 401 et seq.) regulates work, including structures (e.g., wharves and piles), in, over, and under navigable waters of the United States. The USACE issues permits under Section 10 for work and structures.

3.2.15 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 of listed species, 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 NOAA Fisheries 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 NOAA Fisheries under Section 7.

3.2.16 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 or federally managed species to consult with NOAA Fisheries and respond in writing to the conservation recommendations provided by NOAA Fisheries. In addition, NOAA Fisheries is required to comment on any state agency activities that would affect EFH or federally managed species.

3.2.17 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.

3.2.18 California Endangered Species Act

The California Endangered Species Act (CESA) (California Fish and Game Code §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 the Fish and Game Code (§2081). State lead agencies must consult with CDFW during the 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, such as the Proposed Project, 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 (§2080.1).

3.2.19 Marine Mammal Protection Act

The Marine Mammal Protection Act (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. All marine mammal species that may be found in the Port Complex are under the jurisdiction of NOAA Fisheries.

3.2.20 Marine Protection, Research, and Sanctuaries Act of 1972

The Marine Protection, Research, and Sanctuaries Act of 1972 (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. Section 102 of the MPRSA authorizes the EPA to promulgate environmental criteria for evaluation of all disposal permit actions, to retain review and approval authority over Section 103 permits issued by the USACE, and to designate ocean disposal sites for dredged material disposal. Section 103 of the MPRSA regulates the transportation of dredged materials to approved ocean disposal sites. Effects from sediment disposal at the LA-2 ocean dredged material disposal site were evaluated during the site designation process, and subsequently evaluated in consideration of higher maximum annual disposal volume (USEPA and USACE, 2011). The MPRSA is applied in all U.S. ocean waters in and beyond the territorial sea (within 12 nautical miles of the nearest shoreline).

3.2.21 Impacts and Mitigation Measures

3.2.22 Methodology

Impacts on biota were assessed (1) by estimating the amount of habitat that would be affected, (2) by reviewing evidence from similar, past projects in the Port, (3) by reviewing biological resources that may be present or may use the area adjacent to Berths 191-194, and (4) from preparer expertise and judgment. The assessment of impacts is based on the assumption that the Proposed Project would include the following:

- A CWA Section 404 and Rivers and Harbor Act Section 10 permit would be obtained from USACE for in-water construction activities, which would include a requirement to conduct a pre-construction *Caulerpa* survey.
- A permit from the USACE, issued pursuant to the Marine Protection, Research, and Sanctuaries Act (see Section 3.2.3.9) would be required for sediment disposal at the LA-2 ocean disposal site.
- A Section 401 (of the CWA) Water Quality Certification would be obtained from the RWQCB for construction activities. The certification would include requirements for water quality monitoring during clean-up dredging and pile removal/driving activities. The RWQCB would also require standard Waste Discharge Requirements (WDRs) pursuant to the California Porter-Cologne Water Quality Control Act.
- During in-water construction, a water quality monitoring program would be implemented by LAHD's Construction Division in compliance with USACE CWA Section 404 and RWQCB CWA 401 certification permit requirements.
- Coverage under the NPDES General Permit for Stormwater Discharges Associated with Construction Activity (Construction General Permit) for the onshore portions of the Proposed Project (and alternatives) would be obtained by LAHD as the Legally Responsible Person that would delegate applicable responsibilities to the construction contractor.
- Monitoring to verify that the BMPs are implemented and kept in good working order would be conducted.
- The tenant would obtain and implement the applicable stormwater discharge permit (such as the General Industrial Activities Stormwater Permit [GIASP]). Orcem would incorporate MS4/Low Impact Development (LID, see Section 2.5) measures into the Proposed Project design for review and approval by the City of Los Angeles Department of Building and Safety.
- Spill Prevention, Control, and Countermeasure (SPCC) regulations would be implemented. The required Oil Spill Prevention, Control, and Countermeasure (SPCC) measures are in place that help ensure oil spills do not occur, but, if a spill does occur, include protocols to contain the spill and neutralize the potential harmful impacts. The SPCC would be the responsibility of Orcem and the LAHD during construction, and the responsibility of Orcem during operations. 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

The CEQA Guidelines (§15125) require EIRs to include a description of the physical environmental conditions in the vicinity of a project that exist at the time of the NOP. The NOP for the Proposed Project was published in late 2021; accordingly, the LAHD has determined that 2021 is the baseline year for the CEQA analysis. The CEQA baseline conditions are described in Section 2.6.

3.2.23 Thresholds of Significance

The significance criteria are based on Appendix G of the CEQA Guidelines. The IS/NOP for the Proposed Project (Appendix A) concluded that impacts related to CEQA Guidelines Appendix G checklist issues IV b) through f) would be either less than significant or there would be no impact. Accordingly, the analysis in this Draft EIR considers only checklist issue IVa), "*Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?"* Impacts of the Proposed Project and alternatives on biological resources are considered to be significant if they would:

BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

3.2.24 Impact Determination

Proposed Project

Impact BIO-1: Would the Proposed Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Some upland species of birds such as sparrows and finches may use bushes and trees on the site for nesting, but no candidate, sensitive, or special-status bird species (see Table 3.2-1) are known to nest or forage on the Project site. Because the Project site is largely vacant and sparsely vegetated, bats are unlikely to be present.

With respect to marine bird species, the project site is unlikely to serve as nesting habitat for any sensitive species because of its disturbed nature. California least terns nest on Pier 400, nearly three miles from the Project site, and the harbor waters adjacent to the Project site are not considered critical foraging habitat for California least tern or the other listed marine bird species. Snowy plovers have not nested in the harbor in at least 20 years, and no suitable nesting habitat is present in or near the Project site.

Two protected species of marine mammals (California sea lion and harbor seal) are likely to occur in the waters of the East Basin. As described in Section 3.2.2.2, California sea lions are common in the Port, including in the vicinity of the Project site, and harbor seals occasionally can be seen resting on riprap or buoys in various locations throughout the

Port, although they rarely frequent the East Basin. As described in Section 3.2.2, cetaceans (whales, porpoises, and dolphins) have not been observed in the East Basin and therefore no adverse effects on cetaceans from project construction or operation would be expected.

Construction

The Proposed Project would involve upland and in-water construction activities. Upland construction would remove much of the vegetation on the site and replace it with paving. No sensitive upland species would be adversely affected by construction because the project site does not constitute critical habitat for those species, which in any case are not known to occur on the site.

In-water construction could affect sensitive bird species, sea lions and harbor seals, and fish through general disturbance from construction activity and, more particularly, turbidity and underwater noise from pile driving (considered separately below). Approximately 41 new timber piles would be installed as part of the required wharf repairs, 11 existing timber piles along the wharf face would be replaced in kind, and another 47 timber piles would be installed along the face of the wharf at Berth 191 to support the Yokohama fenders (see Section 2.5.1). The new piles would occupy no more than 280 square feet of existing soft-bottom habitat and would themselves provide habitat for the encrusting organisms typical of pilings (e.g., Wood E&I 2021). Accordingly, there would be no net loss of marine habitat. With respect to general construction activity, sea lions and seals would be expected to avoid or move away from areas of disturbance. Both species are acclimated to the active harbor environment, and both would be able to use other areas in the Port if construction activities forced them from the work area. No critical habitat for either species is present at the Proposed Project site. Fish, including species managed under the Coastal Pelagics and Pacific Groundfish FMPs, would likewise be expected to avoid the immediate vicinity of construction activity.

Turbidity: Pile installation and any clean-up dredging that may be necessary, with the resultant turbidity, would be unlikely to affect foraging by terns. As described in Section 3.2.2.2, least terns do not utilize the East Basin to any great extent as a foraging area: very few terns were observed in the East Basin in the 2000, 2008, or 2013 harbor-wide biological surveys and none in the 2018 Biological Surveys (Wood E&IS 2021). Foraging studies in 2001, 2002, 2014, and 2019 all showed that the East Basin was among the least used area in the Harbor (Keane Biological Consulting 2003, eGIS 2015, and Langdon Biological Consulting 2021). Furthermore, existing data do not suggest that dredging activities adversely affect least tern foraging (Keane and Smith 2016); as that study focused on turbidity during dredging, the same would be true of the more limited turbidity generated by pile removal and installation. In addition, the water quality management plan that would be required by the LARWQCB's CWA 401 certification employed during clean-up dredging and pile removal/driving (see Section 3.2.4.1) would limit the extent and severity of turbidity. Accordingly, the extent and duration of turbidity that would be generated by pile removal and driving and the clean-up dredging of up to 1,500 cubic yards of sediment and debris would be too limited to have an adverse effect on foraging activity, even if such foraging were to occur. Likewise, the limited extent of turbidity would prevent substantial adverse effects on EFH for managed fish species.

If sediment testing shows that dredged material is suitable for unconfined aquatic disposal, dredged sediments could be disposed of at the LA-2 ocean disposal site located approximately 5 miles south-southwest of the entrance to Los Angeles Harbor. Impacts from disposal of dredged sediments at LA-2 were evaluated during the site designation

process and subsequently evaluated in consideration of a higher maximum annual disposal volume, and found to be less than significant (USEPA and USACE 2011).

Western snowy plovers, while occasional visitors to the Port, have never been observed resting or foraging in the East Basin, and no suitable nesting or foraging habitat exists there. Brown pelicans and double-crested cormorants frequent the East Basin, but they are acclimated to human activity, including construction projects, and forage widely throughout the Port Complex. The special-status Caspian tern has occasionally been observed in the East Basin; that species would experience impacts similar to those described for California least terns. The remaining special-status birds seldom or never occur in the Proposed Project area, and none are known to nest there. No critical habitat for any of the special-status bird species is present at or near the Project site.

Noise and Vibration: Installation of the new and replacement piles would be accomplished using impact hammers. The sound volume produced during pile driving is determined by the size and type of pilings – larger piles and steel piles generally produce higher sound volume than smaller timber or concrete piles – and by method of driving, sediment conditions, bathymetry, and oceanographic conditions. According to Caltrans (2020), data on noise from impact driving of timber piles are limited, but the evidence cited in Appendix I of the Caltrans report indicates that peak noise levels in the range of 170 - 182 dB could occur.

Sound transmission in the underwater environment can be affected by local bathymetry, substrates, currents, and stratification of the water column. Underwater noise is of concern because marine mammals and fish can be disturbed and even injured by high sound levels. Studies have shown a range of behavioral modifications by whales, dolphins, and pinnipeds in response to chronic anthropogenic noise (Erbe et al. 2019) and permanent hearing impairment from both chronic and short-term noise (NOAA Fisheries 2018). Technical guidance from NOAA Fisheries (2018) establishes a disturbance threshold (Level B harassment) of 160 dBRMS (decibels Root Mean Square) for marine mammals. Exposure to sound at this level would likely cause avoidance, but not injury, for marine mammals. The current Level A harassment (injury) thresholds for impulsive sounds (e.g., pile driving) range from 185 dB to 218 dB for seals, and from 203 dB to 232 dB for sea lions (LAHD 2017b); cetaceans are not considered in this analysis, because as discussed in Section 3.2.2, none are likely to occur at or near the Project site.

Driving timber piles is assumed to cause peak underwater noise levels of 170 to 180 dB (160 to 168 RMS) at 10 meters from the pile being driven (Caltrans 2020), which would not exceed the Level A threshold for seals and sea lions but could exceed the Level B threshold (LAHD 2017b). Noise levels 20 meters from the driving site would be approximately 10 dB less, which would not exceed either Level A or Level B thresholds (Caltrans 2020). Accordingly, noise from impact pile-driving during pile installation could cause seals and sea lions to avoid the immediate (i.e., within 20 meters) area of construction during pile-driving, but would likely not result in harassment or the loss of individuals or habitat.

Underwater noise from pile driving and other in-water construction could affect managed fish species in the Coastal Pelagics and Pacific Groundfish FMPs and the fish that are prey for managed species. Acoustic impacts may include avoidance of the area, injury, or death; smaller fish are more susceptible to acoustic injury. Scientific investigations on the effect of noise on fish indicate that sound levels below 183 to 187 dB do not appear to result in any acute physical damage or mortality to fish (ICF and Illingworth & Rodkin, 2009), and a consortium of federal and state wildlife agencies and highway authorities

has established an "interim injury criterion" for fish of 206 dB_{peak} (Caltrans 2020). The most common behavioral changes include temporary dispersal of fish schools. Since in-water construction activities would not generate peak noise levels in excess of 182 dB, managed fish species would not experience injury or loss of individuals. Furthermore, the small size of the area that would be affected in relation to the total harbor habitat utilized by managed species, particularly fish in the Coastal Pelagics FMP, means that the number of individuals of managed species that could be affected would be small relative to the populations in the Port.

Construction-related noise, including noise from pile driving, could cause special-status marine birds to avoid the construction area. However, as noted above, such species are very infrequent visitors to the Project area.

Operation

Operation of the Proposed Project would not adversely affect any of the special-status bird species listed in Table 3.2.3-1 because, as described above, such species are unlikely to use the Project site for foraging or resting. The addition of up to 24 vessels annually to harbor vessel traffic would not result in a loss of habitat or individuals for sensitive birds that use the water surface for resting or foraging. No critical habitat for any listed or special status bird, marine mammal, or sea turtle species is present in the vicinity of Berths 191-194; therefore, no critical habitat would be affected by operation of the Proposed Project.

Vessel Operations: Underwater sound from cargo vessels and the tugboats used to maneuver them to and from Berth 191 would add to the existing vessel traffic noise in the Outer Harbor, Main Channel, and East Basin, thus potentially affecting marine mammals. Because the increase of 24 vessels would be small relative to the total number of vessels calling in the Port of Los Angeles (1,863 in 2021), the Proposed Project would not result in a substantial change in overall noise. Additionally, transits would be of short duration and distance, few individual animals would be affected, and those present would be expected to avoid sound levels that could cause damage to their hearing. Therefore, the increase in vessel calls would not adversely affect sensitive species in the Outer Harbor, the Main Channel, or the East Basin.

Vessels approaching Angel's Gate would pass through nearshore waters, and sound from their engines and drive systems could disturb marine mammals, including whales and dolphins, in the vicinity. However, few whales and dolphins would be affected because the animals are generally sparsely distributed offshore (Forney et al. 1995) and because the change in vessel activity under the Proposed Project would not substantially alter the underwater sound environment. 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). Noise levels associated with vessel traffic, including near heavily used ferry terminals, generally range between 120 and 143 dB (WSDOT 2015; ICF and Illingworth & Rodkin 2009), which is below the injury threshold of 180 dB_{RMS} for cetaceans and 190 dB_{RMS} for pinnipeds. Accordingly, injury from vessel noise is unlikely.

As discussed in Section 3.2.2.2, cargo ships transiting the coastal waters of Southern California to and from Berth 191 could potentially cause harm by colliding with endangered, threatened, or species of concern, such as marine mammals and sea turtles. However, there is a low probability of additional strikes attributable to the Proposed Project. The 24 additional vessel calls annually resulting from the Proposed Project, compared to the CEQA baseline, would be a minor increase in overall vessel calls to the

Port. Furthermore, the compliance with the Vessel Speed Reduction Program (see Section 3.1 Air Quality) means that in the approaches to Los Angeles Harbor, where whale abundances are likely to be highest (see Section 3.2.2), vessels associated with the Proposed Project would be moving at 12 knots or less, a speed which would materially reduce the risk of collision with whales.

Spills and Leaks: Accidental spills of fuel or other vessel fluids during operation could occur as a result of a vessel collision, which could have adverse effects on special-status species through toxicity and physical coating. The likelihood of a collision resulting in a spill is considered remote, because experienced Port pilots are used to navigating cargo vessels through the harbor. Vessels are required to travel at slow speeds in the harbor, and tugs are used to guide vessels to and from the berths. However, if an accident were to occur that resulted in a release of vessel fuels or lubricants into harbor or ocean waters, the existing spill response mechanisms in the Los Angeles-Long Beach Harbor would limit the severity and consequences of the spill.

Accidental spills of pollutants during terminal operations on land would be small because large quantities of such substances would not be used. 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. Furthermore, the site drainage system would include BMP devices to process site runoff prior to discharge to the East Basin in accordance with the Industrial General Permit (IGP), MS4, and LID requirements (see Section 2.5.1 for further information). These measures would reduce the likelihood of upland spills from terminal operations adversely affecting marine organisms.

Light: Night lighting during operations would be greater than under baseline conditions, as the facility would include safety lighting to support 24-hour operations. However, the lighted area would be set back approximately 100 feet from the shoreline, so the increase in light intensity at the water surface would be minimal. This is particularly true given the existence of the YTI container terminal on the other side of the East Basin; that facility is characterized by bright area lighting, including crane lights shining downward at the shoreline. Accordingly, the Proposed Project's influence on nighttime light intensity in the East Basin area would be insubstantial.

Impact Determination

As described above, construction of the Proposed Project is not likely to result in the loss of individuals of a state or federally listed endangered, threatened, rare, protected, candidate, managed, or sensitive species or a Species of Special Concern, or the reduction of critical habitat for those species or of EFH for managed fish species. In-water construction would cause localized turbidity that could affect birds, fish, and marine mammals. However, these impacts would be temporary and limited to the waters in the vicinity of construction activities. In addition, the small size of the Project site relative to the Port and the fact that the Project area is not heavily utilized by sensitive species reduce the likelihood and severity of potential adverse effects. Implementation of required water quality monitoring during clean-up dredging according to the requirements of the RWQCB, implementation of standard dredging BMPs via adaptive management of the clean-up dredging, and the requirement for a pre-construction *Caulerpa* survey would further reduce adverse impacts. The combination of the temporary and localized nature of construction effects, the small number of individuals of sensitive species that would be affected, and the implementation of standard construction controls would ensure that impacts related to turbidity would be less than significant.

Sediment management and disposal would be conducted in accordance with the conditions in the USACE and Los Angeles Regional Water Quality Control Board (LARWQCB) permits and the requirements of the LA-2 site management and monitoring plan (USEPA and USACE 2011). These controls include pre-dredge testing, water quality monitoring, and adaptive management and use of BMPs. As a result of these controls, turbidity at disposal sites, including the LA-2 site, would be localized and temporary, and impacts on special-status species and their habitats would be less than significant. Because sediments disposed of at inland landfills or the LA-2 site would be managed at those sites in accordance with the facility permits and BMPs, impacts of disposal would be less than significant.

In-water construction equipment (barges, workboats, tugs, and crane delivery vessels) would cause localized noise that could affect birds and marine mammals. However, these impacts would be temporary and limited to the waters in the vicinity of construction activities. Pile driving is not anticipated to result in disturbance (Level B harassment) to marine mammals (harbor seals and sea lions) in the vicinity of pile-driving operations, nor result in the loss of individuals of managed fish species. Nevertheless, because the possibility of adverse effects on marine mammals related to underwater noise cannot be eliminated, impacts of in-water construction related to underwater noise could be significant. Accordingly, mitigation measure MM BIO-1 (Protect Marine Mammals) would be required. With implementation of this measure, impacts on marine mammals and managed fish species would be less than significant.

Terminal activity under the Proposed Project, including increased vessel calls, would be greater than the CEQA baseline; however, operational activities would result in no loss of EFH or of habitat for rare, threatened, endangered, protected, or candidate species, or species of special concern. There would be no impacts on critical habitat because no critical habitat is present in the vicinity of Berths 191-194. Increased vessel activity from the Proposed Project (i.e., 24 additional vessels per year) could result in a slightly increased underwater noise environment. However, impacts would be less than significant because this increase would not result in an exceedance of regulatory guidelines for underwater noise nor lead to the loss of individuals or habitat of sensitive species. The risk of spills from vessels and from landside operations would be small, and the impacts would be less than significant.

The increase in vessel traffic would incrementally increase the likelihood of vessel collisions with marine mammals or sea turtles, which could result in injury or mortality. This impact would be less than significant because, given the minor increase in vessel traffic in the Port (up to 24 additional vessels per year above baseline) and the low speed of most vessels in compliance with the Port's Vessel Speed Reduction program, the probability of additional vessel strikes would be very low.

Mitigation Measures

Mitigation measure MM BIO-1 would reduce impacts to marine mammals to less than significant.

> **MM BIO-1: Protect marine mammals.** Although it is expected that marine mammals will voluntarily move away from the area at the commencement of the "soft start" of pile-driving activities, as a precautionary measure, pile-driving activities occurring as part of the pile installation will include establishment of a safety zone, by a qualified marine mammal professional, and the area surrounding the operations (including the safety zones) will be monitored for marine mammals by a

qualified marine mammal observer[1]. The pile driving site will move with each new pile; therefore, the safety zones will move accordingly.

Residual Impacts

With implementation of MM BIO-1, impacts would be less than significant.

Alternative 1 – No Project

Under the No Project Alternative (Alternative 1), no construction or new operational activities would occur at the project site. The existing Berths 191-194 site would be assumed to be vacant for the foreseeable future. The No Project Alternative (Alternative 1) would not preclude future improvements at the site, but any such improvements would need to be analyzed in a separate environmental document as a new project.

Impact BIO-1: Would Alternative 1 have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Under the No Project Alternative (Alternative 1), there would be no construction at Berths 191-194. Therefore, there would be no activities, including pile removal and driving or clean-up dredging, that could cause loss of individuals or habitat of special-status species.

Under the No Project Alternative (Alternative 1), there would be no vessel activity and, consequently, no potential for vessel strikes with protected species or spills from oceangoing vessels. There would be no change in stormwater discharges from the landside portion of the site.

Impact Determination

Because there would be no construction or operational activity at the Project site, no impacts would occur.

Mitigation Measures

No mitigation is required.

Residual Impacts

There would be no impacts.

Alternative 2 – Reduced Project

Under the Reduced Project Alternative (Alternative 2), all the physical features of the Proposed Project would be constructed. Only the operational activities would be reduced compared to the Proposed Project: instead of 24 vessel calls per year, the Reduced Project Alternative (Alternative 2) would have 18 vessel calls per year, and those vessels would likely be smaller than those serving the Proposed Project (see Section 2.7.1.2).

Impact BIO-1: Would Alternative 2 have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Construction of the Reduced Project Alternative (Alternative 2) would be identical to that of the Proposed Project. Operation of the Reduced Project Alternative (Alternative 2) would result in an increase in the number of vessel calls (18 per year) relative to the CEQA baseline of 1,863 vessel calls in Los Angeles Harbor. Accordingly, as with the Proposed Project, the risk of vessel strikes on marine mammals and sea turtles and the underwater noise environment would both increase relative to the CEQA baseline. However, the increases would be less than those of the Proposed Project.

Impact Determination

Because construction of the Reduced Project Alternative (Alternative 2) would be the same as the Proposed Project, there would be potentially significant impacts to marine mammals from pile driving-generated underwater noise. Impacts of operation would be less than those of the Proposed Project because of the lower activity levels, and would therefore, like those of the Proposed Project, be less than significant.

Mitigation Measures

Mitigation measure MM BIO-1 (Protect marine mammals) would be made part of Alternative 2.

Residual Impacts

With implementation of MM BIO-1, impacts would be less than significant.

Alternative 3 – Product Import Terminal

Under the Product Import Terminal Alternative (Alternative 3), in-water construction and maritime operational activities would be identical to the Proposed Project. The nature of the cargo carried by the vessels would be different, but those cargos, consisting of various cementitious materials in powder form, would also be non-hazardous.

Impact BIO-1: Would Alternative 3 have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Construction of the Product Import Terminal Alternative (Alternative 3) would be similar to that of the Proposed Project, particularly with respect to in-water work. Operation of the Product Import Terminal Alternative (Alternative 3) would be the same, from the perspective of biological resources, as that of the Proposed Project. Accordingly, the effects of operation on marine mammals and other sensitive species would be the same.

Impact Determination

Because construction of the Product Import Terminal Alternative (Alternative 3) would be similar to the Proposed Project, there would be potentially significant impacts to marine mammals from pile driving-generated underwater noise. Mitigation measure MM BIO-1 would reduce impacts to marine mammals to less than significant. Impacts of

operation on biological resources would be similar those of the Proposed Project, and would therefore, like those of the Proposed Project, be less than significant.

Mitigation Measures

Mitigation measure MM BIO-1 (Protect marine mammals) would be made part of Alternative 3.

Residual Impacts

With implementation of MM BIO-1, impacts would be less than significant.

3.2.25 Summary of Impact Determinations

Table 3.2-3 summarizes the impact determinations of the Proposed Project and its alternatives related to biological resources, as described in the 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 impact determination, 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 3.2-3. Summary Matrix of Potential Impacts and Mitigation Measures for Biological Resources Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts	Impact Determination	Applied Mitigation/Lease Measures or Controls	Residual Impacts
Proposed Project	**BIO-1**: Would the Proposed Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	**Potentially significant impact**	**MM BIO-1:** Protect marine mammals	Less than significant
Alternative 1 – No Project	**BIO-1:** Would Alternative 1 have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	No impact	Not applicable	No impact
Alternative 2 – Reduced Project	**BIO-1:** Would Alternative 2 have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	**Potentially significant impact**	**MM BIO-1:** Protect marine mammals	Less than significant

Table 3.2-3. Summary Matrix of Potential Impacts and Mitigation Measures for Biological Resources Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts	Impact Determination	Applied Mitigation/Lease Measures or Controls	Residual Impacts
Alternative 3 – Project Import Terminal	**BIO-1:** Would Alternative 3 have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	**Potentially significant impact**	**MM BIO-1:** Protect marine mammals	Less than significant

3.2.26 Mitigation Monitoring

Mitigation measure MM BIO-1 would be applied to the Proposed Project and Alternatives 2 and 3 as a condition of approval. Mitigation is not applicable to Alternative 1 (No Project).

Mitigation Measure	**MM BIO-1: Protect marine mammals.** Although it is expected that marine mammals will voluntarily move away from the area at the commencement of the "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, by a qualified marine mammal professional, and the area surrounding the operations (including the safety zones) will be monitored for marine mammals by a qualified marine mammal observer[1]. The pile driving site will move with each new pile; therefore, the safety zones will move accordingly. [1] Marine mammal professional qualifications shall be identified based on criteria established by LAHD during the construction bid specification process. Upon selection as part of the construction team, the qualified marine mammal professional shall develop site specific pile-driving safety zone requirements, which shall follow NOAA Fisheries Technical Guidance Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (NOAA 2016) in consultation with the acoustic threshold white paper prepared for this purpose by LAHD (LAHD 2017). Final pile-driving safety zone requirements developed by the selected marine mammal professional shall be submitted to LAHD Construction and Environmental Management Divisions prior to commencement of pile-driving.
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.

3.2.27 Significant Unavoidable Impacts

Neither the Proposed Project nor any of the alternatives would result in significant, unavoidable impacts.

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