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## Section 3.3 Biological Resources

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### SECTION SUMMARY

4 This section identifies the existing conditions of biological resources at the proposed Project site and  
5 analyzes the effects of the proposed Project or any alternative on biological resources at, and adjacent to,  
6 the Project site. A description of the proposed Project site is provided in Section 2.4.3, and presented in  
7 Figure 2-1. The primary features of the proposed Project and alternatives that could affect these resources  
8 include: improvement of the 41-acre backlands; dredging of approximately 20,000 cy at Berth 306;  
9 construction of approximately 1,250 lf of wharf at Berth 306; and operation of the marine terminal until  
10 2027.

11 Section 3.3, Biological Resources, provides the following:

- 12       ▪ A description of the existing environmental setting in the Harbor area;
- 13       ▪ A description of the existing terrestrial habitats and biological communities;
- 14       ▪ A description of the existing aquatic habitats and biological communities;
- 15       ▪ A description of vessel collisions with marine mammals and sea turtles;
- 16       ▪ A description of Essential Fish Habitat (EFH) and managed species found in the proposed Project  
17 vicinity;
- 18       ▪ A description of applicable local, state, and federal regulations and policies regarding biological  
19 resources that are applicable to construction or operational activities associated with the proposed  
20 Project or alternatives;
- 21       ▪ A discussion on the methodology used to determine whether the proposed Project or alternatives  
22 adversely affect biological resources in the proposed Project site;
- 23       ▪ An impact analysis of both the proposed Project and alternatives; and,
- 24       ▪ A description of any mitigation measures proposed to reduce any potential impacts, as applicable.

25 **Key Points of Section 3.3:**

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

28 Mitigation measures for biological resources (**MM BIO-1**) and air quality (**MM AQ-10**), as well as a  
29 standard condition of approval (**SC BIO-1**), are applicable to the proposed Project and Alternatives 5 and  
30 6. Due to disturbance of the 41-acre backlands, mitigation measure **MM BIO-1** also applies to  
31 Alternative 4. With implementation of the following mitigation measures and standard condition of  
32 approval, there would be no potential for significant impacts:

- 1       ▪ **MM BIO-1. Conduct nesting bird surveys.** This measure applies only if construction on the  
2       41-acre undeveloped area is to occur between February 15 and September 1. Prior to  
3       ground-disturbing activities, a qualified biologist shall conduct surveys for the presence of tern  
4       nests on the 41-acre backlands, and within the proposed Project site that contains potential  
5       nesting bird habitat. Surveys shall be conducted no later than 1 week prior to the clearing,  
6       removal, or grubbing of any vegetation or ground disturbance. If active nests of species protected  
7       under the MBTA and/or similar provisions of the California Fish and Game Code (i.e., native  
8       birds including but not limited to the black-crowned night heron) are located, then a barrier  
9       installed at a 50–100 foot radius from the nest(s) shall be established. The barrier will remain  
10      until a qualified biologist determines that the young have fledged or the nest is no longer active.
- 11      ▪ **SC BIO-1. Avoid marine mammals.** Although it is expected that marine mammals will  
12      voluntarily move away from the area at the commencement of the vibratory or “soft start” of  
13      pile-driving activities, as a precautionary measure, pile-driving activities occurring as part of the  
14      wharf extension shall include establishment of a safety zone, and the area surrounding the  
15      operations will be monitored by a qualified marine biologist for pinnipeds. A 100-meter-radius  
16      safety zone will be established around the pile-driving site and monitored for marine mammals.  
17      As the pile-driving site will move with each new pile, the 100-meter safety zone shall move  
18      accordingly.

19      Prior to commencement of pile-driving, observers on shore or by boat will survey the safety zone  
20      to ensure that no marine mammals are seen within the zone before pile-driving of a pile segment  
21      begins. If a marine mammal is observed within 10 meter of pile-driving operations, pile-driving  
22      shall be delayed until the marine mammals moves out of the area. If a marine mammal in the  
23      100-meter safety zone is observed, but more than 10 meter away, the contractor shall wait at least  
24      15 minutes to commence pile-driving. If the marine mammal has not left the 100-meter safety  
25      zone after 15 minutes, pile-driving can commence with a “soft start.” This 15-minute criterion is  
26      based on a study indicating that pinnipeds dive for a mean time of 0.50 minutes to 3.33 minutes;  
27      the 15-minute delay will allow a more than sufficient period of observation to be reasonably sure  
28      the animal has left the proposed Project vicinity.

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

35      Following is a brief description of the related mitigation measure from Section 3.2, Air Quality,  
36      Meteorology, and Greenhouse Gases, which would further reduce the potential for vessel collision with  
37      marine mammals:

- 38      ▪ **MM AQ-10: Vessel Speed Reduction Program.** All ships calling at Berths 302-306 shall  
39      comply with the expanded VSRP of 12 knots between 40 nautical miles (nm) from Point Fermin  
40      and the Precautionary Area in the following implementation schedule: 2014 and thereafter: 95  
41      percent.

### 3.3.1 Introduction

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

- Improvement of the 41-acre backlands adjacent to Berth 306;
- Dredging of approximately 20,000 cy at Berth 306; and
- Construction of approximately 1,250 lf of wharf at Berth 306; and
- Operation of the marine terminal until 2027.

Examples of options for disposal of dredged sediments include: beneficial reuse (such as beach nourishment), confined aquatic disposal (CAD), use of a confined disposal facility (CDF), upland disposal, and use of an Ocean Dredged Material Disposal Site (ODMDS). Dredged sediments would be disposed of via three potential methods:

- Suitable sediments would be used as fill at the Cabrillo shallow water habitat in the Outer Harbor;
- Sediments unsuitable for unconfined aquatic disposal would be used at the Los Angeles Harbor Berths 243-245 CDF. Some suitable sediment could also be used at the CDF depending on the space availability at the CDF; and
- Suitable sediments could be used at the LA-2 Ocean Dredged Material Disposal Site (ODMDS).

Environmental effects associated with disposal at the LA-2 ODMDS were evaluated during the site designation process for LA-3 (USEPA and USACE, 2005). Biological impacts due to construction and fill of the CDF, as well as expansion and fill of the Cabrillo shallow water habitat, were evaluated in the Final Supplemental EIS/EIR for the Port of Los Angeles Channel Deepening Project (USACE and LAHD, 2009). This evaluation included mitigation for habitat loss at the Berths 243-245 CDF.

### 3.3.2 Environmental Setting

The Los Angeles Harbor is the number one port by container volume and cargo value in the United States. The Port alone handled approximately 6.7 million TEUs in calendar year 2009; this is down from 8.5 million TEUs in 2006. In addition, the Harbor provides berthing for cruise ships, sportfishing vessels, commercial fishing vessels, pleasure boaters, and Harbor support vessels. The physical size of the Harbor, diversity of Harbor uses, and ongoing upgrade and development projects result in continuous Harbor modifications. Thus, Harbor waters are subjected to continuous vessel traffic and periodic construction or modification, such as dredging and filling. Commercial vessels and recreational boats produce high levels of underwater noise; ambient noise in San Francisco Bay/Oakland Harbor has been estimated at 120 to 155 dB<sub>PEAK</sub> (or the peak sound pressure level in decibels) (ICF and Illingworth and Rodkin, 2009). A recent baseline hydroacoustic study in Cerritos Channel (in both Los Angeles and Long Beach Harbors) recorded L<sub>90</sub> values (sound levels that were exceeded 90 percent of the time during the measurement period) of 120 to 132 dB (Tetra Tech, 2011). By comparison,

1 ambient noise in the open ocean has been estimated at 74 to 100 dB<sub>PEAK</sub> on the central  
2 California coast.

3 Biological resources in the Port Complex have been described in several environmental  
4 documents, including the Los Angeles and Long Beach Deep Draft Navigation  
5 Improvement EIS/EIR (USACE and LAHD, 1992), West Basin Entrance Widening  
6 Project EIR (LAHD, 1991), Pier 400 (LAHD, 1999), Channel Deepening Project  
7 (USACE and LAHD, 2000, 2009), and biological surveys (MEC, 1988; MBC et al. 2007;  
8 MEC and Associates, 2002; MBC, 2009a, b; SAIC, 2010). The following description of  
9 biological resources incorporates information from these previous environmental  
10 documents, including information from the recent 2008 surveys. Biological resource  
11 sampling throughout the Harbor is not undertaken on an annual basis, and the most recent  
12 comprehensive surveys were completed in 2008.

13 Over the years, the Ports of Los Angeles and Long Beach have worked with the state and  
14 federal resource agencies to conduct periodic evaluations of biological resources within  
15 the Port Complex, which define baseline conditions for habitat assessments associated  
16 with Harbor development projects. Based on these assessments, the resource agencies  
17 and the Ports determine appropriate Harbor habitat values, as necessary. The major  
18 assessment conducted in 2000 resulted in modification of the mitigation values in the  
19 Harbor (LAHD, 2004). These modifications were indicative of a gradual increase in  
20 habitat value in the Main Channel and resulted in an increase in mitigation requirements  
21 in the Main Channel from lower value Inner Harbor habitat to higher value Outer Harbor  
22 habitat. While still valuable, the remainder of the Inner Harbor was identified as having  
23 lower habitat values relative to the deep and shallow waters of the Outer Harbor (see  
24 MEC and Associates, 2002; LAHD, 2004). The waters to the east of the APL Terminal  
25 are classified as shallow Outer Harbor, while the waters south of the terminal are deep  
26 Outer Harbor (LAHD, 2004).

27 In general, marine resource fluctuations along the California Coast and in the Harbor can  
28 occur both seasonally and annually based on general fluctuations in the environment  
29 including, but not limited to, the amount of rainfall and El Niño events. However, in  
30 general, substantial improvements in habitat quality associated with improved water  
31 quality in the Harbor occurred in the period between the 1970s and mid 1980s. Further  
32 improvements in marine resources have occurred since that time, though at a slower pace  
33 than in the previous 10-year period (MEC and Associates, 2002). The types of habitats  
34 (shallow and deep pelagic, benthic, riprap, and piling in the Inner Harbor and Outer  
35 Harbor) and the species associated with them have remained fairly predictable as  
36 described for each habitat below. Perhaps the most significant change has been the  
37 expansion of eelgrass habitat at Cabrillo Beach and the Shallow Water Habitat off Pier  
38 300 (MEC and Associates, 2002; MBC, 2005; SAIC, 2010). The Shallow Water Habitat  
39 site off Pier 300 was constructed, and eelgrass was planted in winter 2002-3, as  
40 mitigation for the Pier 400 project (which was implemented as part of the Los Angeles  
41 and Long Beach Harbors Deep Draft Navigation Improvements Project). The site was  
42 augmented with additional sediment and eelgrass plants in 2007 (SAIC, 2010).

43 Based on the information summarized above, data from the mid 1980s to 2008 accurately  
44 reflect current environmental conditions in the Harbor because those conditions have  
45 remained about the same or even improved. The 2002 MEC report was the first survey  
46 that included an enumeration and identification of what species constitute non-native taxa  
47 that have been introduced over time to the Port Complex.

1 The aquatic habitats surrounding the APL Terminal include deep channel (approximately  
2 -55 to -60 ft MLLW off Berths 302-305) and shallow water habitats (approximately -16  
3 to -26 ft MLLW). These differences in depth result in corresponding differences in water  
4 and sediment characteristics as well, such as water temperature and grain size. Therefore,  
5 infauna, riprap invertebrate, and fish communities at the Shallow Water Habitat off  
6 Pier 300 more closely resemble the communities collected at Cabrillo Beach, which is  
7 similar habitat. Likewise, biological communities in the channel south of Pier 300 more  
8 closely resemble those from similar depths (MEC and Associates, 2002; SAIC, 2010).  
9 Where possible, site-specific data from sampling locations (stations) adjacent to Pier 300  
10 were used to characterize the biological communities.

### 11 3.3.2.1 Terrestrial Habitats

12 All of the proposed Project site and adjacent areas are already developed and paved, with  
13 the exception of the 41-acre backlands. As such, very little vegetation or terrestrial  
14 habitats exist at the proposed Project site. The 41-acre backlands was created using  
15 dredged material from the Channel Deepening Project, and construction was completed  
16 in 2005. It was surveyed for the proposed Project by biologists on January 12, 2010  
17 (Figure 3.3-1). Prior to the survey, biologists reviewed aerial photographs and  
18 information on sensitive plant and animal species that could potentially occur in the area  
19 from the California Natural Diversity Data Base (CNDDDB) and California Native Plant  
20 Society (San Pedro and Long Beach Quadrangles). The CNDDDB and Native Plant  
21 Society data sources provided information on the historical presence and numbers (if any)  
22 of sensitive resources at the proposed Project site. The CNDDDB included species listed  
23 as threatened or endangered (or proposed for listing) by the California Fish and Game  
24 Commission, the U.S. Secretary of the Interior (for U.S. Fish and Wildlife Service), and  
25 the U.S. Secretary of Commerce (National Oceanographic and Atmospheric  
26 Administration). Summary tables from the CNDDDB are included in Appendix F1.

27 Photographs of the proposed Project site are presented in Appendix F2. Russian thistle  
28 (*Salsola tragus*, also ‘tumbleweed’) was the dominant plant species, and grew in a patchy  
29 distribution on the flat 41-acre expanse. Two other species were relatively common:  
30 bassia (*Bassia hyssopifolia*) and slender-leaved iceplant (*Mesembryanthemum*  
31 *nodiflorum*). These two species and all of the other less-common species listed in  
32 Table 3.3-1 were found on the perimeter of the backlands. Only three of the species  
33 identified are classified as native [mule fat (*Baccharis salicifolia*), telegraph weed  
34 (*Heterotheca grandiflora*), and wire lettuce (*Stephanomeria virgata*)]. During the  
35 January 2010 survey, the only wildlife observed on the backlands was a rabbit (probably  
36 desert cottontail [*Sylvilagus audoboni*]). There was no other evidence of habitat use,  
37 such as tracks or scat, by mammals.

38



1 **Figure 3.3-1: Location of APL Terminal Project site, including 41-acre backlands, and**  
2 **triangular habitat area.**  
3

**Table 3.3-1: Plant Species Observed in the 41-acre Backlands Area, January 2010**

| Common name             | Scientific name                | Abundance  | Status          |
|-------------------------|--------------------------------|------------|-----------------|
| Bassia                  | <i>Bassia hyssopifolia</i>     | Common     | Introduced weed |
| Bristly ox-tongue       | <i>Picris echioides</i>        | Occasional | Introduced      |
| Flax-leaved horseweed   | <i>Conyza bonariensis</i>      | Occasional | Introduced      |
| Mule fat, Seep-willow   | <i>Baccharis salicifolia</i>   | Occasional | Native          |
| Russian thistle         | <i>Salsola tragus</i>          | Abundant   | Noxious weed    |
| Slender-leaved iceplant | <i>M. nodiflorum</i>           | Common     | Introduced      |
| Sow-thistle             | <i>Sonchus</i> sp.             | Occasional | Introduced      |
| Telegraph weed          | <i>Heterotheca grandiflora</i> | Occasional | Native          |
| Tree Tobacco            | <i>Nicotiana glauca</i>        | Occasional | Introduced      |
| Unidentified grasses    | Poaceae                        | Occasional | Introduced      |
| White sweetclover       | <i>Melilotus alba</i>          | Occasional | Introduced      |
| Wire lettuce            | <i>Stephanomeria virgata</i>   | Occasional | Native          |

1 There is also a small, triangular-shaped parcel adjacent to the proposed Project site at the  
2 northeast corner of the terminal (identified as an “Accreted Area” on Figure 3.3-1). This  
3 area would not be developed or disturbed, but was surveyed in January 2010 to document  
4 visible plant and animal species. This site consists of sandy intertidal and terrestrial plant  
5 species growing at higher elevations. Plant species observed during the January 2010  
6 survey are listed in Table 3.3-2. Two species of shorebirds were observed in the  
7 intertidal zone: marbled godwit (*Limosa fedoa*) and willet (*Tringa semipalmatus*), and  
8 western meadowlark (*Sturnella neglecta*) was observed in the upland area.

**Table 3.3-2: Plant Species Observed Adjacent to the Northeast Corner of the Proposed Project Site (Triangular Habitat), January 2010**

| Common name           | Scientific name                | Abundance  | Status               |
|-----------------------|--------------------------------|------------|----------------------|
| Bassia                | <i>Bassia hyssopifolia</i>     | Common     | Introduced weed      |
| California broom      | <i>Lotus scoparius</i>         | Occasional | Native               |
| Castorbean            | <i>Ricinus communis</i>        | Occasional | Introduced           |
| Highway iceplant      | <i>Carpobrotus edulis</i>      | Abundant   | Introduced, invasive |
| Mule fat, Seep-willow | <i>Baccharis salicifolia</i>   | Common     | Native               |
| Pampas grass          | <i>Cortaderia</i> sp.          | Uncommon   | Introduced           |
| Telegraph weed        | <i>Heterotheca grandiflora</i> | Occasional | Native               |
| Tree Tobacco          | <i>Nicotiana glauca</i>        | Occasional | Introduced           |

## 9 3.3.2.2 Benthic Environments

### 10 3.3.2.2.1 Soft-Bottom Habitats

11 Organisms that live on and in the bottom sediments act to modify the character of the  
12 bottom. Those that live in the sediments, primarily invertebrate species, are referred to as  
13 infauna, while those living on the sediment surface are referred to as epifauna. These  
14 species are important as a food source for fish, crabs, and other benthic organisms. Since

1 the 1950s, improvements in water quality have aided the establishment of diverse  
2 assemblages of benthic animals in previously disturbed Inner Harbor and channel areas  
3 which were once largely devoid of marine life (MEC and Associates, 2002; SAIC, 2010).  
4 Data from the 1970s show that the polychaete *Tharyx parvus* accounted for most of the  
5 benthic organisms in soft-bottom samples (Soule and Oguri, 1976; USACE, 1980). An  
6 assessment of dominant species in the Harbor indicates a gradient of increasing  
7 environmental stress (enrichment/contamination) from the Outer Harbor to Inner Harbor  
8 and from basins to slips (MEC and Associates, 2002). The most recent infaunal  
9 assessment documented relatively similar densities between Inner Harbor and Outer  
10 Harbor, but densities at shallow water stations were markedly higher than those in deeper  
11 water (SAIC, 2010). The proposed wharf/berth areas at the APL Terminal are considered  
12 deep water habitat. Highest species diversity and abundance were recorded at the  
13 Pier 300 Shallow Water Habitat (SAIC, 2010). Over time, there has been an increasing  
14 tendency of movement of healthy Outer Harbor assemblages up the Main Channel and  
15 improved benthic indicators in the Inner Harbor areas (MEC and Associates, 2002;  
16 MBC, 2009a; SAIC, 2010).

17 In 2008, one station (Station LA9) was sampled in winter and summer at the proposed  
18 Project site off Berth 303 (SAIC, 2010). In winter, 25 infaunal taxa were collected, and  
19 the most abundant species were the polychaetes *Laonice cirrata* and *Pista wui*, the ghost  
20 shrimp *Neotrypaea gigas*, and the Asian clam (*Theora lubrica*). The Asian clam is  
21 thought to have been introduced from the Western Pacific, and was first recorded by the  
22 Intersea Research Corporation (IRC) in the West Basin of Los Angeles Harbor in 1980  
23 (IRC, 1981). The abundance of non-native species such as the Asian clam has increased  
24 throughout the Los Angeles and Long Beach Harbor complex since the 1970s. About  
25 12 percent of the infaunal abundance collected in 2008 was comprised of non-indigenous  
26 taxa, including the Asian clam, which was collected at 86 percent of the stations sampled  
27 and accounted for 10 percent of infaunal abundance. In summer 2008, abundance was  
28 higher than in winter and twice as many species (50) were collected. The most abundant  
29 taxa were the Asian clam, the mollusk *Gadilla aberrans*, and the polychaetes *Paramage*  
30 *scutata* and *Pista agassizi*.

31 In 2008, the biomass of invertebrates in sediments off Berth 303 averaged 15.3 grams per  
32 0.1 square meter ( $\text{g}/0.1 \text{ m}^2$ ) (SAIC, 2010). Annual and seasonal variations in density of  
33 infaunal organisms are to be expected as a result of variations in oceanographic (chemical  
34 and physical) conditions over time and human activities (USACE and LAHD, 1992).

35 Epifaunal invertebrates associated with, but not living in, soft-bottom sediments are  
36 generally larger than infaunal organisms and are also referred to as macroinvertebrates.  
37 These species are most commonly caught during trawl sampling. Epifaunal abundance  
38 varied spatially and temporally in the 2008 surveys of the Port Complex. The number of  
39 individuals per trawl was five times higher at night (103 individuals) than during the day  
40 (21 individuals), although epifaunal biomass was similar between night and day.

41 One trawl station adjacent to the proposed Project site was sampled in 2008: Station LA7,  
42 located at the Pier 300 Shallow Water Habitat at a depth of 16 ft. A combined mean of  
43 six epifaunal invertebrate species were collected at that location in 2008, with a mean of  
44 two species collected during the day sampling and a mean of five species collected at  
45 night (SAIC, 2010). Mean abundance at the station was substantially higher at night  
46 (62 individuals) than during the day (2 individuals). Another station (Station LA1) was  
47 sampled in the Outer Harbor just northwest of Angel's Gate at a depth of 72 ft. A



1 combined mean of 11 epifaunal species was collected at that station, with a mean of four  
2 species collected during day sampling and a mean of six species collected at night. Mean  
3 abundance was similar between day (65 individuals) and night (74 individuals).  
4 Throughout the Port Complex the most abundant invertebrates were: blackspotted bay  
5 shrimp (*Crangon nigromaculata*; 38 percent of total abundance), ridgeback rock shrimp  
6 (*Sicyonia ingentis*; 16 percent), blacktail bay shrimp (*Crangon nigricauda*; 14 percent),  
7 and Xantus swimming crab (*Portunus xantusii*; 11 percent). Blackspotted bay shrimp,  
8 Xantus swimming crab, and shrimp of the genus *Heptacarpus* were collected at all  
9 stations during the 2008 surveys.

10 Surveys in the Outer Harbor in 2006 and 2007 by the City of Los Angeles indicate that  
11 the composition of the epifaunal community has remained relatively consistent with time,  
12 with blackspotted bay shrimp and New Zealand bubble snail (*Philine auriformis*)  
13 recorded as the most widespread and abundant taxa collected (CLA-EMD, 2008). In  
14 2006-2007, however, ridgeback rock shrimp was by far the most abundant invertebrate in  
15 trawl samples. Clade analysis<sup>1</sup> of fishes and invertebrates combined were indicative of  
16 species-site fidelity, and indicated that previous environmental perturbations in the Outer  
17 Harbor (such as construction of Pier 400 and ongoing fill) have less influence on the  
18 fish/invertebrate communities than in the past. Fish associated with soft bottoms are  
19 discussed in Section 3.3.2.3, Water Column Habitats.

#### 20 3.3.2.2.2 Hard Substrates

21 Surveys of invertebrate communities on riprap, pilings, and concrete were conducted at  
22 eight stations throughout the Port Complex in 2008 (SAIC, 2010). The surveys include  
23 quantitative observations by biologist-divers, as well as scraping samples that were  
24 preserved and analyzed in the laboratory. Elevations/depths of sampling stations were  
25 not measured; instead biologists used a combination of tidal zones and biological zones  
26 to delineate the upper intertidal, lower intertidal, and subtidal zones. For example, the  
27 “barnacle zone” distinguished the upper intertidal, while the “mussel zone” marked the  
28 lower intertidal. Mean abundance was highest in the lower intertidal (233 individuals per  
29 0.01 m<sup>2</sup>), lowest in the upper intertidal (140 individuals per 0.01 m<sup>2</sup>), and intermediate in  
30 the subtidal zone (183 individuals per 0.01 m<sup>2</sup>). Abundance was relatively similar  
31 between Inner and Outer Harbor stations, though highest abundance was recorded on the  
32 Middle Breakwater. Abundance was also relatively similar among substrate types. On  
33 average, the number of species was substantially higher in the low intertidal and subtidal  
34 zones (38 and 40 species, respectively) than in the upper intertidal (12 species). Mean  
35 biomass was similar among depth zones (24.1 to 25.6 grams per 0.01 m<sup>2</sup>).

36 In 2008, the upper intertidal zone (as measured in the scraped quadrats) was dominated  
37 by the barnacles *Chthamalus fissus*, *Balanus glandula*, and *Balanus crenatus*  
38 (SAIC, 2010). The dominant members of the lower intertidal and subtidal communities  
39 included the amphipods *Photis* spp. 1 and *Caprella simia*, and the brittlestar *Amphipholis*  
40 *squamata*. Divers observed several motile species, including California spiny lobster  
41 (*Panulirus interruptus*), kelp crabs (such as *Mimulus foliatus* and *Pugettia* spp.), and  
42 hermit crabs (*Pagurus* spp.). The riprap studies in 2000 identified a more robust  
43 community in Outer Harbor areas compared with the Inner Harbor (MEC and Associates,  
44 2002); however, the communities in 2008 appeared to be relatively similar among

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<sup>1</sup> Clade analysis of trawl data in the Outer Harbor examined the association, or co-occurrence, of species with one another.

1 locations with no distinct gradient between Inner and Outer Harbor. Overall, results  
2 suggested improved conditions in the riprap communities since 2000 (SAIC, 2010).

3 Of the 334 observed species in 2008, 12 were introduced and another 31 were considered  
4 cryptogenic (of unknown origin), indicating up to 13 percent of the riprap biota was  
5 potentially non-native in origin. The most conspicuous non-native species observed  
6 during 2008 was the bay mussel (or Mediterranean mussel, *Mytilus galloprovincialis*),  
7 although the most abundant was the amphipod *Caprella simia*.

8 During a biological survey in January 2010, intertidal/subtidal species observed on the  
9 riprap along the perimeter of the 41-acre backlands site included: bay mussel,  
10 short-spined sea star (*Pisaster brevispinus*), the barnacles *Balanus glandula* and  
11 *Chthamalus fissus*, file limpet (*Lottia limatula*), ribbed limpet (*Lottia digitalis*), festive  
12 murex (*Pteropurpura festiva*), and giant keyhole limpet (*Megathura crenulata*). The  
13 brown seaweed *Sargassum muticum* was growing on the riprap, and drift giant kelp  
14 (*Macrocystis pyrifera*) was observed occasionally near shore. Fish associated with hard  
15 substrates are discussed in the following Section 3.3.2.3, Water Column Habitats.

### 16 3.3.2.3 Water Column Habitats

17 Organisms in the water column include plankton (small floating animals and plants) and  
18 fish. Phytoplankton (plant) communities tend to be less diverse in the Inner Harbor than  
19 in the Outer Harbor, but productivity can be higher in the Inner Harbor due to warmer  
20 water temperatures, nutrient inputs, and reduced circulation (Allan Hancock Foundation,  
21 1980). Inner Harbor zooplankton (animal) communities are dominated by copepods that  
22 have seasonal peaks and declines. Ichthyoplankton (fish eggs and larvae) species and  
23 abundances vary on a spatial and temporal basis in Los Angeles and Long Beach Harbors.  
24 During three ichthyoplankton surveys throughout the Port Complex in 2008, the most  
25 abundant larval taxa included CIQ gobies (gobies of the genus *Clevelandia*, *Ilypnus*, and  
26 *Quietula*), combtooth blennies (*Hypsoblennius* spp.), bay goby (*Lepidogobius lepidus*),  
27 clingfishes (Gobiesocidae), yellowfin goby (*Acanthogobius flavimanus*), and white  
28 croaker (*Genyonemus lineatus*) (SAIC, 2010). Most of the fish eggs could not be  
29 identified during the study. The weighted mean abundance during 2008 was highest at  
30 Station LA7, which was located in the Pier 300 Shallow Water Habitat, where density  
31 (4,831 larvae per 100 m<sup>2</sup>) was nearly four times higher than the Harbor-wide mean  
32 (1,294 larvae per 100 m<sup>2</sup>). CIQ gobies comprised 93 percent of ichthyoplankton density  
33 at that station, followed by yellowfin goby (2 percent) and unidentified larvae (2 percent).  
34 Yellowfin goby is a non-native species common in bays and estuaries of California. It  
35 was first identified in Los Angeles Harbor around 1977 (Haaker, 1979). It was the only  
36 exotic adult/juvenile fish species collected during the 2008 fish surveys.

37 There is distinct stratification in the vertical distribution of ichthyoplankton in  
38 Los Angeles and Long Beach Harbors. In 2008, fish eggs were nearly twice as abundant  
39 (847 eggs per 100 cubic meters [m<sup>3</sup>]) in the neuston, or surface waters, than in midwater  
40 (456 eggs per 100 m<sup>3</sup>) or epibenthos (433 eggs per 100 m<sup>3</sup>). Fish larvae, however, were  
41 more abundant in midwater (139 larvae per 100 m<sup>3</sup>) and the epibenthos (134 larvae per  
42 100 m<sup>3</sup>) than in the neuston (39 larvae per 100 m<sup>3</sup>). The overall weighted mean densities  
43 throughout the water column were 5,402 fish eggs and 1,293 fish larvae per 100 m<sup>2</sup> of  
44 surface area.

45 The species composition and abundance of ichthyoplankton in the Harbor has been  
46 shown to be similar to that of the juvenile and adult fish community (Brewer, 1983),

1 suggesting that the Harbor is a nursery for nearly all of the fish species found there as  
2 adults (MBC, 1984; MEC, 1988). Results from 2008 were relatively similar to those  
3 recorded during biweekly surveys in 2006 (MBC et al., 2007) and quarterly surveys in  
4 2000 (MEC and Associates, 2002).

5 The Port Complex consists of habitat for more than 130 species of juvenile and adult fish,  
6 some of them transient visitors and some permanent residents (USACE, 1980; Horn and  
7 Allen, 1981; Brewer, 1983; MEC, 1988; MEC and Associates, 2002; Allen and Pondella,  
8 2006; SAIC, 2010). Several species, however, have dominated fish populations in the  
9 Harbor: white croaker, northern anchovy (*Engraulis mordax*), queenfish (*Seriphus*  
10 *politus*), Pacific sardine (*Sardinops sagax*), and topsmelt (*Atherinops affinis*)  
11 (Brewer, 1983; MEC and Associates, 2002; SAIC, 2010). Some of the other species that  
12 are also relatively abundant and are considered important residents of the Harbor include:  
13 white seaperch (*Phanerodon furcatus*), California tonguefish (*Symphurus atricauda*),  
14 speckled sanddab (*Citharichthys stigmaeus*), and shiner perch (*Cymatogaster aggregata*)  
15 (Horn and Allen, 1981). Juvenile and adult individuals of most species are usually more  
16 abundant during the spring and summer than in winter (Horn and Allen, 1981); however,  
17 pelagic fishes in 2008 were most abundant in winter (SAIC, 2010). The Harbor also  
18 provides habitat for recreationally important species such as California halibut  
19 (*Paralichthys californicus*), barred sand bass (*Paralabrax nebulifer*), and Pacific  
20 barracuda (*Sphyraena argentea*).

21 At Station LA7, located at the Pier 300 Shallow Water Habitat, abundance of pelagic  
22 fishes as sampled by lampara net<sup>2</sup> was relatively low during 2008, with means of three  
23 individuals during the day and 44 at night (SAIC, 2010). For comparison, the  
24 Harbor-wide station mean was 113 individuals during the day and 358 at night. The total  
25 numbers of species collected at Station LA7, however, were nearly double the  
26 Harbor-wide means: seven and 15 species during day and night, respectively, compared  
27 with means of three and six species throughout the Port Complex. The most abundant  
28 species collected by lampara were northern anchovy, queenfish, and topsmelt. At Station  
29 LA1, located in deeper water near Angel's Gate, mean abundance and total species  
30 richness were also relatively low (10 fish and two species during the day and 26 fish and  
31 two species at night). Topsmelt and northern anchovy were the only two species  
32 collected by lampara at Station LA1.

33 Abundance of demersal fishes sampled by otter trawl in 2008 at Station LA7 was  
34 relatively high, with means of 834 individuals during the day and 161 at night  
35 (SAIC, 2010). For comparison, the Harbor-wide station mean was 177 individuals  
36 during the day and 179 at night. The total numbers of species collected at Station LA7  
37 (12 species during the day and 19 at night) were almost identical the Harbor-wide mean  
38 of 13 and 18 species, respectively. The most abundant species collected by otter trawl  
39 were northern anchovy, white croaker, queenfish, shiner perch, and white seaperch. At  
40 Station LA1, located in deeper water near Angel's Gate, mean abundance and total  
41 species richness were lower than at Station LA7 (424 fish and 11 species during the day  
42 and 310 fish and 14 species at night). White croaker, queenfish, and northern anchovy  
43 were the three most abundant species collected by otter trawl at Station LA1.

44 Shallow-water fishes were sampled by beach seine at the Pier 300 Shallow Water Habitat  
45 in 2008. A total of five species were collected during the three surveys, and the most

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<sup>2</sup> The typical gear used for commercial fishing and sampling are nets known as lampara or seines.

1 abundant species were topsmelt and unidentified gobies (Gobiidae) (SAIC, 2010).  
2 Abundance was substantially higher at the Shallow Water Habitat in April  
3 (949 individuals) and July (774 individuals) than in January 2008 (13 individuals).

4 The fish community in Outer Los Angeles Harbor in the vicinity of the Terminal Island  
5 Water Reclamation Plant discharge has been sampled regularly since the 1990s  
6 (CLA-EMD, 2008). In 2006-7, the most abundant fish taxa were white croaker,  
7 queenfish, speckled sanddab, California lizardfish (*Synodus lucioceps*), and California  
8 tonguefish, which together comprised 97 percent of total abundance during the two-year  
9 survey period. Most of the white croaker and queenfish collected were young-of-the-year  
10 (juveniles).

11 Results from recent studies of the fish communities in the Port Complex were consistent  
12 with those in other recent studies, although differences in sampling methods and gear  
13 precluded direct comparisons in many cases (SAIC, 2010). Fish collections in 2008 did  
14 not discern any distinct spatial pattern in the distribution of pelagic fishes throughout the  
15 Port Complex (SAIC, 2010). In contrast, Outer Harbor areas generally were typified by a  
16 greater number, biomass, and variety of trawl-caught fish than Inner Harbor areas.  
17 Number of fish species collected by otter trawl has been relatively consistent since 1986.  
18 However, the number of species collected by beach seine has been variable. The number  
19 of fish species collected by beach seine in 2008 (seven) was intermediate to results from  
20 past studies (between four and 37 species), but differences in sampling methods and gear  
21 precluded direct comparisons (SAIC, 2010).

#### 22 3.3.2.4 Water Birds

23 Numerous water-associated birds use the Harbor as residents and as seasonal visitors.  
24 Recent surveys found 68 species in the Harbor that depend on marine habitats and  
25 another 28 species that do not (SAIC, 2010). Waterfowl, gulls, and aerial fish foragers  
26 were the dominant groups observed throughout the Port Complex in 2008. All other  
27 types of birds (large shorebirds, wading/marsh birds, upland birds, and raptors) were also  
28 represented but in much smaller numbers. The most abundant species, in order of  
29 decreasing abundance, were western gull (*Larus occidentalis*), Brandt's cormorant  
30 (*Phalacrocorax penicillatus*), surf scoter (*Melanitta perspicillata*), California brown  
31 pelican (*Pelecanus occidentalis californicus*), western grebe (*Aechmophorus*  
32 *occidentalis*), Heermann's gull (*L. heermanni*), and elegant tern (*Thelasseus elegans*).  
33 The areas in the Harbor with the highest reported bird observations in 2008 were the  
34 Main Channel, the channel adjacent to the proposed Project site off Berths 301-305, and  
35 the Pier 300 Shallow Water Habitat.

36 During the biological survey in January 2010, the most abundant species observed in  
37 waters adjacent to the proposed Project site was surf scoter. Other commons species  
38 included bufflehead (*Bucephala albeola*) and western grebe, while species occasionally  
39 observed included pied-billed grebe (*Podilymbus podiceps*), Forster's tern (*Sterna*  
40 *forsteri*), California brown pelican, western gull, great blue heron (*Ardea herodias*),  
41 willet (*Tringa semipalmatus*), and cormorants (*Phalacrocorax* spp.). Great blue herons  
42 have nested periodically atop the light standards and cranes at some marine terminals in  
43 the Port Complex, and at least one great blue heron nest has been documented atop a light  
44 standard at the proposed Project site (Prickett, pers. comm., 2010).

### 3.3.2.5 Special-Status Species

Three state and federally listed threatened or endangered species are known to be present, at least seasonally, in the Ports Complex (Table 3.3-3). One endangered bird species, the California least tern (*Sternula antillarum browni*), regularly uses the Port Complex. The California least tern is present only in the Harbor area during its breeding season, April to September. This species is described in detail in Section 3.3.2.5.1. The threatened western snowy plover (*Charadrius alexandrinus nivosus*) is a transient migratory visitor, and a few individuals have been observed on Pier 400 in recent years (Keane Biological Consulting, 2005a, 2005b). Western snowy plover forages on sandy beaches, and is occasionally observed on Pier 400 during migration; it has also been observed outside the Port Complex at Point Fermin and Cabrillo Beach (Keane Biological Consulting, 2009). It was not observed during the year-long bird surveys of 2007-2008 (SAIC, 2010). Belding's savannah sparrow (*Passerculus sandwichensis beldingi*) inhabits pickleweed marshes exclusively (USACE and LAHD, 1992). No suitable habitat for this species is present in the area of the proposed Project, and there have been no known sightings of this species in Los Angeles Harbor.

**Table 3.3-3: Threatened and Endangered Bird Species in the Proposed Project Area.**

| Species                    | Status  |       | Notes  |
|----------------------------|---------|-------|--|
|                            | Federal | State |  |
| California least tern      | E       | E     | Breeds on Pier 400 from about approximately April through August; forages preferentially over shallow waters; 14 sightings near Pier 300 in May and June 2008. |
| Western snowy plover       | T, BCC  | SSC   | Infrequent visitor to Harbor; observed on Pier 400. No observations during 2007-2008 surveys.  |
| Belding's savannah sparrow | –       | E     | Inhabits pickleweed marsh; transient visitor to Harbor. No individuals observed in 2007-2008.  |

Note: E = Endangered, T = Threatened, SSC = CDFG Species of Special Concern, BCC = USFWS Birds of Conservation Concern. Designations from CDFG 2011a. Data in Notes from SAIC (2010) and Keane (2009, 2010).

There are multiple bird species that are not listed by the state or federal governments as threatened or endangered, but have special status designated by either the California Department of Fish and Game (state) or U.S. Fish and Wildlife Service (federal) (Table 3.3-4) (CDFG 2011b). These include:

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

- 1           ▪ **USFWS Birds of Conservation Concern:** Birds of Conservation Concern are those  
2 identified by the USFWS that represent the highest conservation priorities. The  
3 designation is meant to draw attention to species in need of conservation action.

4 California brown pelican was previously listed as endangered; however, this species  
5 recovered and was delisted by the state in June 2009 and by the federal government in  
6 November 2009. It is a Fully Protected species, and is present year-round throughout the  
7 Port Complex. It accounted for 9.6% of the total bird observations in 2007-8, with most  
8 of the individuals observed roosting on the riprap of the breakwaters of the Outer Harbor  
9 (SAIC, 2010). It was observed in all but one survey in the waters off Pier 300.

10 Peregrine falcon (*Falco peregrines*), which was listed as endangered, was delisted by the  
11 federal government in 1999 and by the state in November 2009 (CDFG, 2011a). It is  
12 designated as Fully Protected by the CDFG and a Bird of Conservation Concern by the  
13 USFWS. Peregrine falcon nest at several locations in the Port Complex, but the nesting  
14 site nearest to the proposed Project is on the Vincent Thomas Bridge, approximately  
15 1.1 miles (1.8 km) from the APL Terminal. A total of three peregrine falcon were  
16 observed near Pier 300 in August and September 2008 (SAIC, 2010). The decrease in  
17 California least tern nests at Pier 400 (see Section 3.3.2.5.1) in recent years has been  
18 attributed, in part, to an increase in peregrine falcon activity near the nesting site (Keane,  
19 2009).

20

**Table 3.3-4: Special Status Bird Species (Designated by CDFG and USFWS) in the Proposed Project Area**

| Species                  | Status / Designation            | Notes  |
|--------------------------|---------------------------------|--|
| Black oystercatcher      | USFWS BCC                       | Nested in Ports Complex in 2007-8; 6 individuals observed between Piers 300-400 in 2007-2008.  |
| Black skimmer            | CDFG SSC, USFWS BCC, and others | No nesting in the Harbor in 2008; 2 individuals observed near Pier 300 in 2007-2008.   |
| Brant                    | CDFG SSC                        | Six individuals observed during February 2008 in Long Beach Outer Harbor; no observations near Pier 300.   |
| Burrowing owl            | CDFG SSC, USFWS BCC             | Observed on Pier 400 in 2007-2008; nesting status within the Port Complex unknown.   |
| California brown pelican | CDFG FP                         | Abundant throughout Ports Complex; 567 observations near Pier 300 in 2007-2008.  |
| Caspian tern             | USFWS BCC                       | Nested on Pier 300 in 2008-9; about 170 observations during 2007-2008 surveys near Pier 300. Nesting occurred at Berth 305 backlands in April 2010, but subsequently was abandoned.                    |
| Common loon              | CDFG SSC                        | Thirteen individual observed throughout Ports Complex in 2007-2008; no observations near Pier 300.   |
| Double-crested cormorant | CDFG Watch List                 | Nested in transmission towers in Long Beach Harbor in 2007-2008; among most abundant birds in the Harbor.  |
| Elegant tern             | CDFG Watch List                 | Nested on Pier 400 in 1998-2005, and on Pier 300 since 2007-2008; very abundant, forages over water near nests. Nesting occurred at Berth 305 backlands in April 2010, but subsequently was abandoned. |
| Loggerhead shrike        | CDFG SSC, USFWS BCC             | Observed in Inner Harbor areas of Port Complex in 2001-2002; no observations near Pier 300 in 2007-2008.   |
| Long-billed curlew       | CDFG Watch List, USFWS BCC      | Single individual observed near Pier 300 during 13 surveys in 2007-2008.   |
| Merlin                   | CDFG Watch List                 | One individual observed on riprap in Long Beach Outer Harbor in December 2007; no observations near Pier 300 in 2007-2008.   |
| Osprey                   | CDFG Watch List                 | Observed in Ports Complex during all surveys in 2007-2008; 10 observations (all single individuals) near Pier 300.   |
| Peregrine falcon         | CDFG FP, USFWS BCC              | Nests on the Schuyler Heim and Gerald Desmond Bridges. Usually observed near nesting sites; three observations near Pier 300 in 2007-2008.   |

Note: USFWS BCC = U.S. Fish and Wildlife Service Bird of Conservation Concern; CDFG = California Dept. of Fish and Game; SSC = Species of Special Concern; FP = Fully Protected. Data in Notes from SAIC (2010) and Keane (2009, 2010).

1 Black oystercatcher (*Haematopus bachmani*) nested on the breakwaters during the  
2 2000-2001 and 2007-2008 biological surveys of the Port Complex, and six individuals  
3 were observed flying or resting on riprap near Pier 300 in 2007-2008 (SAIC, 2010).  
4 Nesting in the Port Complex is considered unusual for this species (SAIC, 2010).

5 Black skimmer (*Rynchops niger*) nested in the Harbor at Pier 400, but have not nested  
6 there since 2000. Six brant (*Branta bernicla*) were observed in Long Beach Harbor in

1 February 2008. This species (a “sea goose”) is considered a common migrant offshore  
2 Los Angeles County, but is rarely observed in harbor and estuarine habitats (SAIC, 2010).

3 The burrowing owl (*Athene cunicularia*) was sighted on Pier 400 in 2007 and 2008, but  
4 its nesting status within the Port Complex is unknown. It was not observed near Pier 300  
5 in 2007-2008 (SAIC, 2010).

6 A total of 13 common loon (*Gavia immer*) were observed during the 2007-2008 bird  
7 surveys in the Ports Complex; none of the observations were near Pier 300 (SAIC, 2010).

8 Double-crested cormorant (*Phalacrocorax auritus*) is one of the most abundant species in  
9 the Port Complex, and nests on transmission towers in Long Beach Harbor. It was the  
10 second most abundant special-status bird species observed near Pier 300 in 2007-2008,  
11 with 125 observations (SAIC, 2010).

12 The elegant tern nested on Pier 400 from 1998 through 2005, but has not returned to nest  
13 at that site since then (Keane Biological Consulting, 2009, 2010). However, elegant tern  
14 nested on Pier 300 (on the 41-acre fill site) in 2008 and 2009. By May 24, 2009, an  
15 estimated 4,200 elegant terns, 220 Caspian terns (*Hydroprogne caspia*), and an  
16 undetermined number of royal terns (*Thalasseus maximus*) were nesting near the  
17 backlands of Berth 305 (on the 41-acre fill site). By mid-June the number of elegant  
18 terns was estimated at 4,500 individuals. Elegant tern was the most abundant  
19 special-status bird species observed near Pier 300 during biweekly bird surveys in  
20 2007-2008, with 3,284 observations. Caspian terns nested on Pier 400 from 1997 until  
21 2005, when they left the area due to a nocturnal predator. They began nesting on the  
22 41-acre fill site in 2008, and 174 observations of this species were made near Pier 300 in  
23 2007-2008 (SAIC, 2010). More recently, Caspian terns and elegant terns were observed  
24 nesting at the backlands of Berth 305 on April 23, 2010. However, the following week,  
25 the terns had abandoned the area (Keane Biological Consulting, 2010). No further  
26 nesting activities by Caspian or elegant terns were observed at the backlands of Berth 305  
27 or elsewhere in the Los Angeles Harbor in 2010, aside from limited nesting on Connolly  
28 Pacific barges from April through July (K. Keane pers. comm., 2011).

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

32 Long-billed curlew (*Numenius americanus*) is common in southern California, and  
33 2007-2008 all but one of the 14 observations throughout the Ports Complex occurred in  
34 the three survey zones near Pier 300 (SAIC, 2010). The observations usually consisted of  
35 a single individual.

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

39 Osprey (*Pandion haliaetus*) was 1 of 20 bird species observed during all surveys in  
40 2007-2008. A total of 10 observations of this species was made in the three survey zones  
41 near Pier 300, all consisting of single individuals (SAIC, 2010).



1 Sporadic sightings of sea turtles have been reported in Los Angeles-Long Beach Harbor  
2 over the years; however, none have been observed during more than 20 years of baseline  
3 biological surveys (MEC, 1988; MEC and Associates, 2002; Keane Biological  
4 Consulting, 2007; SAIC, 2010). Because several green sea turtles (*Chelonia mydas*) have  
5 been observed in nearby Alamitos Bay and in the San Gabriel River (Lawson, pers.  
6 comm., 2009), it is possible that this species and perhaps other species of sea turtle listed  
7 below may be rare visitors to the Outer Harbor areas.

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

15 Green sea turtles, federally listed as threatened, are found in all temperate and tropical  
16 waters throughout the world. They primarily remain near the coastline and around  
17 islands and live in bays and protected shores, especially in areas with seagrass beds. In  
18 the eastern North Pacific, green turtles have been sighted from Baja California to  
19 southern Alaska, but most commonly occur from San Diego south (NMFS, 2011). A  
20 small population of green sea turtles has been observed in the lower San Gabriel River,  
21 and studies are proposed to determine more information on these animals (Lawson, pers.  
22 comm., 2009). They rarely are observed in the open ocean.

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

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

30 All marine mammals are protected under the Marine Mammal Protection Act (MMPA) of  
31 1972, and some are protected by the Endangered Species Act (ESA) of 1973. These  
32 species may forage in Los Angeles Harbor but do not breed there. Sightings of marine  
33 mammals were recorded during the 2008 biological surveys of Los Angeles and  
34 Long Beach Harbors (SAIC, 2010). Both California sea lion (*Zalophus californianus*)  
35 and Pacific harbor seals (*Phoca vitulina vitulina*) were observed during the 2008 surveys  
36 near the proposed Project site off Pier 300. During 2008 California sea lions were  
37 observed throughout Los Angeles-Long Beach Harbor, while harbor seals were limited to  
38 Outer Harbor waters. During the January 2010 biological survey at the proposed Project  
39 site, two California sea lions were hauled out (resting) on mooring buoys in the channel  
40 to the east of the 41-acre backlands.

41 Outside the breakwater, a variety of marine mammals use nearshore waters. These  
42 include the gray whale (*Eschrichtius robustus*), which migrates from the Bering Sea to  
43 Mexico and back each year. This and other species of baleen whales generally are found  
44 as single individuals or in pods of a few individuals. Toothed whales, and particularly  
45 dolphins, can be found in larger groups up to a thousand or more (Leatherwood and

1 Reeves, 1983). Several species of dolphin and porpoise are commonly found in coastal  
2 areas near Los Angeles, including the Pacific white-sided dolphin (*Lagenorhynchus*  
3 *obliquidens*), Risso's dolphin (*Grampus griseus*), Dall's porpoise (*Phocoenoides dalli*),  
4 bottlenose dolphin (*Tursiops truncatus*), northern right-whale dolphin (*Lissodelphis*  
5 *borealis*), and common dolphin (*Delphinus delphis*), with the common dolphin the most  
6 abundant (Forney et al., 1995). Bottlenose and common dolphin were observed during  
7 the 2008 baseline surveys; except for bottlenose dolphin sighted near the San Pedro  
8 Waterfront in the Main Channel, all other observations were in the Outer Harbors  
9 (SAIC, 2010).

## 10 **Vessel Collisions with Marine Mammals and Sea Turtles**

11 Ship strikes involving marine mammals and sea turtles, although uncommon, have been  
12 documented for the following listed species in the eastern North Pacific: blue whale  
13 (*Balaenoptera musculus*), fin whale (*Balaenoptera physalus*), gray whale, humpback  
14 whale (*Megaptera novaeangliae*), sperm whale (*Physeter macrocephalus*), southern sea  
15 otter (*Enhydra lutris nereis*), loggerhead sea turtle, green sea turtle, olive ridley sea turtle,  
16 and leatherback sea turtle (NOAA Fisheries and USFWS 1998a, 1998b, 1998c, 1998d;  
17 Stinson 1984; Carretta et al., 2009; NMFS 2010). The blue whale, fin whale, humpback  
18 whale, sperm whale, and gray whale are all listed as endangered under the ESA; however,  
19 the Eastern Pacific gray whale population was delisted by the NOAA in 1994.

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

27 Between 2000 and 2004, 13 California sea lion deaths were attributed to collisions with  
28 boats along the coasts of California, Oregon and Washington combined, while eight  
29 harbor seals were killed and two injured by vessel strikes in California between 1999 and  
30 2003 (Carretta et al., 2009). Stock assessments for bottlenose dolphin (coastal and  
31 offshore stocks) do not list any information on ship strikes; dolphins (as well as seals, sea  
32 lions, and some whale species) are susceptible to injury and mortality from fishery  
33 interactions (i.e., entanglement in nearshore gill nets). From January 2000 through  
34 June 2010, two olive ridley sea turtles were found with injuries consistent with ship  
35 strikes: one washed ashore near the launch ramp in Alamitos Bay in 2003, and the other  
36 washed ashore at Goleta (Santa Barbara County) in 2004 (NMFS, 2010).

## Whale Strikes

While vessel collisions with all marine mammals and sea turtles have been reported, the majority of incidents involve whales. The National Marine Fisheries Service (NMFS), which is a division of the National Oceanic and Atmospheric Administration (NOAA), has records of vessel strikes with whales in U.S. coastal waters. From January 2000 through June 2010, 23 whales were believed to have been struck by ships in southern California (NMFS, 2010). These included seven gray whales, five fin whales, five blue whales, and six unidentified whales. Of these 23, eight were struck by a vessel and their final disposition was unknown. The other 15 were either found dead with wounds consistent with ship strikes, or were found dead on the bow of cargo vessels. Ten of these 15 were found in or near the Port Complex, including one blue whale and three fin whales found dead on the bows of freighters.

From January 2000 through June 2010, the number of strikes per year ranged from none (2000 and 2003) to five (2007) and averaged two to three strikes per year, but the actual number is likely to be greater because not all strikes are reported. The type of vessel involved often was not known, but of the 23 reported strikes two involved U.S. Naval vessels, three involved commercial island passenger catamarans, four involved freighters at the Port Complex, and in one incident a gray whale breached and landed on top of a small pleasure craft.

In Southern California, potential strikes to blue whales are of the most concern, in part due to low population numbers compared to historical populations. Blue whales normally pass through the Santa Barbara Channel en route from breeding grounds in Mexico to feeding grounds farther north, a migration pattern along the California coast that at times runs perpendicular to the established shipping channels in and out of California ports, increasing the opportunities for whale/vessel collisions. Blue whales were historically a target of commercial whaling activities worldwide, but are now protected from whaling. In the North Pacific, the pre-whaling population is estimated to have been approximately 4,900 individuals; the recent population estimate is approximately 1,400 blue whales (Carretta et al., 2009). Along the California coast, there is evidence that despite vessel strikes blue whale abundance has increased over the past three decades (Calambokidis et al., 1990; Barlow, 1995 and Calambokidis, 1995; Carretta et al., 2009).

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

1 Vessel speed seems to influence whale/ship collision incidences. The Jensen and Silber  
2 whale-strike database (Jensen and Silber, 2003) reports that there are 134 cases of known  
3 vessel strikes in U.S. coastal waters. Of these 134 cases, 14.9 percent (20 cases) involved  
4 container/cargo ships/freighters, and 6.0 percent (eight cases) involved tankers. The  
5 remaining incidents involved Navy vessels (17.1 percent, or 23 cases), whale-watching  
6 vessels (14.2 percent, or 19 cases), cruise ships/liners (12.7 percent, or 17 cases), ferries  
7 (11.9 percent, or 16), Coast Guard vessels (6.7 percent, or nine cases), recreational  
8 vessels (5.2 percent, or six cases), and fishing vessels (3.0 percent, or four cases). One  
9 collision (0.75 percent) was reported from each of the following: dredge boat, research  
10 vessel, pilot boat, and whaling catcher boat. Of the 134 cases, vessel speed was known  
11 for 58 cases. Of these 58 cases, most vessels were traveling in the ranges of 13 to  
12 15 knots, followed by speed ranges of 16 to 18 knots and 22 to 24 knots.

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

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

### 28 3.3.2.5.1 California Least Tern

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

38 The California least tern has been nesting during the summer on Terminal Island  
39 (including Pier 300) since at least 1974 (Keane Biological Consulting, 1999a). In 1979,  
40 the LAHD began providing nesting habitat for the species and entered into a  
41 Memorandum of Agreement (MOA) with the U.S. Fish and Wildlife Service (USFWS),  
42 USACE, and California Department of Fish and Game (CDFG) for management of a  
43 15-acre least tern nesting site in 1984. This MOA set forth the responsibilities of the  
44 signing parties for management of the designated California least tern nesting site in the  
45 Harbor, and it is renewed every three to five years. A new MOA was approved by the  
46 Board of Harbor Commissioners in June 2006. The MOA also allows the designated

1 nesting site to be relocated under specific conditions, and the location of this nesting site  
2 has changed over time due to Port development activities and is now on the southern tip  
3 of Pier 400 (Keane Biological Consulting, 2003). In 1997, the only successful nesting  
4 occurred on the newly constructed Pier 400. In 1998, the Pier 300 nesting site was  
5 decommissioned (Keane Biological Consulting, 1999). Least tern nesting in the Harbor  
6 has been monitored annually since 1973. The number of nests in the Harbor varied from  
7 0 to 134 between 1973 and 1994. The number steadily increased from 16 in 1995 to  
8 565 in 2000, with decreases in 2001 and 2002, and an increase to 1,071 in 2004 and  
9 1,332 in 2005 (Keane Biological Consulting, 2008). The number of nests declined from  
10 2006 through 2010 to a total of 216 nests (Keane Biological Consulting, 2010). In 2009,  
11 nesting at Pier 400 accounted for 12.4 percent of the total fledglings in the Los Angeles and  
12 Orange county areas, and approximately 4 percent of statewide fledglings (Keane Biological  
13 Consulting, 2009). This is a marked decrease from 2005, when nesting at Pier 400 accounted  
14 for 71.4 percent of total fledglings in Los Angeles and Orange counties and 45 percent of the  
15 statewide number of fledglings.

16 Several foraging studies have been conducted in the Harbor. The 1982, 1984, and 1985  
17 surveys found that California least tern foraged over shallow water (generally less than  
18 20 ft deep) in the Outer Harbor, especially near the nesting site, but not in the Inner  
19 Harbor (Keane Biological Consulting, 1997). Surveys using radio-telemetry and  
20 observations in 1986 and 1987 showed that the California least terns foraged inside and  
21 outside the Harbor during egg incubation. More foraging occurred near the breakwater  
22 than adjacent to Terminal Island during incubation, but this reversed after the eggs  
23 hatched (Keane Biological Consulting, 1997). In the 1994-1996 surveys, least terns  
24 foraged around the east and south sides of Pier 300 with greater use of the Seaplane  
25 Anchorage in 1996 than in the other 2 years. After the south side of Pier 300 was  
26 dredged to deep water, use by the California least terns declined. The Cabrillo Beach and  
27 Cabrillo saltmarsh areas were used to varying degrees (Keane Biological Consulting,  
28 1997). A study in 1997 and 1998 found that the California least terns used the West  
29 Basin of Long Beach Harbor as well as the Pier 300 Shallow Water Habitat, Seaplane  
30 Lagoon, and the Gap (the area between Naval Mole and Pier 400 Transportation  
31 Corridor). The foraging frequency (dives per acre) varied among locations and between  
32 years. This variation may be related to changes in availability of prey and distance from  
33 nest sites (Keane Biological Consulting, 1998). These studies have shown that Outer  
34 Harbor shallow water areas (less than 20 ft deep) provide important foraging areas for the  
35 California least tern. During the year-long avian surveys of 2007-8, California least terns  
36 were present from May through July 2008, as is typical, and observed in the waters of the  
37 Pier 300 Shallow Water Habitat in May and June 2008 (SAIC, 2010). The majority of  
38 the observations during the study were recorded near the Pier 400 nesting site, where  
39 California least terns were observed flying and foraging. In summary, the foraging  
40 studies show that the California least terns forage primarily in the Outer Harbor and not  
41 in the channels, basins, and slips of the Inner Harbor.

42 From 1994 through 2002, the Pier 300 Shallow Water Habitat and the channel south of  
43 Pier 300 supported the highest foraging preference by California least terns (Keane  
44 Biological Consulting, 2003b). The foraging preference scores were calculated using the  
45 ratio between observed foraging dives and foraging flights. During the eight-year study,  
46 California least tern foraging trends were stable in the Pier 300 Shallow Water Habitat,  
47 but foraging decreased in the channel south of Pier 300.

1 In 2003, foraging showed three peaks: early to mid-May (egg-formation period),  
2 mid-June (chick hatching period), and early to mid-July (fledging period) (Keane  
3 Biological Consulting and Aspen Environmental Group, 2004). In 2003, foraging outside  
4 the Harbor increased in relation to that of the previous 2 years. Stations with deep-water  
5 habitats accounted for 29 percent of California least tern foraging dives in the Harbor in  
6 2003, compared with 71 percent for stations with shallow-water habitats.

### 7 **3.3.2.6 Wildlife Movement Corridors**

8 The Conservation Element of the City of Los Angeles General Plan addresses wildlife  
9 corridors. These are for movement of animals between large habitat areas. The Harbor  
10 does not provide any such corridors. However, some marine fish species move into and  
11 out of the Harbor for spawning or nursery areas.

### 12 **3.3.2.7 Invasive Species**

13 There are at least 196 non-native aquatic species in the Los Angeles and Long Beach  
14 Harbor (CDFG, 2008). The occurrence of non-native species is also discussed above  
15 under each habitat type. Without controlling pressures found in a native ecosystem,  
16 invasive species can compete with or prey upon resident species and thus alter the local  
17 ecology, which can have economic effects as well. Invasive species in the Port Complex  
18 include a Japanese brown alga (*Sargassum muticum*), New Zealand bubble snail,  
19 Japanese mussel (*Musculista senhousia*), an isopod (*Sphaeroma quoyanum*), and  
20 yellowfin goby. Another species of *Sargassum* (*S. horneri*) was discovered in  
21 Long Beach Harbor during annual subtidal surveys in Long Beach Harbor in 2003  
22 (MBC, 2009b). The primary source of invasive organisms is likely to have been the  
23 discharge of ballast water from cargo vessels using the ports (NRC, 1996). Other  
24 potential vessel sources include hulls, anchors and chains, piping and tanks, propellers,  
25 and suction grids, while non-vessel sources include aquarists and restaurant live fish trade.

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

36 The aquarium strain of *Caulerpa* (*Caulerpa taxifolia*) is an invasive alga that has covered  
37 more than 30,000 acres in the Mediterranean Sea and is listed as a federal noxious weed  
38 under the Plant Protection Act. *Caulerpa* was found in two southern California locations  
39 in 2000. This species has never been identified in Los Angeles-Long Beach Harbor, but  
40 is of particular concern because it is a fast-growing green alga native to tropical waters  
41 where it typically grows in isolated patches. However, in areas outside its native range,  
42 *Caulerpa* can grow rapidly and quickly overtake native species. In the Mediterranean,  
43 *Caulerpa* has caused ecological devastation by overwhelming local seaweed species and  
44 altering fish distributions. Its rampant growth also has resulted in huge economic losses  
45 by harming tourism, pleasure boating, fishing, and the diving industry. Species of

1 *Caulerpa* are used in the aquarium trade and can enter coastal marine waters through  
2 disposal of the plants or aquarium water into storm drains or coastal waters. Due to its  
3 potential to create severe ecological and economic losses, a *Caulerpa* survey must be  
4 completed in accordance with the *Caulerpa* Control Protocol prior to specific underwater  
5 disturbances (such as bulkhead repair, dredging, and placement of navigational aids)  
6 (NMFS and CDFG, 2008).

### 7 **3.3.2.8 Significant Ecological Areas**

8 The County of Los Angeles has established Significant Ecological Areas (SEAs) to  
9 preserve a variety of biological communities for public education, research, and other  
10 non-disruptive outdoor uses. SEAs do not preclude limited development that is  
11 compatible with the biological community. Policies and regulations for SEAs do not  
12 apply within city boundaries. No SEAs are present on Pier 300. The closest designated  
13 SEA, and the only SEA located in the Harbor, is the Terminal Island SEA, which is  
14 located at the Pier 400 California least tern nesting site (County of Los Angeles, 1980,  
15 2008).

### 16 **3.3.2.9 Essential Fish Habitat (EFH)**

17 In accordance with the 1996 amendments to the Magnuson-Stevens Fishery Management  
18 and Conservation Act, an assessment of EFH was prepared for the proposed Project and  
19 alternatives, which includes impacts of dredging and wharf construction along Berths  
20 302-305 and the 41-acre fill site (Appendix F3). The proposed Project/alternative area is  
21 located in an area designated as EFH for two Fishery Management Plans (FMPs): the  
22 Coastal Pelagics and Pacific Groundfish Management Plans. Of the 95 species federally  
23 managed under these plans, 24 are known to occur in the Port Complex and could  
24 potentially be affected by the proposed Project or alternatives (Appendix F3). However,  
25 most of these 24 species have been collected only sporadically and in very low numbers,  
26 and habitat near the proposed Project site is not suitable for these species. The species  
27 with the highest potential to be affected by the proposed Project/alternatives are identified  
28 in Table 3.3-5.

29 Two coastal pelagic - northern anchovy and Pacific sardine - are likely to occur in the  
30 vicinity of the proposed Project. As summarized in Appendix F3, northern anchovy is  
31 among the most common and abundant fish species in the Port Complex. In 2006, larvae  
32 were present in the Port Complex during two seasonal periods: a greater peak in  
33 March-July and a lesser peak in October-December (MBC et al., 2007). Juvenile and  
34 adult anchovies have consistently been collected during fish sampling near the proposed  
35 Project site (MEC and Associates, 2002; SAIC, 2010). Northern anchovy are found from  
36 the surface to depths of 1,017 ft, though juveniles are generally more common inshore  
37 and in estuaries (Davies and Bradley, 1972).

38 Pacific sardine were not abundant during 2006 ichthyoplankton sampling throughout the  
39 Port Complex; two sardine larvae were collected in the Outer Harbor in April 2006  
40 (MBC et al., 2007). This species is also less common than northern anchovy near the  
41 proposed Project site (MEC and Associates, 2002; SAIC, 2010). Pacific sardine is  
42 epipelagic, occurring in loosely aggregated schools (Wolf et al., 2001).

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

1 anchovy and Pacific sardine. While no mature market squid (*Doryteuthis opalescens*)  
2 have been reported in recent surveys, market squid paralarvae were collected in Inner and  
3 Outer Harbor areas in 2006 (MBC et al., 2007). All coastal pelagics are associated with  
4 the water column (as opposed to the seafloor like many of the groundfish); however,  
5 female squid also lay egg masses on sandy bottoms during spawning (at depths of about  
6 16-180 ft, with most occurring between 66-115 ft) (PFMC, 1998).

7 None of the species covered under the Pacific Groundfish FMP are considered abundant  
8 in the area of the proposed Project. However, many are associated with hard substrate,  
9 kelp, and/or eelgrass (*Zostera marina*), which are less frequently sampled habitats than  
10 soft bottoms. Pacific sanddab (*Citharichthys sordidus*) is considered common in the  
11 vicinity of the proposed Project because it was collected by trawl in all three of the  
12 Harbor-wide biological studies, though not in great numbers (MEC 1988; MEC and  
13 Associates, 2002; SAIC, 2010). One individual was collected in 1986, 51 were collected  
14 in 2000, and 171 were collected in 2008. English sole (*Parophrys vetulus*) has also been  
15 collected during all three trawl studies, but in relatively low numbers: one individual in  
16 1986, three individuals in 2002, and 24 individuals in 2008. Larvae of English sole were  
17 also collected in 2008. English sole prefer soft bottoms from 60 to 1,000 ft, while Pacific  
18 sanddab are found between 30 and 1,800 ft (Miller and Lea, 1972).

19 California skate (*Raja inornata*) and big skate (*R. binoculata*) were collected by trawl  
20 during the biological surveys of the Harbor, although only 23 California skate were  
21 collected in 2008, and no big skate were collected. Like English sole, California skate  
22 has been collected in all three Harbor-wide biological surveys, whereas big skate was  
23 only collected in 2002. Both species prefer soft-bottom habitat, although California skate  
24 occurs in much deeper waters (60 to 2,200 ft) than big skate (10 to 360 ft) (Miller and  
25 Lea, 1972). California scorpionfish (*Scorpaena guttata*) is another species collected in  
26 all three Harbor-wide surveys, with 11 individuals in 2008. Vermilion rockfish (*Sebastes*  
27 *miniatus*) was only collected in 2002 (four individuals) and 2008 (20 individuals).  
28 Vermilion rockfish occur between 20 and 1,440 ft, but are most common between 165  
29 and 495 ft. Juveniles are common in shallower water (20 to 120 ft), where they hover  
30 over sand patches near algae or structures, including pier pilings (Love et al., 2002). The  
31 remaining species in the table have only been collected sporadically and in low numbers.

32



**Table 3.3-5: Managed Fish/invertebrate Species Most Likely to Occur off Pier 300 in Los Angeles Harbor Based on Past Occurrences**

| Common Name               | Potential Habitat Use   | Larval Occurrence <sup>1,2,4</sup> | Juv./Adult Occurrence <sup>2,3,4,5</sup> |
|---------------------------|---|------------------------------------|--|
| <b>Coastal Pelagics</b>   |   |                                    |  |
| northern anchovy          | Open water.   | Abundant                           | Abundant                                 |
| Pacific sardine           | Open water.   | Uncommon                           | Common                                   |
| Pacific (chub) mackerel   | Open water, juveniles off sandy beaches and around kelp beds.                                     | -                                  | Uncommon                                 |
| jack mackerel             | Open water, young fish over shallow banks and juveniles around kelp beds.                         | Rare                               | Uncommon                                 |
| market squid              | Open water. Rare near bays, estuaries, and river mouths.  | Rare                               | -  |
| <b>Pacific Groundfish</b> |   |                                    |  |
| English sole              | Soft bottom habitats.   | Rare                               | Uncommon                                 |
| Pacific sanddab           | Soft bottom habitats.   | Rare                               | Common                                   |
| butter sole               | Soft bottom habitats.   | Rare                               | -  |
| black rockfish            | Along breakwater, near deep piers and pilings. Associated with kelp, eelgrass, high relief reefs. | -                                  | Rare                                     |
| bocaccio                  | Multiple habitat associations, including soft and hard bottom, kelp, eelgrass, etc.               | -                                  | Rare                                     |
| brown rockfish            | Multiple habitat associations but prefer hard substrata and rocky interfaces.                     | -                                  | Rare                                     |
| calico rockfish           | Multiple habitat associations but prefer hard substrata and rocky interfaces.                     | -                                  | Rare                                     |
| California scorpionfish   | Benthic, on soft and hard bottoms, as well as around structures.                                  | -                                  | Uncommon                                 |
| grass rockfish            | Common on hard substrate, kelp, and eelgrass habitats.  | -                                  | Rare                                     |
| kelp rockfish             | Common on hard substrate, kelp; reported along breakwater.  | -                                  | Rare                                     |
| olive rockfish            | Common around hard substrate, kelp; reported along breakwater.                                    | -                                  | Rare                                     |
| vermilion rockfish        | Juveniles over soft-bottom and kelp, adults associated with hard substrate.                       | -                                  | Uncommon                                 |
| lingcod                   | Multiple habitat associations but prefer hard substrata and rocky interfaces.                     | -                                  | Rare                                     |
| cabezon                   | Multiple habitat associations but prefer hard substrata and rocky interfaces.                     | Rare                               | Rare                                     |
| Pacific hake              | Common offshore, juveniles in open water.   | Rare                               | -  |
| leopard shark             | Multiple habitat associations, including soft bottoms, and near structure, kelp, and eelgrass.    | N/A                                | Rare                                     |
| spiny dogfish             | Pelagic and on muddy bottoms.   | N/A                                | Rare                                     |
| big skate                 | Soft bottom habitat.  | N/A                                | Rare                                     |
| California skate          | Soft bottom habitat.  | N/A                                | Uncommon                                 |

Sources: 1 – MBC et al. (2007), 2 – MEC and Associates (2002), 3 – MBC (2009a,b), 4 – SAIC (2010), 5 – MEC (1999). N/A = Not applicable, internal fertilization. Abundant>Common>Uncommon>Rare.

Note - Most rockfish larvae not identifiable to species.

1

## 1 **3.3.2.10 Wetlands and Other Special Habitats**

### 2 **3.3.2.10.1 Wetlands**

3 Wetlands are regulated under the Clean Water Act (CWA). The definition of wetlands  
4 varies among state and federal agencies, but USACE uses a three-parameter method that  
5 includes assessing vegetation, hydrology, and soils (Environmental Laboratory, 1987).  
6 Wetlands commonly present in estuarine to marine habitats are salt marshes dominated  
7 by pickleweed (*Salicornia virginica*) and other salt-tolerant plant species. No wetlands  
8 under state or USACE jurisdiction are present at or near the proposed Project site. The  
9 closest wetlands are at Inner Cabrillo Beach in the Outer Harbor, about 2.5 miles from  
10 the proposed Project site.

### 11 **3.3.2.10.2 Eelgrass Beds**

12 Eelgrass beds, as with wetlands, are considered “special aquatic sites” under the CWA  
13 (40 CFR Part 230). Eelgrass is a rooted aquatic plant that inhabits shallow soft-bottom  
14 habitats in quiet waters of bays and estuaries, as well as sheltered coastal areas (Dawson  
15 and Foster, 1982). Eelgrass can form dense beds that provide substrate, food, and shelter  
16 for a variety of marine organisms. Most eelgrass beds in bays or estuaries are found in  
17 water less than 20 ft deep with light being the primary limiting factor. Surveys of the  
18 Harbor in 2000 and 2008 documented eelgrass along Inner Cabrillo Beach and in three  
19 beds in the Pier 300 Shallow Water Habitat/Seaplane Lagoon area (MEC and Associates,  
20 2002; SAIC, 2010). Total coverage for the three beds in the Pier 300 Shallow Water  
21 Habitat/Seaplane Lagoon area changed little in the eight years between Harbor-wide  
22 studies: 28.5 acres in March 2000 to 30.6 acres in April 2008 (Figure 3.3-2).

23 In addition, recent sampling of sediments along Berth 306 (June 2010) confirmed the  
24 absence of eelgrass in the Pier 300 Channel along the proposed Berth 306 area (the only  
25 area along the berths shallow enough to support eelgrass).

26



1 Data from SAIC, 2010  
 2 **Figure 3.3-2: Location of eelgrass in the adjacent to the proposed Project site,**  
 3 **September 2008.**

4 **3.3.2.10.3 Kelp Beds**

5 In 2000, giant kelp (*Macrocystis pyrifera*) beds were present in the Outer Harbor along  
 6 the breakwaters, on the outer riprap of Pier 400, at the entrance East Channel, Main  
 7 Channel, and Fish Harbor and on the containment dike for the Cabrillo shallow water  
 8 habitat (MEC and Associates, 2002). Total canopy coverage was estimated at 24.8 acres  
 9 in spring 2000, and 14.2 acres in fall 2000 (MEC and Associates, 2002). Canopy  
 10 coverage of giant kelp at these locations in 2008, however, was estimated at 77.8 acres in  
 11 spring 2008 and 50.4 acres in fall 2008 (SAIC, 2010). The nearest kelp beds to the  
 12 proposed Project site are located south and west of the entrance to Fish Harbor. Because  
 13 the majority of kelp distribution in the Port Complex is located at the outer breakwaters,  
 14 and riprap structures in the Outer Harbors that face harbor entrances (SAIC, 2010), giant  
 15 kelp is not expected to occur in areas adjacent to the proposed Project.

1 In separate studies, giant kelp growing along the breakwaters in the Outer Harbor of the  
2 Port Complex has been quantified annually since 2005. Canopy coverage has ranged  
3 between 29.2 acres in 2007 and 122.1 acres in 2006 (MBC, 2009c). Coverage in 2008  
4 was 52.6 acres.

#### 5 **3.3.2.10.4 Mudflats**

6 The shoreline at and near the proposed Project site is rock riprap with wharves. No  
7 mudflats, which are also considered a “special aquatic site” under the CWA (40 CFR  
8 Part 230), are present at the proposed Project site. The nearest known mud flat habitats  
9 are located at Berth 78 along the west side of Main Channel and at Salinas de San Pedro  
10 Salt Marsh, which are approximately 2.5 miles from the proposed Project site.

### 11 **3.3.3 Applicable Regulations**

#### 12 **3.3.3.1 Clean Water Act**

13 The Clean Water Act (33 U.S.C Section 1251 *et seq.*) provides for the restoration and  
14 maintenance of the physical, chemical, and biological integrity of the waters of the  
15 United States. Section 402 of the CWA created the National Pollutant Discharge  
16 Elimination System (NPDES) to enforce effluent limitations. The NPDES program  
17 prohibits the point-source discharge of pollutants unless an NPDES discharge permit has  
18 been obtained. The ultimate goal of the NPDES program is the complete elimination of  
19 all discharges. The NPDES program was expanded in 1987 to regulate non-point source  
20 stormwater discharges (runoff) originating from municipal and industrial sources.

21 Under the USEPA and USACE implementing regulations (40 CFR 230 and 33 CFR 320  
22 – 332), USACE issues Section 404 permits for discharge of dredged or fill materials into  
23 waters of the United States, including wetlands and other special aquatic sites. A Section  
24 401 Water Quality Certification or waiver from the Regional Water Quality Control  
25 Board (RWQCB) is required for issuance of a Section 404 permit. Additional CWA  
26 water quality permitting requirements may include compliance with the Section 402  
27 NPDES General Construction Permit for Storm Water Discharges Associated with  
28 Construction Activity (including the development of a Storm Water Pollution Prevention  
29 Plan [SWPPP]) issued by the State Water Resources Control Board (SWRCB) for  
30 projects that will disturb one or more acres. These regulations are discussed in greater  
31 detail in Section 3.14, Water Quality, Sediments, and Oceanography.

32 In southern California, discharge of dredged or fill material is regulated under Section  
33 404 of the Clean Water Act. Dredging in navigable waters is defined as “work” and  
34 requires a permit under Section 10 of the Rivers and Harbors Appropriations Act.  
35 Because the proposed Project and Project alternatives are not expected to discharge  
36 dredged or fill material to Waters of the U.S., a Section 404(b)(1) evaluation is not  
37 required. The transportation of dredged materials to approved ocean disposal sites is  
38 regulated under Section 103 of the Marine Protection, Research and Sanctuaries Act of  
39 1972 (MPRSA; see Section 3.3.3.10, below). Disposal of dredged material at the LA-2  
40 Ocean Dredged Material Disposal Site would be conducted only if the dredged material  
41 met the permitted volume and sediment quality requirements for these sites. Effects from  
42 disposal of dredged material at LA-2 were evaluated during the LA-2 site designation  
43 process (prior to approval) and were determined to be insignificant.

1 Disposal of dredge material from the proposed Project (or alternative) would occur at a  
2 CDF, with return water to the Harbor. The CDF, however, has already been permitted  
3 under Section 404.

4 Sediments from the proposed dredging area were tested using standard USEPA/USACE  
5 protocols according to an approved Sampling and Analysis Plan (SAP) prior to dredging  
6 to determine the suitability of the material for unconfined, aquatic disposal or other  
7 disposal alternatives. Sediments are proposed to be used for both (1) fill at the Cabrillo  
8 shallow water habitat in the Outer Harbor, and (2) for use in CDF in the Harbor, both of  
9 which already have Corps authorization under Section 404 of the CWA.

### 10 **3.3.3.2 Rivers and Harbors Appropriations Act of 1899**

11 Sections 9 and 10 of the Act (33 U.S.C. Section 401 *et seq.*) regulate work and structures  
12 in, over, and under navigable waters of the U.S., including dredging, filling, and bridges.  
13 Section 9 pertains to bridges and causeways and is administered by the U.S. Coast Guard.  
14 Under Section 10, the USACE issues permits for work and structures in, over, and under  
15 navigable waters.

### 16 **3.3.3.3 Federal Endangered Species Act**

17 The Federal Endangered Species Act (ESA) (16 U.S.C. 1531 *et seq.*) protects threatened  
18 and endangered species, and designated critical habitat, from unauthorized take.  
19 Section 9 prohibits such take, and defines take as to harm, harass, pursue, hunt, shoot,  
20 wound, kill, trap, capture, or collect or to attempt to engage in any such conduct. Take  
21 incidental to otherwise lawful activities can be authorized under Section 7 when there is a  
22 federal nexus (e.g., federal funding, license, or authorization) and under Section 10 when  
23 there is no federal nexus. The USFWS and NMFS share responsibilities for  
24 administering the ESA. Whenever actions authorized, funded, or carried out by federal  
25 agencies could adversely affect listed species or designated critical habitat, the federal  
26 lead agency must consult with the USFWS and/or NMFS under Section 7. The  
27 Biological Opinion issued at the conclusion of that consultation may include a statement  
28 authorizing incidental take<sup>3</sup>.

### 29 **3.3.3.4 Magnuson-Stevens Fishery Conservation and Management Act**

30  
31 The 1996 amendments to the Magnuson-Stevens Fishery Management and Conservation  
32 Act (16 U.S.C. Section 1801 *et seq.*) require federal agencies that fund, permit, or carry  
33 out activities that may affect EFH to consult with the NMFS and respond in writing to the  
34 conservation recommendations provided by NMFS. In addition, NMFS is required to  
35 comment on any state agency activities that would affect EFH.

### 36 **3.3.3.5 Migratory Bird Treaty Act**

37 The Migratory Bird Treaty Act (MBTA) (16 U.S.C. Section 703 *et seq.*), as amended,  
38 provides for the protection of migratory birds by making it illegal to possess, pursue, hunt,  
39 take, or kill any migratory bird species, unless specifically authorized by a regulation  
40 implemented by the Secretary of the Interior, such as designated seasonal hunting. The  
41 Act also applies to removal of nests occupied by migratory birds during the breeding

---

<sup>3</sup> The ESA does not allow incidental take of listed plants or their critical habitat.

1 season. Under certain circumstances, a depredation permit can be issued to allow limited  
2 and specified take of migratory birds.

### 3 **3.3.3.6 California Fish and Game Code, Section 1600**

4 Section 1600 *et seq.* of the Fish and Game Code requires notification of the CDFG before  
5 activities that would substantially alter the bed, bank, or channel of a stream, river, or  
6 lake, including obstructing or diverting the natural flow. This applies to all perennial,  
7 intermittent, and ephemeral water bodies as well as the associated riparian vegetation that  
8 are used by fish and wildlife resources. CDFG may or may not assert jurisdiction over  
9 coastal or port areas including shipping channels. Activities that have the potential to  
10 affect jurisdictional areas can be authorized through issuance of a Lake or Streambed  
11 Alteration Agreement (LAA/SAA). The LAA/SAA specifies conditions and mitigation  
12 measures that will minimize impacts to riparian or aquatic resources from proposed  
13 actions.

### 14 **3.3.3.7 California Endangered Species Act**

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

### 24 **3.3.3.8 Ballast Water Management for Control of Nonindigenous** 25 **Species Act**

26 California PRC Section 71200 *et seq.* (enacted January 1, 2000), and as amended by  
27 Assembly Bill (AB) 433 in September 2003, requires ballast water management practices  
28 for all vessels, domestic and foreign, carrying ballast water into waters of the state after  
29 operating outside the Exclusive Economic Zone (EEZ), which includes waters within  
30 200 nautical miles from shore). Specifically, the regulation prohibits ships from  
31 discharging ballast water in Harbor waters unless they have performed an exchange  
32 outside the EEZ in deep, open ocean waters. Alternatively, ships may retain water while  
33 in port, discharge to an approved reception facility, or implement other similar protective  
34 measures. Each ship must also develop a ballast water management plan to minimize the  
35 amount of ballast water discharged in the Harbor. The Act also requires an analysis of  
36 other vectors for release of non-native species from vessels. Rules for vessels originating  
37 in the Pacific Coast Region took effect in March 2006. Ships must now exchange ballast  
38 water on coastwise voyages. Regulations currently under consideration for future years  
39 (2011-2022) will require phase-in of ballast water treatment performance standards, first  
40 for newly constructed ships and then for existing ships.

41

### 3.3.3.9 Marine Mammal Protection Act

The Marine Mammal Protection Act (MMPA) (16 U.S.C. Section 1361 *et seq.*) prohibits the taking (including harassment, disturbance, capture, and death) of any marine mammals, except as set forth in the act. The NMFS and the USFWS administer this Act. Species found in the Harbor are under the jurisdiction of NMFS.

### 3.3.3.10 Marine Protection, Research, and Sanctuaries Act of 1972

The Marine Protection, Research, and Sanctuaries Act of 1972 (MPRSA) (33 U.S.C. Section 1401 *et seq.*) regulates the transportation and ultimate disposal of material in the ocean, prohibits ocean disposal of certain wastes without a permit, and prohibits the disposal of certain materials entirely. Prohibited materials include those that contain radiological, chemical, or biological warfare agents, high-level radiological wastes, and industrial waste. The MPRSA has jurisdiction over all U.S. ocean waters in and beyond the territorial sea (within 12 nautical miles of the nearest shoreline), vessels flying the U.S. flag, and vessels leaving U.S. ports. Section 102 of the MPRSA authorizes the USEPA to promulgate environmental criteria for evaluation of all disposal permit actions, to retain review authority over the USACE MPRSA Section 103 permits, and to designate ocean disposal sites for dredged material disposal.

## 3.3.4 Impacts and Mitigation Measures

### 3.3.4.1 Methodology

Impacts to biota were assessed by estimating the amount of habitat that would be gained/lost or disturbed, through analysis of water quality and sediment analyses results (see Section 3.14, Water Quality, Sediments, and Oceanography), based on biological resources that may be present or may use the undeveloped 41-acre fill area adjacent to the existing APL Terminal site (such as terns), and from preparer expertise and judgment. The assessment of impacts is based on the assumption that the proposed Project (and each alternative) will include the following:

- A Section 401 (of the CWA) Water Quality Certification from the RWQCB for construction dredging activities that contains conditions including standard Waste Discharge Requirements (WDRs).
- A Rivers and Harbors Act Section 10 permit from the USACE for dredging and wharf construction activities in waters of the U.S. An MPRSA Section 103 permit would be required for ocean transport and disposal of qualifying material at a designated ocean site (LA-2).
- No discharge of dredged or fill material to Waters of the U.S. requiring a Section 404(b)(1) evaluation is anticipated. In addition, no upland disposal in which a 404 permit would be needed for return water is anticipated.
- During dredging, an integrated multi-parameter monitoring program shall be implemented by the Port's Environmental Management Division in compliance with both USACE and RWQCB permit requirements, wherein dredging performance is measured *in situ*. The objective of the monitoring program shall be adaptive management of the dredging operation, whereby potential exceedances of water quality objectives can be measured and dredging operations subsequently modified. If potential exceedance levels are approached, the Port's Environmental Management

1 Division shall immediately meet with the construction manager to discuss  
 2 modifications of dredging operations to reduce turbidity and to keep it at acceptable  
 3 levels. This could include alteration of dredging methods, and/or implementation of  
 4 additional Best Management Practices (BMPs) such as a silt curtain (which may be  
 5 required by permit conditions). An individual NPDES permit for construction  
 6 stormwater discharges or coverage under the General Construction Activity Storm  
 7 Water Permit will be obtained for the onshore portions of the proposed Project (and  
 8 alternatives).

- 9 ■ Sediments suitable for unconfined aquatic disposal from the proposed dredging area  
 10 would be used as fill at the Cabrillo shallow water habitat in the Outer Harbor,  
 11 potentially used in the Los Angeles Harbor Berths 243-245 CDF, and potentially  
 12 disposed of at the LA-2 ODMDS. Sediments unsuitable for unconfined aquatic  
 13 disposal would be used for fill in the CDF. Ocean disposal at LA-2 would require  
 14 Corps authorization under the MPRSA.
- 15 ■ The tenant would obtain and implement the stormwater discharge permits (such as  
 16 the General Industrial Permit). In addition Standard Urban Stormwater Management  
 17 Plan (SUSMP) requirements for the development of the 41 acres and any applicable  
 18 redevelopment would be implemented. These are described in detail in Section 3.14,  
 19 Water Quality, Sediments, and Oceanography.
- 20 ■ Spill Prevention, Control, and Countermeasure Regulations - The Oil Spill  
 21 Prevention, Control, and Countermeasure (SPCC) regulations require that the Port  
 22 have in place measures that help ensure oil spills do not occur, but if they do, that  
 23 there are protocols in place to contain the spill and neutralize the potential harmful  
 24 impacts. An SPCC plan and an Oil Spill Contingency Plan (OSCP) would be  
 25 prepared that would be reviewed and approved by the Regional Water Quality  
 26 Control Board (for the SPCC) or the California Department of Fish and Game Office  
 27 of Spill Prevention and Response, in consultation with other responsible agencies.  
 28 The SPCC and OSCP plans would detail and implement spill prevention and control  
 29 measures.

#### 30 **3.3.4.1.1 CEQA Baseline**

31 Section 15125 of the CEQA Guidelines requires EIRs to include a description of the  
 32 physical environmental conditions in the vicinity of a project that exist at the time of the  
 33 NOP. These environmental conditions normally would constitute the baseline physical  
 34 conditions by which the CEQA lead agency determines if an impact is significant. For  
 35 purposes of this Draft EIS/EIR, the CEQA baseline for determining the significance of  
 36 potential Project impacts is the environmental set of conditions that prevailed at the time  
 37 the NOP was published for the proposed Project - July 2009. The CEQA baseline takes  
 38 into account the throughput for the 12-month period preceding July 2009 (July 2008  
 39 through the end of June 2009) in order to provide a representative characterization of  
 40 activity levels throughout the year. The CEQA baseline conditions are described in  
 41 Section 2.6.1. The CEQA baseline for this proposed Project includes approximately 1.13  
 42 million TEUs per year, 998,728 annual truck trips, and 247 annual ship calls that  
 43 occurred on the 291-acre APL Terminal in the year prior to and including June 2009.

44 The CEQA baseline represents the setting at a fixed point in time and differs from the No  
 45 Project Alternative (Alternative 1) in that the No Project Alternative addresses what is  
 46 likely to happen at the proposed Project site over time, starting from the existing  
 47 conditions. Therefore, the No Project Alternative allows for growth at the proposed



1 Project site that could be expected to occur without additional approvals, whereas the  
2 CEQA baseline does not.

### 3 **3.3.4.1.2 NEPA Baseline**

4 For purposes of this Draft EIS/EIR, the evaluation of significance under NEPA is defined  
5 by comparing the proposed Project or other alternative to the NEPA baseline. The NEPA  
6 baseline conditions are described in Section 2.6.2. Briefly, the NEPA baseline condition  
7 for determining significance of impacts includes the full range of construction and  
8 operational activities the applicant could implement and is likely to implement absent a  
9 federal action, in this case the issuance of a USACE permit. The NEPA baseline includes  
10 minor terminal improvements in the upland area (i.e., conversion of a portion of the dry  
11 container storage unit area to reefers and utility infrastructure), operation of the 291-acre  
12 container terminal, and assumes that by 2027, the terminal (Berths 302 to 305) handles up  
13 to approximately 2.15 million TEUs annually and accommodates 286 annual ships calls  
14 and 2,336 on-way rail trips, without any federal action. Because the NEPA baseline is  
15 dynamic, it includes different levels of terminal operations at each study year (2012, 2015,  
16 2020, 2025, and 2027).

17 Unlike the CEQA baseline, which is defined by conditions at a point in time, the NEPA  
18 baseline is not bound by statute to a “flat” or “no-growth” scenario. Therefore, the  
19 USACE could project increases in operations over the life of a project to properly  
20 describe the NEPA baseline condition. Normally, any federal permit decision would  
21 focus on direct impacts of the proposed Project to the aquatic environment, as well as  
22 indirect and cumulative impacts in the uplands determined to be within the scope of  
23 federal control and responsibility. Significance of the proposed Project or alternative  
24 under NEPA is defined by comparing the proposed Project or alternative to the NEPA  
25 baseline (i.e., the increment).

26 The NEPA baseline, for purposes of this Draft EIS/EIR, is the same as the No Federal  
27 Action Alternative. Under the No Federal Action Alternative, only minor terminal  
28 improvements (utility infrastructure, and conversion of dry container storage to  
29 refrigerated container storage) would occur, but no new cranes would be added, and the  
30 terminal configuration would remain as it was configured in 2008 (291 acres, 12 A-frame  
31 cranes, and a 4,000-ft wharf). However, forecasted increases in cargo throughput and  
32 annual ship calls would still occur as container growth occurs.

### 33 **3.3.4.2 Thresholds of Significance**

34 The significance criteria have been developed using the *L.A CEQA Thresholds Guide*  
35 (City of Los Angeles, 2006). They were modified to better assess impacts of the  
36 proposed Project and alternatives. Consequently, criterion BIO-2 has been modified to  
37 delete locally designated species (because none are present) and to include state and  
38 federally designated habitats (e.g., EFH, mudflats, and wetlands), criterion BIO-3 has  
39 been modified to cover species other than sensitive species, and BIO-4 has been deleted  
40 because it is now included in BIO-2. BIO-5 is now BIO-4 and has been modified to  
41 address only disruption of local biological communities, and a new criterion, BIO-5, has  
42 been added for permanent loss of marine habitat, which is evaluated under construction  
43 impacts. Aerial deposition impacts are addressed in Section 3.14, Water Quality,  
44 Sediments, and Oceanography. Impacts of the proposed Project/alternative on biological  
45 resources are considered to be significant if the project would result in any of the  
46 following:



1 be unsuitable for future elegant and Caspian tern nesting. No critical habitat for any  
2 federally listed species is present at the proposed Project/alternative sites.

3 Dredging and wharf construction could affect water-associated birds and marine  
4 mammals through temporary increases in noise, vibration, and turbidity, as well as the  
5 potential for displacement of individuals from the work area. However, these birds and  
6 marine mammals would be able to use other areas in the Harbor if construction activities  
7 occurred when they were present and if the disturbances caused them to avoid the work  
8 area. With the exception of potential noise impacts during pile-driving (discussed further  
9 below), other construction disturbances are considered insignificant.

10 Dredging activities and the resultant temporary turbidity have the potential to affect  
11 foraging by bird species in the general area, such as elegant, Caspian, and least terns.  
12 However, impacts would be temporary, limited to the construction areas, and conditions  
13 would return to normal after conclusion of dredging activities. Moreover, high levels of  
14 turbidity and total suspended solids are usually not measured during dredging operations  
15 in southern California (Anchor Environmental, 2003). In addition, implementation of  
16 required water quality monitoring during dredging according to the requirements of the  
17 RWQCB, as well as implementation of standard dredging BMPs via adaptive  
18 management of the dredging would keep these impacts to a less than significant level.

19 Foraging in the vicinity of the proposed Project could also continue with no adverse  
20 effects to bird species; California least terns have been observed foraging in dredge  
21 plumes in Long Beach Harbor (Moore, pers. comm., 2010). All three tern species prefer  
22 to forage in shallower waters, and the waters of the Shallow Water Habitat likely provide  
23 higher foraging value than those in the channel south of Pier 300. Because dredging and  
24 wharf construction would occur in the channel south of Pier 300, and  
25 dredging/construction impacts would be limited to that area, substantial effects to the  
26 Shallow Water Habitat are not likely. As summarized below, dredging is not likely to  
27 substantially increase turbidity and/or total suspended solids in the waters along the  
28 proposed Project site. Results from water quality monitoring during dredging would be  
29 used to evaluate the potential for resuspension of potentially contaminated sediments to  
30 affect sensitive species. If results were to indicate that contaminated sediments were  
31 being resuspended and causing turbidity to increase in the Shallow Water Habitat during  
32 foraging periods, applicable BMPs, such as modifications to dredging equipment or use  
33 of silt curtains (which may be required by permit conditions), would be implemented.

34 Potential biological impacts from disposal of dredged sediments would depend on the  
35 disposal method. However, for all in-water disposal options (such as confined aquatic  
36 disposal or at the LA-2 ODMDS), potential impacts include: water quality impacts from  
37 turbidity or contaminants, and smothering of resident fishes and invertebrates. Impacts  
38 from disposal at the LA-2 (as well as the LA-3) disposal site was evaluated during the  
39 site designation process (USEPA and USACE, 2005).

40 Sediments were screened to determine acceptability of disposal at different locations.  
41 Sediments suitable for unconfined aquatic disposal would (1) be used as fill at the  
42 Cabrillo shallow water habitat, (2) potentially provide fill for the Berths 243-245 CDF,  
43 and (3) potentially be disposed of at the LA-2 ODMDS. Unsuitable sediments would be  
44 used for fill in the Berths 243-245 CDF. Biological impacts due to construction and fill  
45 of the CDF, as well as expansion and fill of the Cabrillo shallow water habitat, were  
46 evaluated in the *Final Supplemental Environmental Impact Statement / Final Supplemental*

1 *Environmental Impact Report (EIS/EIR) for the Port of Los Angeles Channel Deepening*  
2 *Project* (USACE and LAHD, 2009). This evaluation included mitigation for habitat loss  
3 at the Berths 243-245 CDF. Any temporary water quality impacts would be minimized  
4 as discussed by pre-dredge screening, water quality monitoring, and adaptive  
5 management and use of BMPs.

6 Approximately 515 new concrete support piles would be installed for the new wharf,  
7 which would become Berth 306. Piling installation would be accomplished with impact  
8 pile-driving methods. The size and type of pilings affect the sound volume produced  
9 during pile-driving. For instance, larger piles generally produce higher sound volume  
10 than smaller ones. In addition, the extent and intensity of noise effects would also  
11 depend on the underwater geography and water depth in the piling vicinity.

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

19 Concrete piles would be used for wharf construction. Concrete piles would be installed  
20 with impact driving to achieve final depth and to firmly set the piles. Impact driving of  
21 24-inch concrete piles (of unspecified shape) has produced peak sound volumes of  
22 183-193 dB<sub>PEAK</sub>, and volumes of 171-175 dB<sub>RMS</sub> at a distance of 33 feet (ICF and  
23 Illingworth & Rodkin, 2009). This is consistent with Illingworth and Rodkin who  
24 measured sound pressures from impact pile-driving of 24-inch concrete piles of  
25 185-188 dB<sub>PEAK</sub> and 170-176 (dB<sub>RMS</sub>) within 33 ft of the source (Illingworth and Rodkin,  
26 2007) Therefore, concrete pile-driving is anticipated to result in disturbance (Level B  
27 harassment) to marine mammals in the vicinity of construction operations.

### 28 **California least tern**

29 A nesting colony for the California least tern is located on the southeast portion of  
30 Pier 400 within the Harbor, approximately 1.1 miles from the proposed Project site.  
31 Historically, the site has been located at a variety of locations on Terminal Island in the  
32 vicinity of Pier 300. In 1997, the birds nested for the first time on the newly constructed  
33 Pier 400. Since 1998, this species has nested exclusively on Pier 400. Currently, a  
34 15-acre nesting site on Pier 400 is maintained by LAHD under an interagency California  
35 Least Tern Nesting Site Memorandum of Agreement (City of Los Angeles et al., 2006).  
36 California least terns feed on small fish in the surface waters of the Harbor.

37 The shallow waters (<-20 ft mean lower low water [MLLW]) in the Outer Harbor,  
38 including the Shallow Water Habitat adjacent to Pier 300, are considered important  
39 feeding areas for the California least tern and are areas requiring protection. As  
40 discussed above, turbidity due to dredging is not likely to substantially affect the Shallow  
41 Water Habitat because dredging operations do not normally result in high turbidity or  
42 suspended solids. Dredging and wharf construction would occur in waters that are  
43 generally greater than about -48 ft MLLW (in the Pier 300 Channel), and are therefore  
44 not expected to affect California least tern foraging. However, because the Shallow  
45 Water Habitat is adjacent to the eastern end of the proposed dredge footprint (at proposed

Berth 306), there is the potential for a dredge plume to extend into the Shallow Water Habitat. Based on water quality monitoring data from other harbor dredge projects using suction and clamshell dredge equipment (Jones & Stokes 2007a, 2007b), water quality effects are expected to be transitory, lasting for less than one tide cycle following active dredging, and covering an area generally within 1,000 ft of the activity, and often less than 300 ft. Turbidity may also be temporarily increased during installation of piles (or other subtidal construction activities that take place near the seafloor). However, the extent would generally be much less than the area affected by dredging, likely affecting a radius of no more than about 100 ft from the activity.

Potential biological effects from expansion of the Cabrillo shallow water habitat were also previously evaluated (USACE and LAHD, 2009). Turbidity from disposal of suitable dredged material could affect the foraging of California least tern by obscuring visibility, decreasing the number of forage fish in the area, or both. However, both of these effects would be limited in scope and duration. The limited scope of the fill would leave a large portion of the Cabrillo shallow water habitat available for potential foraging. Other waters within the Ports Complex, including the Pier 300 Shallow Water Habitat, would also still be available for foraging. Upon completion of construction, the expanded shallow water area would provide habitat for fish and invertebrates typical of shallow waters. Shallow waters tend to support a higher biomass of benthic invertebrates than deeper waters and provide more food for fish (USACE and LAHD, 2009). The fish, in turn, would help support the California least tern.

Water quality monitoring conducted during the Los Angeles Harbor Channel Deepening Project in June 2003 indicated that reductions in light transmittance from clamshell dredging were 31 percent at the surface and 11 percent at mid-depth; there was no reduction in transmittance near bottom (LAHD and CH2M Hill, 2008). There were no reductions during suction dredging during that same survey. MBC monitored clamshell dredging at Berth 100 in Los Angeles Harbor during a five-week period in 2002. During these surveys, a dredge plume was evident in the bottom half of the water column at the station 300 ft downcurrent from dredge operations. However, suspended solids concentrations measured during dredge surveys were within the range seen during periods of no dredging (MBC, 2002). Similar results were recorded during six dredge surveys each at Berths 212-215 and Berths 261-265 in Los Angeles Harbor in 2001 (MBC, 2001a and 2001b). During those surveys, light transmittance was reduced in the lower half of the water column by about 15 percent on average at the station 300 ft downcurrent from dredge operations at Berths 212-215, and reduced by about 36 percent on average at Berths 261-265. The differences were likely due to the configuration of the dredge areas, as dredging at Berths 261-265 occurred in a semi-enclosed basin.

Implementation of required water quality monitoring during dredging according to the requirements of the RWQCB, as well as implementation of standard dredging BMPs via adaptive management of the dredging would keep these impacts to a less than significant level.

### **Elegant and Caspian tern**

Elegant and Caspian terns nested on the 41-acre backlands, which would be developed as part of the proposed Project, in 2008, 2009, and 2010 (the 2010 nesting was abandoned a week later). The site was originally constructed in 2005 by the Port of Los Angeles in anticipation of terminal development. Caspian and elegant tern also nested on Pier 400

1 from 1998 through 2005, but have not returned since then (Keane Biological Consulting,  
2 2008). In May of 2008 an estimated 3,300 elegant terns, 270 Caspian terns, and 15 royal  
3 terns were observed nesting in five separate groups on the backlands of Berth 305.  
4 Chicks began hatching in June 2008, and all terns were gone from the site by September  
5 2008 (Keane Biological Consulting, 2008). In May of 2009, an estimated 4,200 elegant  
6 terns, 220 Caspian terns, and royal terns (not quantified) were observed nesting on the  
7 backlands of Berth 305 (Keane Biological Consulting, 2009). In April 2010, elegant  
8 terns and Caspian terns began nesting at the 41-acre area, but the nesting was abandoned  
9 a week later. No further nesting activities by Caspian or elegant terns were observed at  
10 the backlands of Berth 305 or elsewhere in the Los Angeles Harbor in 2010, aside from  
11 limited nesting on Connolly Pacific barges from April through July (Keane, pers. comm.,  
12 2011). Like California least terns, Caspian and elegant terns feed on small fish in the  
13 surface waters of the Harbor. As discussed above, dredging and wharf construction  
14 would occur in the channel south of Pier 300, and dredging/construction impacts would  
15 likely be limited to that area. However, because the Shallow Water Habitat is adjacent to  
16 the eastern end of the proposed dredge footprint (at proposed Berth 306), there is the  
17 potential for a dredge plume to extend into the Shallow Water Habitat.

18 This recently-created site was used opportunistically by terns since 2008 due to the  
19 interval between construction of the fill site and terminal development. However,  
20 elegant, royal, and Caspian terns would likely nest at other sites suitable for nesting (such  
21 as Bolsa Chica, Orange County).

22 Because development of the 41-acre area is scheduled to begin in the first quarter of  
23 2013, which overlaps with the general tern nesting period (February 15 – September 1), if  
24 elegant and/or Caspian terns nest at the 41-acre area in 2013, there could be potential  
25 impacts to nesting. Potential impacts to elegant and Caspian nesting at the 41-acre area  
26 are considered a potentially significant impact.

27 Pre-construction surveys within the proposed Project site would keep potential impacts to  
28 nesting habitat to a less than significant level. Implementation of required water quality  
29 monitoring during dredging according to the requirements of the RWQCB, as well as  
30 implementation of standard dredging BMPs via adaptive management of the dredging  
31 would keep potential impacts to foraging areas to a less than significant level.

## 32 **Marine mammals**

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

## 38 **CEQA Impact Determination**

39 As described above, construction of the proposed Project is not likely to result in the loss  
40 of individuals or the reduction of existing federally-listed critical habitat of a state or  
41 federally listed endangered, threatened, rare, protected, candidate, or sensitive species or  
42 a species of special concern. In-water construction would cause localized activity, noise,  
43 and turbidity that could affect birds and marine mammals. However, these impacts  
44 would be temporary and limited to the waters in the vicinity of construction activities.  
45 Implementation of required water quality monitoring during dredging according to the

1 requirements of the RWQCB, and implementation of standard dredging BMPs via  
2 adaptive management of the dredging would keep these impacts to a less than significant  
3 level.

4 Sediments were screened to determine acceptability of disposal at different locations.  
5 Sediments suitable for unconfined aquatic disposal would (1) be used as fill at the  
6 Cabrillo shallow water habitat, (2) potentially provide fill for the Berths 243-245 CDF,  
7 and (3) potentially be disposed of at the LA-2 ODMDS. Unsuitable sediments would be  
8 used for fill in the Berths 243-245 CDF. Biological impacts due to construction and fill  
9 of the CDF, as well as expansion and fill of the Cabrillo shallow water habitat, were  
10 evaluated in the *Final Supplemental Environmental Impact Statement / Final Supplemental*  
11 *Environmental Impact Report (EIS/EIR) for the Port of Los Angeles Channel Deepening*  
12 *Project* (USACE and LAHD, 2009). This evaluation included mitigation for habitat loss  
13 at the Berths 243-245 CDF. Impacts from disposal at the LA-2 disposal site were  
14 evaluated during the site designation process (USEPA and USACE, 2005). Any  
15 temporary water quality impacts would be minimized as discussed by pre-dredge  
16 screening, water quality monitoring, and adaptive management and use of BMPs.

17 Development of the area as backlands is scheduled to start in the first quarter 2013, which  
18 overlaps with the nesting season. If the elegant and Caspian tern utilize the 41-acre are  
19 for nesting in 2013, site development could result in a significant impact on nesting.  
20 Implementation of mitigation measure **MM BIO-1** would reduce potential impacts to  
21 elegant and Caspian tern nesting due to backlands development on the 41-acre site.  
22 Concrete pile-driving is anticipated to result in disturbance (Level B harassment) to  
23 marine mammals (particularly harbor seals and sea lions, which would be the marine  
24 mammals most likely to occur in the vicinity of Pier 300) in the vicinity of pile-driving  
25 operations. Impacts would not be significant; however, impacts on marine mammals  
26 resulting from noise associated with pile-driving would be further reduced with  
27 implementation of standard condition of approval **SC BIO-1**. This would ensure that  
28 marine mammals would be readily able to avoid pile-driving areas, and no injury to  
29 marine mammals from pile-driving sounds would be expected.

### 30 *Mitigation Measures*

31 **MM BIO-1. Conduct nesting bird surveys.** This measure applies only if  
32 construction on the 41-acre undeveloped area is to occur between  
33 February 15 and September 1. Prior to ground-disturbing activities, a  
34 qualified biologist shall conduct surveys for the presence of tern nests  
35 on the 41-acre backlands, and within the proposed Project site that  
36 contains potential nesting bird habitat. Surveys shall be conducted no  
37 later than 1 week prior to the clearing, removal, or grubbing of any  
38 vegetation or ground disturbance. If active nests of species protected  
39 under the MBTA and/or similar provisions of the California Fish and  
40 Game Code (i.e., native birds including but not limited to the black-  
41 crowned night heron) are located, then a barrier installed at a 50–100  
42 foot radius from the nest(s) shall be established. The barrier will remain  
43 until a qualified biologist determines that the young have fledged or the  
44 nest is no longer active.

45 **SC BIO-1. Avoid marine mammals.** Although it is expected that marine mammals  
46 will voluntarily move away from the area at the commencement of the  
47 vibratory or “soft start” of pile-driving activities, as a precautionary

1 measure, pile-driving activities occurring as part of the wharf extension  
2 shall include establishment of a safety zone, and the area surrounding  
3 the operations will be monitored by a qualified marine biologist for  
4 pinnipeds. A 100-meter-radius safety zone will be established around  
5 the pile-driving site and monitored for marine mammals. As the pile-  
6 driving site will move with each new pile, the 100-meter safety zone  
7 shall move accordingly.

8 Prior to commencement of pile-driving, observers on shore or by boat  
9 will survey the safety zone to ensure that no marine mammals are seen  
10 within the zone before pile-driving of a pile segment begins. If a  
11 marine mammal is observed within 10 meter of pile-driving operations,  
12 pile-driving shall be delayed until the marine mammals moves out of  
13 the area. If a marine mammal in the 100-meter safety zone is observed,  
14 but more than 10 meter away, the contractor shall wait at least 15  
15 minutes to commence pile-driving. If the marine mammal has not left  
16 the 100-meter safety zone after 15 minutes, pile-driving can commence  
17 with a "soft start". This 15-minute criterion is based on a study  
18 indicating that pinnipeds dive for a mean time of 0.50 minutes to 3.33  
19 minutes; the 15-minute delay will allow a more than sufficient period of  
20 observation to be reasonably sure the animal has left the proposed  
21 Project vicinity.

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

### 29 *Residual Impacts*

30 Impacts would be less than significant.

### 31 **NEPA Impact Determination**

32 Construction of the proposed Project would result in limited upland construction,  
33 in-water, and over-water construction activities not included in the NEPA baseline. As  
34 described above, construction of the proposed Project is not likely to result in the loss of  
35 individuals or the reduction of existing federally-listed critical habitat of a state or  
36 federally listed endangered, threatened, rare, protected, candidate, or sensitive species or  
37 a species of special concern. In-water construction would cause localized activity, noise,  
38 and turbidity that could affect birds and marine mammals. However, these impacts  
39 would be temporary and limited to the waters in the vicinity of construction activities.  
40 Implementation of required water quality monitoring during dredging according to the  
41 requirements of the RWQCB, and implementation of standard dredging BMPs via  
42 adaptive management of the dredging would keep these impacts to a less than significant  
43 level.

44 Sediments were screened to determine acceptability of disposal at different locations.  
45 Sediments suitable for unconfined aquatic disposal would (1) be used as fill at the



1 Cabrillo shallow water habitat, (2) potentially provide fill for the Berths 243-245 CDF,  
2 and (3) potentially be disposed of at the LA-2 ODMDS. Unsuitable sediments would be  
3 used for fill in the Berths 243-245 CDF. Biological impacts due to construction and fill  
4 of the CDF, as well as expansion and fill of the Cabrillo shallow water habitat, were  
5 evaluated in the *Final Supplemental Environmental Impact Statement / Final Supplemental*  
6 *Environmental Impact Report (EIS/EIR) for the Port of Los Angeles Channel Deepening*  
7 *Project* (USACE and LAHD, 2009). This evaluation included mitigation for habitat loss  
8 at the Berths 243-245 CDF. Impacts from disposal at the LA-2 disposal site were  
9 evaluated during the site designation process (USEPA and USACE, 2005). Any  
10 temporary water quality impacts would be minimized as discussed by pre-dredge  
11 screening, water quality monitoring, and adaptive management and use of BMPs.

12 Development of the area as backlands is scheduled to start in the first quarter 2013, which  
13 overlaps with the nesting season for elegant and Caspian tern. If the elegant and Caspian  
14 tern utilize the 41-acre area for nesting in 2013, site development could result in a  
15 significant impact on nesting. Implementation of mitigation measure **MM BIO-1** would  
16 mitigate potential impacts to elegant and Caspian tern nesting due to backlands  
17 development on the 41-acre site. Concrete pile-driving is anticipated to result in  
18 disturbance (Level B harassment) to marine mammals (particularly harbor seals and sea  
19 lions, which would be the marine mammals most likely to occur in the vicinity of Pier  
20 300) in the vicinity of pile-driving operations. Impacts would not be significant;  
21 however, impacts on marine mammals resulting from noise associated with pile-driving  
22 would be further reduced with implementation of standard condition of approval  
23 **SC BIO-1**. This would ensure that marine mammals would be readily able to avoid  
24 pile-driving areas, and no injury to marine mammals from pile-driving sounds would be  
25 expected.

#### 26 *Mitigation Measures*

27 Mitigation measure **MM BIO-1** and standard condition of approval **SC BIO-1** would  
28 apply to the proposed Project during construction.

#### 29 *Residual Impacts*

30 Impacts would be less than significant.

### 31 **Impact BIO-2a: Construction activities would not result in a** 32 **substantial reduction or alteration of a state, federally, or locally** 33 **designated natural habitat, special aquatic site, or plant community,** 34 **including wetlands.**

35 There are no special aquatic habitats or other sensitive natural communities identified at  
36 the proposed Project site that would be affected by proposed Project construction. There  
37 is approximately 30.6 acres of eelgrass habitat in the Pier 300 Shallow Water  
38 Habitat/Seaplane Lagoon area; however, proposed Project construction is not expected to  
39 affect subtidal eelgrass. Prior to installation of in-water structures and dredging along  
40 Berth 306, eelgrass surveys would be conducted as required under the *Southern*  
41 *California Eelgrass Mitigation Policy* (NMFS, 1991 as amended). Although the absence  
42 of eelgrass along Berth 306 in the Pier 300 Channel has been confirmed, if eelgrass is  
43 found in the vicinity of any of the structures, a plan would be developed to ensure that  
44 there would be no net loss of eelgrass habitat, consistent with the policy. However,  
45 because the depths at the proposed construction site (-48 ft MLLW or deeper) are

1 generally inadequate for eelgrass growth, the proposed Project would probably have no  
2 direct impact on eelgrass and associated biological communities. Based on water quality  
3 monitoring data summarized in Impact BIO-1a, turbidity would be limited to between a  
4 few hundred feet and 1,000 ft from dredging operations. The nearest eelgrass beds are  
5 approximately 2,900 ft from the nearest (eastern) edge of the proposed dredge and  
6 in-water construction area. Results from required water quality monitoring would also be  
7 used to document the extent of the dredge plume, and adaptive management measures  
8 (such as implementation of BMPs, or compliance with permit conditions such as use of a  
9 silt curtain) would be implemented to reduce impacts from turbidity and siltation.  
10 Therefore, effects from dredging/pile-driving on eelgrass are not expected.

11 The addition of a negligible amount of sediment at the Cabrillo shallow water habitat  
12 would not affect existing eelgrass beds at Cabrillo Beach by removal or burial. Turbidity  
13 caused by fill, including deposition of suspended sediment on the plant surfaces, could  
14 affect eelgrass by reducing light penetration and photosynthesis by eelgrass. The extent  
15 and duration of such effects would depend on the amount of suspended sediment and  
16 water currents at the time of the work. However, because turbidity is not expected to  
17 extend beyond 300 feet (91 m) of the disposal location it would be unlikely to adversely  
18 affect productivity of the eelgrass. Deposition of sediment on the eelgrass would be low  
19 because much of the suspended sediment would settle out before reaching the eelgrass  
20 beds. These effects would occur only during construction with rapid recovery (a few  
21 months) of any plants damaged by the sediment.

22 Potential biological impacts from disposal of dredged sediments would depend on the  
23 disposal method. Impacts from disposal at the LA-2 disposal site were evaluated during  
24 the site designation process (USEPA and USACE, 2005). Any temporary water quality  
25 impacts would be minimized as discussed by pre-dredge screening, water quality  
26 monitoring, and adaptive management and use of BMPs. Fill would not be allowed at  
27 special aquatic sites, including wetlands, eelgrass beds, or kelp beds.

28 The nearest kelp beds to the proposed Project site are located adjacent to the entrance to  
29 Fish Harbor, and kelp distribution in the Port Complex is generally located at the outer  
30 breakwaters and riprap structures in the Outer Harbors that face harbor entrances  
31 (SAIC, 2010). Giant kelp does not occur in waters directly off the APL Terminal, and  
32 the nearest beds (at the entrance to Fish Harbor) are more than 1,600 ft from the western  
33 edge of the proposed dredge area. Based on water quality monitoring data summarized in  
34 Impact BIO-1a, water quality effects are expected to be transitory, lasting for less than  
35 one tide cycle following active dredging, and covering an area generally within 1,000 ft  
36 of the activity, and often less than 300 ft. Turbidity may also be temporarily increased  
37 during installation of piles (or other subtidal construction activities that take place near  
38 the seafloor). However, the extent would generally be much less than the area affected  
39 by dredging, probably affecting a radius of no more than about 100 ft from the activity.  
40 Therefore, effects from dredging/pile-driving on giant kelp are not expected. There is no  
41 eelgrass or giant kelp in the vicinity of the Berth 306 wharf, so shading from the new  
42 wharf would not impact these resources. There are no mudflats or marshes near the  
43 proposed Project site that would be affected by proposed Project construction. Impacts to  
44 EFH during construction would be localized and temporary.

45 The SWPPP implemented by the tenant currently at the APL Terminal has been  
46 successful in preventing water quality exceedances and maintaining water quality  
47 sufficient for growth of eelgrass (EMS, 2010). A similar program would be implemented

1 as part of the proposed Project to ensure continued protection of these resources during  
2 construction. This program would include standard BMPs, such as use of sediment  
3 barriers, to minimize runoff that could affect EFH and eelgrass.

#### 4 **CEQA Impact Determination**

5 Construction of the proposed Project is not expected to affect subtidal eelgrass habitat in  
6 the Pier 300 Shallow Water Habitat/ Seaplane Lagoon area, or at the Cabrillo shallow  
7 water habitat, either from runoff or from turbidity during dredging. The nearest Giant  
8 kelp beds to the APL Terminal are located at the entrance to Fish Harbor more than 1,600  
9 ft from the western edge of the proposed dredge area. Based on water quality monitoring  
10 data summarized in Impact BIO-1a, water quality effects are expected to be transitory  
11 and are not expected to significantly affect the kelp beds. There are no mudflats or  
12 marshes near the proposed Project site that would be affected by proposed Project  
13 construction. Impacts to EFH during construction would be localized and temporary and  
14 not significant.

##### 15 *Mitigation Measures*

16 No mitigation is required.

##### 17 *Residual Impacts*

18 Impacts would be less than significant.

#### 19 **NEPA Impact Determination**

20 Construction of the proposed Project would result in limited upland construction,  
21 in-water, and over-water construction activities not included in the NEPA baseline.  
22 Construction of the proposed Project is not expected to affect subtidal eelgrass habitat in  
23 the Pier 300 Shallow Water Habitat/Seaplane Lagoon area, or at the Cabrillo shallow  
24 water habitat, either from runoff or from turbidity during dredging. The nearest Giant  
25 kelp beds to the APL Terminal are located at the entrance to Fish Harbor more than 1,600  
26 ft from the western edge of the proposed dredge area. Based on water quality monitoring  
27 data summarized in Impact BIO-1a, water quality effects are expected to be transitory  
28 and are not expected to significantly affect the kelp beds. There are no mudflats or  
29 marshes near the proposed Project site that would be affected by proposed Project  
30 construction. Impacts to EFH during construction would be localized and temporary and  
31 not significant.

##### 32 *Mitigation Measures*

33 No mitigation is required.

##### 34 *Residual Impacts*

35 Impacts would be less than significant.

#### 36 **Impact BIO-3a: Construction activities would not interfere with** 37 **wildlife movement/migration corridors.**

38 No known terrestrial wildlife migration corridors are present at the proposed Project site.  
39 The only defined migratory species in the Harbor are birds. California least tern is a  
40 migratory bird species that nests on Pier 400, while Caspian tern, elegant tern, and royal  
41 tern have nested on the 41-acre fill site; construction of the proposed Project would not

1 interfere with the aerial migration of these species. Movement to and from foraging areas  
2 in the Harbor also would not be affected by proposed Project construction activities. A  
3 number of other water birds that are present at least seasonally in the Harbor are  
4 migratory as well. Construction activities within the proposed Project site would not  
5 block or interfere with migration or movement of any of these species covered under the  
6 MBTA, because the work would be in a small portion of the Harbor area where the birds  
7 occur and the birds could easily fly around or over the work.

8 Fish species present in the Harbor would be subject to temporary acoustic and possibly  
9 water quality impacts during dredging and wharf construction. Turbidity and effects  
10 related to possible resuspension of contaminants during dredging would be temporary  
11 and localized. Implementation of required water quality monitoring during dredging  
12 according to the requirements of the RWQCB, as well as implementation of standard  
13 dredging BMPs via adaptive management of the dredging would keep these impacts to a  
14 less than significant level. Water quality conditions would quickly return to baseline  
15 once dredging is completed (Parish and Weiner, 1987; USACE and LAHD, 1992;  
16 Anchor Environmental, 2003).

17 The sound pressure waves from pile-driving could result in temporary avoidance of the  
18 construction areas as well as cause mortality of fish in the Coastal Pelagics FMP. With  
19 implementation of standard condition of approval **SC BIO-1**, the pile-driving would  
20 initiate with a soft start, which would minimize potential impacts to fish, as they would  
21 leave the area. Avoidance of the area would be temporary, lasting for a few days at a  
22 time. There would be no physical barriers to movement, and the baseline condition for  
23 fish and wildlife access would be essentially unchanged. Due to the limited potential  
24 impact area and with the implementation of standard condition of approval **SC BIO-1**,  
25 this is not considered a substantial disruption.

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

35 Potential biological impacts from disposal of dredged sediments would depend on the  
36 disposal method. However, impacts from disposal at the LA-2 disposal site were  
37 evaluated during the site designation process (USEPA and USACE, 2005). Biological  
38 impacts due to construction and fill of the CDF, as well as expansion and fill of the  
39 Cabrillo shallow water habitat, were evaluated in the *Final Supplemental Environmental*  
40 *Impact Statement / Final Supplemental Environmental Impact Report (EIS/EIR) for the*  
41 *Port of Los Angeles Channel Deepening Project* (USACE and LAHD, 2009). No  
42 interference with wildlife movement/migration corridors would occur as part of the  
43 proposed Project.

## CEQA Impact Determination

Caspian tern, elegant tern, and royal tern have nested on the 41-acre fill site; however, construction activities within the proposed Project site would not block or interfere with migration or movement of any of these species covered under the MBTA. Fish species near the Project site would be subject to temporary impacts during dredging and wharf construction; however, implementation of standard dredging BMPs via adaptive management of the dredging would keep these impacts to a less than significant level. Sound pressure from pile-driving could cause mortality of fish in the Coastal Pelagics FMP; however, with implementation of standard condition of approval **SC BIO-1**, the pile-driving would initiate with a soft start, which would minimize potential impacts to fish, as they would leave the area. There would be no physical barriers to movement, and the baseline condition for fish and wildlife access would be essentially unchanged. Project-related construction vessel traffic to and from the Harbor (i.e., tugboats carrying dredged sediments) would not interfere with whale migrations along the coast. In addition, impacts from disposal at the LA-2 (as well as the LA-3) disposal site was evaluated during the site designation process (USEPA and USACE, 2005). Biological impacts due to construction and fill of the CDF, as well as expansion and fill of the Cabrillo shallow water habitat, were also previously evaluated (USACE and LAHD, 2009). Overall, Project construction would not result in significant impacts wildlife movement or migration corridors.

### *Mitigation Measures*

No mitigation is required. Implementation of standard condition of approval **SC BIO-1** would further reduce impacts.

### *Residual Impacts*

Impacts would be less than significant.

## NEPA Impact Determination

Construction of the proposed Project would result in limited upland construction, in-water, and over-water construction activities not included in the NEPA baseline. No known terrestrial wildlife migration corridors are present at the proposed Project site. Caspian tern, elegant tern, and royal tern have nested on the 41-acre fill site; however, construction activities within the proposed Project site would not block or interfere with migration or movement of any of these species covered under the MBTA. Fish species near the Project site would be subject to temporary impacts during dredging and wharf construction; however, implementation of standard dredging BMPs via adaptive management of the dredging would keep these impacts to a less than significant level. Sound pressure from pile-driving could cause mortality of fish in the Coastal Pelagics FMP; however, with implementation of standard condition of approval **SC BIO-1**, the pile-driving would initiate with a soft start, which would minimize potential impacts to fish, as they would leave the area. There would be no physical barriers to movement, and the baseline condition for fish and wildlife access would be essentially unchanged. Project-related construction vessel traffic to and from the Harbor (i.e., tugboats carrying dredged sediments) would not interfere with whale migrations along the coast. In addition, impacts from disposal at the LA-2 (as well as the LA-3) disposal site was evaluated during the site designation process (USEPA and USACE, 2005). Biological impacts due to construction and fill of the CDF, as well as expansion and fill of the Cabrillo shallow water habitat, were also previously evaluated (USACE and LAHD,

1 2009). Overall, Project construction would not result in significant impacts wildlife  
2 movement or migration corridors.

### 3 *Mitigation Measures*

4 No mitigation is required.

### 5 *Residual Impacts*

6 Impacts would be less than significant.

## 7 **Impact BIO-4a: Construction activities would not substantially** 8 **disrupt local biological communities.**

9 Biological communities, the collection of species inhabiting a particular habitat or  
10 ecosystem, can potentially be disrupted by changes in environmental conditions that  
11 favor a different assemblage of species, or alter the dynamics among species that make  
12 up a biological community. The significance of changes in local conditions depends on  
13 the extent and duration of those changes, as well as the species or groups of species  
14 affected. Because the terrestrial portions of the proposed Project site are largely  
15 developed, impacts on terrestrial biological communities would be limited. Plant  
16 communities on the backlands site are mostly introduced, weedy species, with Russian  
17 thistle (tumbleweed) the most abundant species. Construction-related impacts on marine  
18 biological communities are expected to be temporary, lasting through the construction  
19 period and for a short time thereafter. These include physical disturbance, underwater  
20 and overwater noise, and turbidity produced during dredging, pile-driving, and wharf  
21 construction.

### 22 **Physical Disturbance**

23 Where pilings are installed below the ordinary high water mark (OHWM) or high tide  
24 line, some physical disturbance of the underlying sediment would be inevitable and a  
25 small conversion of habitat area (from soft bottom to hard substrate) would occur where  
26 pilings are installed. Benthic habitat at the piling sites would be disturbed and individual  
27 invertebrates would be crushed. Sediment displaced during pile-driving would bury  
28 surface organisms in the immediate vicinity (i.e. within an approximately 1-foot diameter  
29 around each piling). Sediment recolonization would occur rapidly, however, so this  
30 impact would be limited in both time and space and would not constitute a substantial  
31 disturbance of biological communities.

32 Under the proposed Project, approximately 515 concrete pilings would be installed for  
33 the new wharf at Berth 306. New hard substrate from the pilings could marginally add to  
34 productivity in the Harbor, while pilings would also add structure in the water column  
35 that could be used by invertebrates and fishes. Prior to installation of in-water structures,  
36 eelgrass surveys would be conducted as required under the *Southern California Eelgrass*  
37 *Mitigation Policy* (NMFS, 1991 as amended). Although the absence of eelgrass along  
38 Berth 306 in the Pier 300 Channel has been confirmed, if eelgrass is found in the vicinity  
39 of any of the structures, a plan would be developed to ensure that there would be no net  
40 loss of eelgrass habitat, consistent with the policy. However, because the depths at the  
41 proposed construction site (-48 ft MLLW or deeper) are generally inadequate for eelgrass  
42 growth, the proposed Project would probably have no impact on eelgrass and associated  
43 biological communities. As discussed below under Invasive Species, *Caulerpa* surveys  
44 would also be conducted prior to dredging to ensure no *Caulerpa* is present in the  
45 construction area.

1 As discussed under Impact BIO-1a, special-status and other sensitive species in the  
2 Harbor that could use the water surface and shoreline and potentially be displaced or  
3 affected during construction include: the harbor seal and sea lion; two endangered bird  
4 species (California least tern and Belding's savannah sparrow); one threatened bird  
5 species (western snowy plover); and 14 other bird species with state and/or federal  
6 protection or designation (see Table 3.3-4). Physical disturbances as a result of proposed  
7 Project construction activities could temporarily disrupt foraging and other activities of  
8 these species; however, no substantial disruption to biological communities would result  
9 from proposed Project construction.

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

22 Potential biological impacts from disposal of dredged sediments would depend on the  
23 disposal method. However, for all in-water disposal options (such as confined aquatic  
24 disposal or at the LA-2 ODMDS), potential impacts include: water quality impacts from  
25 turbidity or contaminants, and smothering of resident fishes and invertebrates. Impacts  
26 from disposal at the LA-2 (as well as the LA-3) disposal site was evaluated during the  
27 site designation process (USEPA and USACE, 2005). Biological impacts due to  
28 construction and fill of the CDF, as well as expansion and fill of the Cabrillo shallow  
29 water habitat, were evaluated in the *Final Supplemental Environmental Impact Statement /*  
30 *Final Supplemental Environmental Impact Report (EIS/EIR) for the Port of Los Angeles*  
31 *Channel Deepening Project* (USACE and LAHD, 2009). Any temporary water quality  
32 impacts would be minimized as discussed by pre-dredge screening, water quality  
33 monitoring, and adaptive management and use of BMPs.

### 34 **Noise**

35 There may be occasions where construction could occur during the night, such as  
36 dredging or possibly paving during cooler weather or to accommodate the construction  
37 schedule. Such night construction could occur in backland areas along the wharf. Noise  
38 from night construction is not expected to result in significant impacts to biological  
39 resources because birds/wildlife are scarce in the developed upland areas of the Port and  
40 upland construction would not affect underwater noise levels.

41 As described under Impact BIO-2a, pile-driving creates underwater sound. Although this  
42 sound is not expected to cause injury to marine mammals, it may be of a sufficient  
43 volume and range to cause some acoustic impacts to fish. Acoustic impacts may include  
44 avoidance of the area, injury, or death. As described under Impact BIO-2a, the extent of  
45 acoustic impacts would depend on the size and type of pilings used, and the pile-driving  
46 methods used. Impact methods would be required to drive or proof the concrete pilings.  
47 Impact pile-driving may cause some fish mortality, particularly at the onset. Because

1 smaller fish are more susceptible to acoustic injury, the species most likely to suffer  
2 mortality would be northern anchovy, Pacific sardine, and topsmelt. These species play  
3 important roles in the cycling of energy and nutrients in the Harbor, which has been  
4 designated as EFH for both northern anchovy and Pacific sardine. A peak sound level of  
5 180 dB<sub>PEAK</sub> has been identified as an injury threshold for small fish. Impact driving of  
6 concrete piles would create sound of levels of about 183 to 193 dB<sub>PEAK</sub> to a radius of up  
7 to 33 ft from each pile (Illingworth and Rodkin, 2007; ICF and Illingworth and Rodkin,  
8 2009). However, due to the limited potential impact area, this is not considered a  
9 substantial disruption. Additionally, with implementation of standard condition of  
10 approval **SC BIO-1**, the pile-driving would initiate with a soft start, which would  
11 minimize potential impacts to fish, as they would leave the area.

12 Marine mammals, such as sea lions and harbor seals, in the proposed Project area at the  
13 time of construction could be temporarily disturbed by construction activities; however  
14 any individuals present would likely avoid the work area. As described under Impact  
15 BIO-1a, construction activities are not likely to interfere with marine mammal foraging  
16 because the disturbances would be temporary and limited to relatively small areas off  
17 Pier 300. These temporary behavioral effects on marine mammals would not measurably  
18 affect biological communities.

### 19 **Light**

20 Shade from construction vessels, and lights to support construction activities at night,  
21 would have temporary influences on the distribution of water column species. Certain  
22 zooplankton, fish, and squid are attracted to light. Other species may be attracted by  
23 concentrations of zooplankton and squid associated with night lighting. Conversely,  
24 daytime shading from construction vessels or localized turbidity during in-water  
25 construction may reduce algal productivity. Certain fish species are attracted to shade  
26 and cover that construction vessels provide, while vibration and activity may frighten  
27 certain species from the area. However, because construction activities and locations  
28 would be constantly changing, the effects would be similar to those that occur under  
29 normal Port operations with vessels constantly coming and going, and night lighting  
30 provided for Port operations. Following construction of the new wharf, shade upon the  
31 existing riprap may change the epifaunal community by selecting for aquatic  
32 communities that are adapted to shade. However, given the small affected marine areas  
33 adjacent to the new wharf, a substantial disruption of the marine biological communities  
34 is not anticipated. Therefore, no substantial disruption of biological communities would  
35 occur.

### 36 **Invasive Species**

37 Construction activities have the potential to introduce or redistribute invasive species if  
38 those species are present in the construction area and are disturbed by boat anchors or  
39 other equipment, or if in-water equipment or construction vessels bring those species into  
40 the area of the proposed Project. However, the potential for introduction during  
41 construction activity would be essentially the same as under normal Port operations. The  
42 invasive green alga, *Caulerpa*, has the potential to spread by fragmentation. Prior to  
43 in-water work, (including dredging), an underwater survey for the invasive alga *Caulerpa*  
44 would be conducted to ensure that no *Caulerpa* is present in the proposed Project site. In  
45 the unlikely event that *Caulerpa* is detected during pre-construction surveys, an  
46 eradication program would be implemented per the requirements of the *Caulerpa* Control  
47 Protocol (NMFS and CDFG, 2008). Construction would commence only after the area is  
48 certified to be free of this invasive species. To date, more than 36 *Caulerpa* surveys have



1 been conducted in the Harbor as a standard procedure conducted prior to sediment  
2 disturbing activities, and no *Caulerpa* has been found (SCCAT, 2010). Considering the  
3 *Caulerpa* survey requirement and absence of *Caulerpa* to date, and with implementation  
4 of the aforementioned *Caulerpa* protocols, the potential for proposed underwater  
5 construction activities to spread this species is unlikely.

## 6 **CEQA Impact Determination**

7 As described above, construction activities in the proposed Project site, particularly  
8 pile-driving, could cause short-term impacts on individuals (e.g. marine mammals and  
9 fishes, including those with designated EFH) in the immediate vicinity of pile-driving.  
10 However, no substantial disruption of biological communities would result from  
11 proposed Project construction, and impacts are considered insignificant. In addition, with  
12 implementation of standard condition of approval **SC BIO-1**, the pile-driving would  
13 initiate with a soft start, which would minimize impacts to fish and marine mammals near  
14 construction activities, as they would leave the area. Furthermore, night construction, if  
15 required, would not result in significant impacts to biological resources.

16 Potential biological impacts from disposal of dredged sediments would depend on the  
17 disposal method. Impacts from disposal at the LA-2 (as well as the LA-3) disposal site  
18 was evaluated during the site designation process (USEPA and USACE, 2005).  
19 Biological impacts due to construction and fill of the CDF, as well as expansion and fill  
20 of the Cabrillo shallow water habitat, were evaluated in the *Final Supplemental*  
21 *Environmental Impact Statement / Final Supplemental Environmental Impact Report*  
22 *(EIS/EIR) for the Port of Los Angeles Channel Deepening Project* (USACE and LAHD,  
23 2009). Any temporary water quality impacts would be minimized as discussed by pre-  
24 dredge screening, water quality monitoring, and adaptive management and use of BMPs.

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

### 29 *Mitigation Measures*

30 No mitigation is required. Implementation of mitigation measure **MM BIO-1** and  
31 standard condition of approval **SC BIO-1** would further reduce impacts.

### 32 *Residual Impacts*

33 Impacts would be less than significant.

## 34 **NEPA Impact Determination**

35 Construction of the proposed Project would result in limited upland construction,  
36 in-water, and over-water construction activities not included in the NEPA baseline.  
37 As described above, construction activities at the proposed Project site, particularly  
38 pile-driving, could cause short-term impacts on individuals (e.g. marine mammals and  
39 fishes, including those with designated EFH) in the immediate vicinity of pile-driving.  
40 However, no substantial disruption of biological communities would result from  
41 proposed Project construction, and impacts are considered insignificant. In addition, with  
42 implementation of standard condition of approval **SC BIO-1**, the pile-driving would  
43 initiate with a soft start, which would minimize impacts to fish and marine mammals near

1 construction activities, as they would leave the area. Furthermore, night construction, if  
2 required, would not result in significant impacts to biological resources.

3 Potential biological impacts from disposal of dredged sediments would depend on the  
4 disposal method. Impacts from disposal at the LA-2 (as well as the LA-3) disposal site  
5 was evaluated during the site designation process (USEPA and USACE, 2005).  
6 Biological impacts due to construction and fill of the CDF, as well as expansion and fill  
7 of the Cabrillo shallow water habitat, were evaluated in the *Final Supplemental*  
8 *Environmental Impact Statement / Final Supplemental Environmental Impact Report*  
9 *(EIS/EIR) for the Port of Los Angeles Channel Deepening Project* (USACE and LAHD,  
10 2009). Any temporary water quality impacts would be minimized as discussed by pre-  
11 dredge screening, water quality monitoring, and adaptive management and use of BMPs.

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

#### 16 *Mitigation Measures*

17 No mitigation is required. Implementation of mitigation measure **MM BIO-1** and  
18 standard condition of approval **SC BIO-1** would further reduce impacts.

#### 19 *Residual Impacts*

20 Impacts would be less than significant.

### 21 **Impact BIO-5: Construction activities would not result in a** 22 **permanent loss of marine habitat.**

#### 23 **CEQA Impact Determination**

24 No loss of marine habitat would occur because the proposed Project would not result in  
25 fill being discharged into the marine environment that could eliminate marine habitat  
26 functions. Although new piles would be added to the water column, piles provide hard  
27 substrate usable as habitat by marine organisms. Therefore, there would be no impact  
28 under CEQA.

#### 29 *Mitigation Measures*

30 No mitigation is required.

#### 31 *Residual Impacts*

32 There would be no impacts.

#### 33 **NEPA Impact Determination**

34 Construction of the proposed Project would result in limited upland construction,  
35 in-water, and over-water construction activities not included in the NEPA baseline. No  
36 loss of marine habitat would occur because the proposed Project would not result in fill  
37 being discharged into the marine environment that could eliminate marine habitat  
38 functions. Although new piles would be added to the water column, piles provide hard  
39 substrate usable as habitat by marine organisms. Therefore, there would be no impact  
40 under NEPA.

1                    *Mitigation Measures*

2                    No mitigation is required.

3                    *Residual Impacts*

4                    There would be no impacts.

5                    **3.3.4.3.1.2 Operational Impacts**

6                    Operation of the new facilities would result in increased vessel traffic, runoff of  
7                    pollutants from redeveloped terminal surfaces, and increased potential for accidental  
8                    spills of pollutants into Harbor waters. All of these effects would occur in the waters off  
9                    Pier 300. Vessel traffic effects would occur from the approach to Angels Gate, through  
10                    the Outer Harbor, to Berths 302-306 at the proposed Project site.

11                    **Impact BIO-1b: Operations would not cause a loss of individuals or**  
12                    **habitat for a state- or federally listed endangered, threatened, rare,**  
13                    **protected, or candidate species, or a Species of Special Concern or**  
14                    **the loss of federally listed critical habitat.**

15                    Operation, of new and upgraded terminal facilities at the proposed Project site would not  
16                    adversely affect any of the special status bird species listed in Tables 3.3-3 and 3.3-4.  
17                    Those species that currently use the proposed Project site (see Impact BIO-1a) for  
18                    foraging or resting could continue to do so because the proposed Project would not  
19                    appreciably change the industrial activities at the proposed Project site or cause a loss of  
20                    habitat for those species. Operation of the backland facilities (e.g., cranes, railyard, and  
21                    container transfers) would not measurably change the numbers or species of common  
22                    birds in that area and, thus, would not affect foraging. The increase in vessel traffic of up  
23                    to one ship call every 2 to 3 days would cause a short interval of disturbance throughout  
24                    the route from Angel's Gate to Berths 302-306 but would not result in a loss of habitat or  
25                    individuals for sensitive birds that use the water surface for resting or foraging.

26                    An estimated 143 additional vessel calls per year above the CEQA baseline ship calls of  
27                    247 to the Port would result from the proposed Project by the year 2027. This increase  
28                    would occur gradually over time. Underwater sound from these vessels, or tug boats  
29                    used to maneuver them to the berth, would add to the existing vessel traffic noise in the  
30                    Harbor. Because a doubling in the number of vessels (noise sources) in the Harbor would  
31                    be necessary to increase the overall underwater sound level by 3 dBA (FHWA, 1978), the  
32                    small increase in vessels relative to the total using the Harbor (2,370 per year in Los  
33                    Angeles Harbor) would not result in a measurable change in overall noise. Adding up to  
34                    one ship call every 2-3 days (one vessel transit to and from the terminal every 2 to 3  
35                    days) would not adversely affect marine mammals in the Outer Harbor or the approach to  
36                    Berths 302-306, because the transits would be of short duration and distance, few  
37                    individuals would be affected (large numbers are not present in the Harbor), Harbor seals  
38                    and sea lions would be expected to avoid sound levels that could cause damage to their  
39                    hearing (as described in Impact BIO-1a), and overall underwater noise levels would not  
40                    be measurably increased.

41                    Vessels approaching Angel's Gate would pass through nearshore waters, and sound from  
42                    their engines and drive systems could disturb marine mammals that happen to be nearby.  
43                    However, few whales and dolphins would be affected because the animals are generally  
44                    sparsely distributed (i.e., have offshore densities of less than five individuals per

1 100 square km, and are not abundant in the Port Complex [Forney et al., 1995;  
2 SAIC, 2010]), the animals likely would move away from the sound as it increases in  
3 intensity from the approaching vessel, and exposure would be of short duration  
4 (Blackwell et al., 2004). Pinnipeds would be expected to avoid sound levels that could  
5 cause damage to their hearing (as described in Impact BIO-1a), and overall underwater  
6 noise levels would not be measurably increased. Noise levels associated with vessel  
7 traffic, including near heavily used ferry terminals, generally range between 120 and  
8 143 dB (WSDOT, 2010; ICF and Illingworth and Rodkin, 2009), which is below the  
9 injury threshold of 180 dB<sub>RMS</sub> for cetaceans and 190 dB<sub>RMS</sub> for pinnipeds.

10 Container ships transiting the coastal waters of southern California could potentially  
11 cause harm from vessel collisions to endangered, threatened, or species of concern, such  
12 as marine mammals and sea turtles. Impacts of proposed Project-related vessel traffic on  
13 marine mammals would be considered less than significant because of the low probability  
14 of vessel strikes and proposed Project vessel strikes would not be expected to occur. The  
15 proposed Project would result in a relatively minor increase in overall vessel calls to the  
16 Port, and recent data suggests increases in ship strikes likely result from higher  
17 abundance of whales in nearshore waters. Mortality usually results from higher vessel  
18 speeds, as well. As discussed in Section 3.3.2.5, there are few reports of marine mammal  
19 mortality resulting from vessel strikes in southern California each year. Although the  
20 likelihood of such a collision is low, such collisions do occur and may cause an impact to  
21 species listed on the ESA, especially blue whales. Therefore, although considered less  
22 than significant because of the low probability of vessel strikes, any increase in vessel  
23 traffic caused by the proposed Project may incrementally increase the potential for whale  
24 strikes. No critical habitat for any of the listed species is present in the Harbor; therefore,  
25 no critical habitat would be affected by operation of the proposed Project.

## 26 **CEQA Impact Determination**

27 Terminal activity under the proposed Project would be greater than the CEQA baseline;  
28 however, operational activities would result in no loss of habitat for rare, threatened,  
29 endangered, protected, or candidate species, or species of special concern. No impacts to  
30 critical habitat would occur because no critical habitat is present. Increased vessel  
31 activity from the proposed Project would result in increased noise levels. However,  
32 impacts are not considered significant because this would not lead to the loss of  
33 individuals or habitat of sensitive species. The increase in vessel traffic would also  
34 increase the likelihood of a vessel collision with a marine mammal or sea turtle, which  
35 could result in injury or mortality. Even though it is considered less than significant  
36 under CEQA because of the low probability of vessel strikes, any increase in vessel  
37 traffic caused by the proposed Project may incrementally increase the potential for whale  
38 strikes. Even though impacts due to vessel strikes are considered less than significant,  
39 implementation of mitigation measure **MM AQ-10** would further reduce the potential for  
40 vessel collision with marine mammals.

### 41 *Mitigation Measures*

42 No mitigation is required. However, air quality mitigation measure **MM AQ-10** (in  
43 Section 3.2, Air Quality, Meterology, and Greenhouse Gases) requires that all ships  
44 calling at Berths 302-306 shall comply with the expanded Vessel Speed Reduction  
45 Program of 12 knots between 40 nm from Point Fermin and the Precautionary Area.  
46 This mitigation measure would further reduce the potential for vessel collision with  
47 marine mammals.

### *Residual Impacts*

Impacts would be less than significant.

### **NEPA Impact Determination**

Terminal activity under the proposed Project would be greater than the NEPA baseline; however, operational activities would result in no loss of habitat for rare, threatened, endangered, protected, or candidate species, or Species of Special Concern. No impacts to critical habitat would occur because no critical habitat is present. Increased vessel activity from the proposed Project would result in increased noise levels. However, impacts are not considered significant because this would not lead to the loss of individuals or habitat of sensitive species. The increase in vessel traffic would also increase the likelihood of a vessel collision with a marine mammal or sea turtle, which could result in injury or mortality. Even though it is considered less than significant under NEPA because of the low probability of vessel strikes, any increase in vessel traffic caused by the proposed Project may incrementally increase the potential for whale strikes. Even though impacts due to vessel strikes are considered less than significant, implementation of mitigation measure **MM AQ-10** would further reduce the potential for vessel collision with marine mammals.

### *Mitigation Measures*

No mitigation is required. However, the potential for impacts would be further reduced with implementation of mitigation measure **MM AQ-10**.

### *Residual Impacts*

Impacts would be less than significant.

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

### **Essential Fish Habitat**

Operation of proposed Project facilities would have minimal effects on EFH. Although the proposed Project vessels would add to the number of noise events, they would not substantially add to the overall underwater noise level. The addition of up to one vessel trip every 2 to 3 days would not adversely affect FMP species present in the Outer Harbor or in the vicinity of Pier 300 because the additional trips proposed for the Project are infrequent. Schooling fish, such as sardines and anchovy, likely would ignore the ship movements and sound, or temporarily move out of the way. Other FMP species are rare in the Harbor, and vessel noise would result in temporary effects on their distribution in the Port despite a projected additional 143 visits annually compared to the CEQA baseline. In recent history, the Port has witnessed an improvement in fish abundance including EFH for FMP species (MEC and Associates, 2002; SAIC, 2010). However, there has been increased vessel traffic in the Harbor. Therefore, it is unlikely that additional ship calls would affect FMP species, and additional ship calls would not adversely affect EFH for any species in the Harbor. Runoff from the new facilities would not substantially reduce or alter EFH in Harbor waters because water quality standards for protection of marine life would not be exceeded (see Section 3.14, Water Quality, Sediments, and Oceanography).

## Natural Habitat or Plant Community

As described in Impact BIO-2a, no SEAs or natural plant communities are present that could be affected by operation of proposed Project facilities. No wetlands or mudflats are present at the proposed Project site, and those in other areas of the Harbor are not located in or near (more than 1 mile away) the channels that would be used by vessels transiting to or from the APL Terminal.

Eelgrass beds are located in the Shallow Water Habitat and Seaplane Lagoon adjacent to the proposed Project site. Vessel operations at the proposed Project site are not expected to directly affect eelgrass beds because they are located in shallower areas north of Berths 302-306 that cargo vessels would not be operating in. Runoff from the newly paved areas of proposed Project site would be routed southward, treated via BMP devices, and discharged to the Pier 300 Channel. The runoff is not expected to adversely affect eelgrass beds present in the Shallow Water Habitat or Seaplane Lagoon due to the large separation distance (over 2,900 ft).

## CEQA Impact Determination

Activity at the terminal under the proposed Project would be greater than the CEQA baseline; however, operational activities on land and in the water would not substantially reduce or alter EFH for the reasons described above, and no significant impacts to EFH would occur under CEQA. No SEAs, natural plant communities, mudflats, or wetlands are present. The runoff is not expected to adversely affect eelgrass beds present in the Shallow Water Habitat or Seaplane Lagoon due to the large separation distance (over 2,900 ft). Such impacts, therefore, would be less than significant under CEQA

### *Mitigation Measures*

No mitigation is required.

### *Residual Impacts*

Impacts would be less than significant.

## NEPA Impact Determination

Activity in the terminal under the proposed Project would be greater than the NEPA baseline; however, operational activities on land and in the water would not substantially reduce or alter EFH for the reasons described above, and no significant impacts to EFH would occur under NEPA. No SEAs, natural plant communities, mudflats, or wetlands are present. The runoff is not expected to adversely affect eelgrass beds present in the Shallow Water Habitat or Seaplane Lagoon due to the large separation distance (over 2,900 ft). Such impacts, therefore, would be less than significant under NEPA

### *Mitigation Measures*

No mitigation is required.

### *Residual Impacts*

Impacts would be less than significant.

1                   **Impact BIO-3b: Operation of the proposed Project would not**  
2                   **interfere with wildlife movement/migration corridors.**

3                   **CEQA Impact Determination**

4                   No barriers to wildlife passage would result from operation of the proposed Project. The  
5                   type of operational activity that would occur within the Harbor (vessel traffic) would  
6                   gradually increase to an additional 143 calls per year in 2027, but would not interfere  
7                   with wildlife movement or migration within the Harbor. Therefore, there would be no  
8                   impact under CEQA.

9                   *Mitigation Measures*

10                  No mitigation is required.

11                  *Residual Impacts*

12                  There would be no impacts.

13                  **NEPA Impact Determination**

14                  Operation of the proposed Project would exceed that of the NEPA baseline; however, no  
15                  barriers to wildlife passage would result from proposed Project operations. The type of  
16                  operational activity that would occur within the Harbor (vessel traffic) would slightly  
17                  increase by 52 to 104 calls per year, but would not interfere with wildlife movement or  
18                  migration within the Harbor. Therefore, there would be no impact under NEPA.

19                  *Mitigation Measures*

20                  No mitigation is required.

21                  *Residual Impacts*

22                  There would be no impacts.

23                  **Impact BIO-4b: Operation of the proposed Project would not**  
24                  **substantially disrupt local biological communities.**

25                  Vessel traffic at the proposed Project site would have minimal direct effects on marine  
26                  organisms as a result of propeller wash (USACE and LAHD, 1992). This traffic increase  
27                  would adversely affect organisms in the water column, such as fish and plankton, as each  
28                  vessel passes. The disturbance would cause fish to move at least a short distance and  
29                  could damage some individual planktonic organisms through turbulence. Turbidity from  
30                  the propeller wash would form a small plume behind each vessel. However, this would  
31                  dissipate rapidly as described for dredging in Impact BIO-1a. Biological communities  
32                  would not be substantially disrupted, however, because the physical disturbance would  
33                  occur in a small area, over a short duration (a few minutes at each location along the  
34                  route from Angel's Gate to the proposed Project site), and relatively infrequently (once  
35                  every 2 to 3 days). The Harbor historically has had a highly active environment with  
36                  many ships, tugs, and work boats moving along the channels. Addition of vessels calls  
37                  would not substantially change this environment.

38                  Accidental spills of fuel or other vessel fluids during operation could occur as a result of  
39                  a vessel collision, although the likelihood is considered remote due to the use of Port  
40                  pilots to navigate the Harbor, because of the requirement that vessels travel in the Harbor

1 at slow speeds, and due to the use of tugs to slowly guide vessels to and from the berths.  
2 Spill Prevention, Controls, and Countermeasures (SPCC) regulations require that the Port  
3 have in place measures that help ensure oil spills do not occur, but if they do, that there  
4 are protocols in place to contain the spill and neutralize the potential harmful impacts.  
5 An SPCC plan and an OSCP would be prepared that would be reviewed and approved by  
6 the RWQCB or the CDFG Office of Spill Prevention and Response, in consultation with  
7 other responsible agencies. The SPCC and OSCP plans would detail and implement spill  
8 prevention and control measures. However, container shipping vessels hold larger  
9 amounts of fuels than construction-related vessels. If an accident occurs and fuels are  
10 spilled into Harbor or ocean waters, the fuel could harm biological resources, depending  
11 on the extent of the spill. Based on compliance with applicable regulations, and the  
12 nature and frequency of past spill events (see Section 3.8, Hazards and Hazardous  
13 Materials), impacts due to accidental spills are considered less than significant.

14 Accidental spills of pollutants during terminal operations on land would be small because  
15 large quantities of such substances would not be used. Also, as discussed in Section 3.14,  
16 compliance with standard laws and requirements would ensure that terminal facilities  
17 include containment and other countermeasures that would prevent upland spills from  
18 reaching navigable waters. In addition, oil spill contingency plans are required to address  
19 spill cleanup measures after a spill has occurred. Furthermore, the site drainage system  
20 would include BMP devices to process site runoff prior to discharge (to the Pier 300  
21 Channel) in accordance with SUSMP requirements (see Section 3.14, Water Quality,  
22 Sediments, and Oceanography, for further information). Because of these measures,  
23 upland spills from terminal operations are not expected to result in significant impacts to  
24 biological resources.

25 Runoff of pollutants to the Harbor from the new facilities on existing land and the  
26 41-acre landfill would have negligible effects on marine biological communities (fish,  
27 benthos, plankton) because water quality standards for protection of marine life would  
28 not be exceeded (see Section 3.14). Such runoff could occur during dry weather and  
29 from storm events. The latter are periodic, primarily during the winter rainy season, and  
30 generally of short duration.

31 New lights would be added to the proposed Project site. The new lights would all be  
32 low-glare lights with reduced light emissions (see Section 3.1, Aesthetics and Visual  
33 Resources). The amount of light at the proposed Project site would not substantially  
34 increase. Because the lighting would be in industrial areas, the light would not  
35 substantially affect terrestrial wildlife habitat or the species present. Most of the new  
36 lights would be located away from the edge of the water (throughout the backlands), and  
37 this would minimize effects on marine organisms, so that biological communities would  
38 not be substantially disrupted.

### 39 **CEQA Impact Determination**

40 A remote potential exists for an accidental vessel spill that could harm biological  
41 resources in the Harbor or ocean during proposed Project operation.

42 Based on compliance with applicable regulations, and the nature and frequency of past  
43 spill events (see Section 3.8, Hazards and Hazardous Materials), impacts due to  
44 accidental spills are considered less than significant. Upland spills from terminal  
45 operations are not expected to result in significant impacts for the reason discussed



1 previously. Although terminal operations would extend over a larger area and be more  
2 intensive than the CEQA baseline, proposed Project operations would not substantially  
3 disrupt biological communities through runoff of contaminants in the vicinity of the  
4 proposed Project site. Existing runoff and storm drain discharge controls, as well as  
5 conditions of all proposed Project-specific permits, would be implemented (see Section  
6 3.14, Water Quality, Sediments, and Oceanography). The presence of new wharf  
7 structures, increased vessel traffic, or new lighting would not substantially disrupt  
8 biological communities in the Harbor, for the reasons described above. Such impacts,  
9 therefore, would be less than significant under CEQA.

#### 10 *Mitigation Measures*

11 No mitigation is required.

#### 12 *Residual Impacts*

13 Impacts would be less than significant.

### 14 **NEPA Impact Determination**

15 Project operations would result in greater vessel calls than the NEPA baseline. A remote  
16 potential exists for an accidental vessel spill that could harm biological resources in the  
17 Harbor or ocean during proposed Project operation. Based on compliance with  
18 applicable regulations, and the nature and frequency of past spill events (see Section 3.8,  
19 Hazards and Hazardous Materials), impacts due to accidental spills are considered less  
20 than significant. Upland spills from terminal operations are not expected to result in  
21 significant impacts for the reason discussed previously. Although terminal operations  
22 would extend over a larger area and be more intensive than the NEPA baseline, proposed  
23 Project operations would not substantially disrupt biological communities through runoff  
24 of contaminants in the vicinity of the proposed Project site. Existing runoff and storm  
25 drain discharge controls, as well as conditions of all proposed Project-specific permits,  
26 would be implemented (see Section 3.14, Water Quality, Sediments, and Oceanography).  
27 The presence of new wharf structures, increased vessel traffic, or new lighting would not  
28 substantially disrupt biological communities in the Harbor, for the reasons described  
29 above. Such impacts, therefore, would be less than significant under NEPA.

#### 30 *Mitigation Measures*

31 No mitigation is required.

#### 32 *Residual Impacts*

33 Impacts would be less than significant.

### 34 **Impact BIO-4c: Operation of the proposed Project could introduce 35 non-native species into the Harbor that could substantially disrupt 36 local biological communities.**

37 The amount of ballast water discharged into the Pier 300 area, and thus, the potential for  
38 introduction of invasive exotic species could increase because more and larger container  
39 ships would use the Port as a result of the proposed Project (LAHD, 1999). These vessels  
40 would come primarily from outside the EEZ and would be subject to regulations to  
41 minimize the introduction of non-native species in ballast water as described in Section  
42 3.3.3.8. In addition, container ships coming into the Harbor loaded would be taking on

1 local water while unloading and discharging when reloading. This would also diminish  
2 the opportunity for discharge of non-native species. Thus, ballast water discharges  
3 during cargo transfers in the Harbor would be unlikely to contain non-native species, but  
4 is still a possibility.

5 Current practices to reduce the likelihood for introduction of invasive species at and near  
6 the proposed Project site include:

- 7     ▪ Training of seagoing staff on environmental awareness, ballast water management,  
8       and all applicable laws and regulations;
- 9     ▪ Ballast water is exchanged mid-ocean for APL vessels en route to Los Angeles;
- 10    ▪ APL ship crews perform routine inspections of ballast tanks and properly dispose of  
11      any accumulated sediments;
- 12    ▪ All APL vessels comply with ballast water reporting requirements, and this is  
13      verified through routine audits;
- 14    ▪ No ballast water is discharged into harbor waters unless in the event of a ship  
15      stability emergency; and
- 16    ▪ APL vessel hulls are inspected and cleaned twice per year.

17 Non-native algal species can also be introduced via vessel hulls. The California State  
18 Lands Commission has issued a report on commercial vessel fouling in California  
19 (CSLC, 2006). The Commission recommended that the state legislature broaden the state  
20 program and adopt regulations to prevent non-indigenous species introductions by ship  
21 fouling. Of particular concern is the introduction of an alga, *Caulerpa taxifolia*. As  
22 discussed in Section 3.3.2.7, this species is most likely introduced from disposal of  
23 aquarium plants and water and is spread by fragmentation rather than from ship hulls or  
24 ballast water; therefore, risk of introduction is associated with movement of plant  
25 fragments from infected to uninfected areas by activities such as dredging and/or  
26 anchoring. The Port conducts surveys, consistent with the Caulerpa Control Protocol  
27 (NMFS and CDFG, 2008) prior to every water-related construction project to verify that  
28 Caulerpa is not present. This species has not been detected in the Harbors and has been  
29 eradicated from known localized areas of occurrence in southern California. Therefore,  
30 there is little potential for additional vessel operations from the proposed Project to  
31 introduce these species.

32 *Undaria pinnatifida*, which was discovered in the Port Complex in 2000 (MEC and  
33 Associates, 2002), and *Sargassum filicinum* (or *S. horneri*), discovered in October 2003  
34 (MBC, 2004), may be introduced and/or spread as a result of hull fouling or ballast water  
35 and, therefore, might have the potential to increase in the Harbor via vessels traveling  
36 between ports in the EEZ. Invertebrates that attach to vessel hulls could be introduced in  
37 a similar manner.

38 The proposed Project would result in a gradual increase to an additional 143 vessels per  
39 year in 2027 (compared to the CEQA baseline ship calls of 247 at the APL terminal),  
40 which represents an approximately six percent increase in vessel traffic compared to the  
41 total number of vessels entering the Port (an average of 2,275 vessel arrivals in 2008-9  
42 [Port of Los Angeles, 2010]). Considering the small discharge of non-local water from  
43 container ships (see above) and the ballast water regulations currently in effect, the  
44 potential for introduction of additional exotic species via ballast water would be low from

1 vessels entering from outside the EEZ. The potential for introduction of exotic species  
2 via vessel hulls would be increased in proportion to the increase in number of vessels.  
3 However, vessel hulls are generally coated with antifouling paints and cleaned at  
4 intervals to reduce the frictional drag from growths of organisms on the hull (Global  
5 Security, 2007). This would reduce the potential for transport of exotic species. For  
6 these reasons, the proposed Project has a low potential to increase the introduction of  
7 non-native species into the Harbor that could substantially disrupt local biological  
8 communities, but such effects could still occur.

### 9 **CEQA Impact Determination**

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

#### 15 *Mitigation Measures*

16 No feasible mitigation is currently available to totally prevent introduction of  
17 invasive species via vessel hulls or even ballast water, due to the lack of a proven  
18 technology. The Port of Los Angeles and Port of Long Beach, California State Lands  
19 Commission, and the University of Maryland are collaborating with APL to test a  
20 shipboard ballast water treatment system designed to remove non-native species from  
21 ballast water, and prevent their introduction into harbor waters. If methods become  
22 available in the future, they would be implemented as required at that time.

#### 23 *Residual Impacts*

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

### 26 **NEPA Impact Determination**

27 The proposed Project would increase the annual ship calls relative to the NEPA baseline.  
28 Operation of the proposed Project facilities has the potential to result in the introduction  
29 of non-native species into the Harbor via ballast water or vessel hulls and thus could  
30 substantially disrupt local biological communities. Impacts, therefore, would be  
31 significant under NEPA.

#### 32 *Mitigation Measures*

33 No feasible mitigation is currently available to totally prevent introduction of  
34 invasive species via vessel hulls or even ballast water, due to the lack of a proven  
35 technology. The Ports of Los Angeles and Long Beach, California State Lands  
36 Commission, and the University of Maryland are collaborating with APL to test a  
37 shipboard ballast water treatment system designed to remove non-native species from  
38 ballast water, and prevent their introduction into harbor waters. If methods become  
39 available in the future, they would be implemented as required at that time.

#### 40 *Residual Impacts*

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

## 1 **3.3.4.3.2 Alternatives**

### 2 **3.3.4.3.2.1 Alternative 1 – No Project**

3 Under Alternative 1, no further Port action or federal action would occur. The Port  
4 would not construct and develop additional backlands, wharves, or terminal  
5 improvements. No new cranes would be added, no gate or backland improvements  
6 would occur, and no infrastructure for AMP at Berth 306 or automation in the backland  
7 area adjacent to Berth 306 would be provided. This alternative would not include any  
8 dredging, new wharf construction, or new cranes. The No Project Alternative would not  
9 include development of any additional backlands because the existing terminal is berth-  
10 constrained and additional backlands would not improve its efficiency.

11 Under the No Project Alternative, the existing APL Terminal would continue to operate  
12 as an approximately 291-acre container terminal. Based on the throughput projections,  
13 terminal operations are expected to grow over time as throughput demands increase.  
14 Under Alternative 1, the existing APL Terminal would handle approximately 2.15  
15 million TEUs by 2027, which would result in 286 annual ship calls at Berths 302-305. In  
16 addition, this alternative would result in up to 7,273 peak daily one-way truck trips  
17 (1,922,497 annual), and up to 2,336 annual one-way rail trip movements. Under  
18 Alternative 1, cargo ships that currently berth and load/unload at the Berths 302-305  
19 terminal would continue to do so.

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

24 **Impact BIO-1a: Construction activities would not cause a loss of**  
25 **individuals or habitat of a state- or federally listed endangered,**  
26 **threatened, rare, protected, or candidate species, or a Species of**  
27 **Special Concern or the loss of federally listed critical habitat.**

#### 28 **CEQA Impact Determination**

29 Because there would be no new construction at the proposed Project site, there would be  
30 no loss of individuals or habitat of special-status species under CEQA.

#### 31 *Mitigation Measures*

32 No mitigation is required.

#### 33 *Residual Impacts*

34 There would be no impacts.

#### 35 **NEPA Impact Determination**

36 The impacts of the No Project Alternative are not required to be analyzed under NEPA.  
37 NEPA requires the analysis of a No Federal Action Alternative (Alternative 2 in this  
38 document).

#### 39 *Mitigation Measures*

40 Mitigation measures are not applicable.

1                    *Residual Impacts*

2                    An impact determination is not applicable.

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

7                    **CEQA Impact Determination**

8                    Because there would be no new construction at the proposed Project site, there would be  
9                    no loss of individuals or habitat under CEQA.

10                  *Mitigation Measures*

11                  No mitigation is required.

12                  *Residual Impacts*

13                  There would be no impacts.

14                  **NEPA Impact Determination**

15                  The impacts of the No Project Alternative are not required to be analyzed under NEPA.  
16                  NEPA requires the analysis of a No Federal Action Alternative (Alternative 2 in this  
17                  document).

18                  *Mitigation Measures*

19                  Mitigation measures are not applicable.

20                  *Residual Impacts*

21                  An impact determination is not applicable.

22                  **Impact BIO-3a: Construction activities would not interfere with**  
23                  **wildlife movement/migration corridors.**

24                  **CEQA Impact Determination**

25                  Because there would be no new construction at the proposed Project site, there would be  
26                  no interference with wildlife movement or migration corridors under CEQA.

27                  *Mitigation Measures*

28                  No mitigation is required.

29                  *Residual Impacts*

30                  There would be no impacts.

31                  **NEPA Impact Determination**

32                  The impacts of the No Project Alternative are not required to be analyzed under NEPA.  
33                  NEPA requires the analysis of a No Federal Action Alternative (Alternative 2 in this  
34                  document).

1                    *Mitigation Measures*  
2                    Mitigation measures are not applicable.

3                    *Residual Impacts*  
4                    An impact determination is not applicable.

5                    **Impact BIO-4a: Construction activities would not substantially**  
6                    **disrupt local biological communities.**

7                    **CEQA Impact Determination**

8                    Because there would be no dredging or wharf construction, there would not be any  
9                    disruption of local biological communities under CEQA.

10                  *Mitigation Measures*  
11                  No mitigation is required.

12                  *Residual Impacts*  
13                  There would be no impacts.

14                  **NEPA Impact Determination**

15                  The impacts of the No Project Alternative are not required to be analyzed under NEPA.  
16                  NEPA requires the analysis of a No Federal Action Alternative (Alternative 2 in this  
17                  document).

18                  *Mitigation Measures*  
19                  Mitigation measures are not applicable.

20                  *Residual Impacts*  
21                  An impact determination is not applicable.

22                  **Impact BIO-5: Construction activities would not result in a**  
23                  **permanent loss of marine habitat.**

24                  **CEQA Impact Determination**

25                  Because there would be no fill, there would not be any loss of marine habitat under  
26                  CEQA.

27                  *Mitigation Measures*  
28                  No mitigation is required.

29                  *Residual Impacts*  
30                  There would be no impacts.

31                  **NEPA Impact Determination**

32                  The impacts of the No Project Alternative are not required to be analyzed under NEPA.  
33                  NEPA requires the analysis of a No Federal Action Alternative (Alternative 2 in this  
34                  document).

1                    *Mitigation Measures*  
2                    Mitigation measures are not applicable.

3                    *Residual Impacts*  
4                    An impact determination is not applicable.

5                    **Impact BIO-1b: Operations would not cause a loss of individuals or**  
6                    **habitat for a state- or federally listed endangered, threatened, rare,**  
7                    **protected, or candidate species, or a Species of Special Concern or**  
8                    **the loss of federally listed critical habitat.**

### 9                    **CEQA Impact Determination**

10                   Under Alternative 1, the number of ship calls at the proposed Project site would increase  
11                   through 2027, slightly increasing the potential for vessel strikes with protected species (as  
12                   described in Impact BIO-1b for the proposed Project). Although considered less than  
13                   significant because of the low probability of vessel strikes, any increase in vessel traffic  
14                   caused by the project under CEQA may incrementally increase the potential for whale  
15                   strikes.

16                    *Mitigation Measures*  
17                    No mitigation is required.

18                    *Residual Impacts*  
19                    Impacts would be less than significant.

### 20                   **NEPA Impact Determination**

21                   The impacts of the No Project Alternative are not required to be analyzed under NEPA.  
22                   NEPA requires the analysis of a No Federal Action Alternative (Alternative 2 in this  
23                   document).

24                    *Mitigation Measures*  
25                    Mitigation measures are not applicable.

26                    *Residual Impacts*  
27                    An impact determination is not applicable.

28                    **Impact BIO-2b: Operations would not result in a substantial**  
29                    **reduction or alteration of a state, federally, or locally designated**  
30                    **natural habitat, special aquatic site, or plant community, including**  
31                    **wetlands.**

### 32                   **CEQA Impact Determination**

33                   Operation of the APL Terminal under Alternative 1 would not result in a substantial  
34                   reduction or alteration of special habitat, site, or community, including wetlands.  
35                   Operations at the terminal would continue, and there would be no disruption of EFH.  
36                   Eelgrass beds are located in the Shallow Water Habitat and Seaplane Lagoon adjacent to  
37                   the terminal site. Vessel operations under Alternative 1 are not expected to directly affect  
38                   eelgrass beds because they are located in shallower areas north of Berths 302-305 that

1 cargo vessels would not be operating in. Alternative 1 would not result in changes in  
2 drainage patterns and would therefore under CEQA not result in runoff increases that  
3 could affect eelgrass in the Shallow Water Habitat.

4 *Mitigation Measures*

5 No mitigation is required.

6 *Residual Impacts*

7 Impacts would be less than significant.

8 **NEPA Impact Determination**

9 The impacts of the No Project Alternative are not required to be analyzed under NEPA.  
10 NEPA requires the analysis of a No Federal Action Alternative (Alternative 2 in this  
11 document).

12 *Mitigation Measures*

13 Mitigation measures are not applicable.

14 *Residual Impacts*

15 An impact determination is not applicable.

16 **Impact BIO-3b: Operation of Alternative 1 would not interfere with**  
17 **wildlife movement/migration corridors.**

18 **CEQA Impact Determination**

19 Because there are no true wildlife movement or migration corridors at the proposed  
20 Project site, there would be no interference with movement or migration as a result of  
21 ongoing operations at the proposed Project site. Migration by bird species that visit or  
22 pass through the area would not be affected under CEQA by any changes in terminal  
23 operations because no new structures would be present that could impede their  
24 movement.

25 *Mitigation Measures*

26 No mitigation is required.

27 *Residual Impacts*

28 There would be no impacts.

29 **NEPA Impact Determination**

30 The impacts of the No Project Alternative are not required to be analyzed under NEPA.  
31 NEPA requires the analysis of a No Federal Action Alternative (Alternative 2 in this  
32 document).

33



1 *Mitigation Measures*  
2 Mitigation measures are not applicable.

3 *Residual Impacts*  
4 An impact determination is not applicable.

5 **Impact BIO-4b: Operation of Alternative 1 would not substantially**  
6 **disrupt local biological communities.**

7 **CEQA Impact Determination**

8 Under Alternative 1, operations at the existing APL Terminal would continue with  
9 increasing vessel calls through 2027. There is no indication of any disruption to  
10 biological communities resulting from operations of the terminal. The potential for  
11 accidental spills would continue. However, based on compliance with applicable  
12 regulations, and the nature and frequency of past spill events (see Section 3.8, Hazards  
13 and Hazardous Materials), impacts due to accidental spills are considered less than  
14 significant under CEQA.

15 *Mitigation Measures*  
16 No mitigation is required.

17 *Residual Impacts*  
18 Impacts would be less than significant.

19 **NEPA Impact Determination**

20 The impacts of the No Project Alternative are not required to be analyzed under NEPA.  
21 NEPA requires the analysis of a No Federal Action Alternative (Alternative 2 in this  
22 document).

23 *Mitigation Measures*  
24 Mitigation measures are not applicable.

25 *Residual Impacts*  
26 An impact determination is not applicable.

27 **Impact BIO-4c: Operation of the Project could introduce non-native**  
28 **species into the Harbor that could substantially disrupt local**  
29 **biological communities.**

30 **CEQA Impact Determination**

31 Under Alternative 1, there would be an additional number of vessels operating at the APL  
32 Terminal; therefore, there would still be the potential for introduction of non-native  
33 species. As described under Impact BIO-4c for the proposed Project, the potential for  
34 introduction of additional exotic species via ballast water would be low from vessels  
35 entering from or going outside the EEZ due to current ballast water regulations. The  
36 potential for introduction of exotic species via vessel hulls would be increased in  
37 proportion to the increase in number of vessels. However, vessel hulls are generally  
38 coated with antifouling paints and cleaned at intervals to reduce the frictional drag from

1 growths of organisms on the hull (Global Security, 2007). This would reduce the  
2 potential for transport of exotic species. For these reasons, Alternative 1 has a low  
3 potential to increase the introduction of non-native species into the Harbor that could  
4 substantially disrupt local biological communities, but such effects could still occur and  
5 would be considered significant.

#### 6 *Mitigation Measures*

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

#### 12 *Residual Impacts*

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

### 15 **NEPA Impact Determination**

16 The impacts of the No Project Alternative are not required to be analyzed under NEPA.  
17 NEPA requires the analysis of a No Federal Action Alternative (Alternative 2 in this  
18 document).

#### 19 *Mitigation Measures*

20 Mitigation measures are not applicable.

#### 21 *Residual Impacts*

22 An impact determination is not applicable.

### 23 **3.3.4.3.2.2 Alternative 2 – No Federal Action**

24 The No Federal Action Alternative would be the same as the NEPA baseline and would  
25 include only the activities and impacts likely to occur absent further USACE federal  
26 approval but could include improvements that require a local action. Under Alternative 2,  
27 no federal action would occur; however, minor terminal improvements in the upland area  
28 of the existing APL Terminal would be implemented. These minor upland improvements  
29 would include conversion of a portion of the dry container storage area to an additional  
30 200 reefers, associated electrical lines, and installation of utility infrastructure at locations  
31 in the existing backland areas. Beyond these minor upland improvements, the Port would  
32 not construct and develop additional backlands or wharves. No gate or additional  
33 backland improvements would occur, and no in-water features such as dredging or a new  
34 berth, wharf extension, or over-water features such as new cranes would occur under the  
35 No Federal Action Alternative.

36 Under the No Federal Action Alternative, the existing APL Terminal would continue to  
37 operate as an approximately 291-acre container terminal, and up to approximately  
38 2.15 million TEUs could be handled at the terminal by 2027. Based on the throughput  
39 projections, the No Federal Action Alternative would result in 286 annual ship calls at  
40 Berths 302-305. In addition, this alternative would result in up to 7,273 peak daily truck  
41 trips (1,922,497 annual), and up to 2,336 annual one-way rail trip movements. Cargo

1 ships that currently berth and load/unload at the Berths 302-305 terminal would continue  
2 to do so.

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

7 **CEQA Impact Determination**

8 Because only minor new construction would occur on the existing developed Project site,  
9 there would be no loss of individuals or habitat of special-status species under CEQA.

10 *Mitigation Measures*

11 No mitigation is required.

12 *Residual Impacts*

13 There would be no impacts.

14 **NEPA Impact Determination**

15 The No Federal Action Alternative would have the same conditions as the NEPA  
16 baseline, as explained in Section 2.6.2 in Chapter 2; therefore, there would be no  
17 incremental difference between Alternative 2 and the NEPA baseline. As a consequence,  
18 Alternative 2 would result in no impact under NEPA.

19 *Mitigation Measures*

20 No mitigation is required.

21 *Residual Impacts*

22 There would be no impacts.

23 **Impact BIO-2a: Construction activities would not result in a**  
24 **substantial reduction or alteration of a state, federally, or locally**  
25 **designated natural habitat, special aquatic site, or plant community,**  
26 **including wetlands.**

27 **CEQA Impact Determination**

28 Because only minor new construction would occur on the existing developed Project site,  
29 there would be no loss of individuals or habitat under CEQA.

30 *Mitigation Measures*

31 No mitigation is required.

32 *Residual Impacts*

33 There would be no impacts.

1                   **NEPA Impact Determination**

2                   The No Federal Action Alternative would have the same conditions as the NEPA  
3                   baseline, as explained in Section 2.6.2 in Chapter 2; therefore, there would be no  
4                   incremental difference between Alternative 2 and the NEPA baseline. As a consequence,  
5                   Alternative 2 would result in no impact under NEPA.

6                   *Mitigation Measures*

7                   No mitigation is required.

8                   *Residual Impacts*

9                   There would be no impacts.

10                  **Impact BIO-3a: Construction activities would not interfere with**  
11                  **wildlife movement/migration corridors.**

12                  **CEQA Impact Determination**

13                  Because only minor new construction would occur on the existing developed Project site,  
14                  there would be no interference with wildlife movement or migration corridors under  
15                  CEQA.

16                  *Mitigation Measures*

17                  No mitigation is required.

18                  *Residual Impacts*

19                  There would be no impacts.

20                  **NEPA Impact Determination**

21                  The No Federal Action Alternative would have the same conditions as the NEPA  
22                  baseline, as explained in Section 2.6.2 in Chapter 2; therefore, there would be no  
23                  incremental difference between Alternative 2 and the NEPA baseline. As a consequence,  
24                  Alternative 2 would result in no impact under NEPA.

25                  *Mitigation Measures*

26                  No mitigation is required.

27                  *Residual Impacts*

28                  There would be no impacts.

29                  **Impact BIO-4a: Construction activities would not substantially**  
30                  **disrupt local biological communities.**

31                  **CEQA Impact Determination**

32                  Because there would be no dredging or wharf construction and only minor construction  
33                  on the existing terminal, there would not be any disruption of local biological  
34                  communities under CEQA.

1                    *Mitigation Measures*

2                    No mitigation is required.

3                    *Residual Impacts*

4                    There would be no impacts.

5                    **NEPA Impact Determination**

6                    The No Federal Action Alternative would have the same conditions as the NEPA  
7                    baseline, as explained in Section 2.6.2 in Chapter 2; therefore, there would be no  
8                    incremental difference between Alternative 2 and the NEPA baseline. As a consequence,  
9                    Alternative 2 would result in no impact under NEPA.

10                   *Mitigation Measures*

11                   No mitigation is required.

12                   *Residual Impacts*

13                   There would be no impacts.

14                   **Impact BIO-5: Construction activities would not result in a**  
15                   **permanent loss of marine habitat.**

16                   **CEQA Impact Determination**

17                   Because there would be no fill, there would not be any loss of marine habitat under  
18                   CEQA.

19                   *Mitigation Measures*

20                   No mitigation is required.

21                   *Residual Impacts*

22                   There would be no impacts.

23                   **NEPA Impact Determination**

24                   The No Federal Action Alternative would have the same conditions as the NEPA  
25                   baseline, as explained in Section 2.6.2 in Chapter 2; therefore, there would be no  
26                   incremental difference between Alternative 2 and the NEPA baseline. As a consequence,  
27                   Alternative 2 would result in no impact under NEPA.

28                   *Mitigation Measures*

29                   No mitigation is required.

30                   *Residual Impacts*

31                   There would be no impacts.

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

5           **CEQA Impact Determination**

6           Under Alternative 2, the number of ship calls at the Project site would increase through  
7           2027, slightly increasing the potential for vessel strikes with protected species (as  
8           described in Impact BIO-1b for the proposed Project). Although considered less than  
9           significant because of the low probability of vessel strikes, any increase in vessel traffic  
10          caused by the Project under CEQA may incrementally increase the potential for whale  
11          strikes.

12                   *Mitigation Measures*

13           No mitigation is required. However, as described under the proposed Project, the  
14           potential for impacts under Alternative 2 would be further reduced with  
15           implementation of mitigation measure **MM AQ-10**.

16                   *Residual Impacts*

17           Impacts would be less than significant.

18           **NEPA Impact Determination**

19           The No Federal Action Alternative would have the same conditions as the NEPA  
20           baseline, as explained in Section 2.6.2 in Chapter 2; therefore, there would be no  
21           incremental difference between Alternative 2 and the NEPA baseline. As a consequence,  
22           Alternative 2 would result in no impact under NEPA.

23                   *Mitigation Measures*

24           No mitigation is required.

25                   *Residual Impacts*

26           There would be no impacts.

27           **Impact BIO-2b: Operations would not result in a substantial**  
28           **reduction or alteration of a state, federally, or locally designated**  
29           **natural habitat, special aquatic site, or plant community, including**  
30           **wetlands.**

31           **CEQA Impact Determination**

32           Operation of the APL Terminal under Alternative 2 would not result in a substantial  
33           reduction or alteration of special habitat, site, or community, including wetlands.  
34           Operations at the terminal would continue, and there would be no disruption of EFH.  
35           Eelgrass beds are located in the Shallow Water Habitat and Seaplane Lagoon adjacent to  
36           the terminal site. Vessel operations under Alternative 2 are not expected to directly affect  
37           eelgrass beds because they are located in shallower areas north of Berths 302-306 that  
38           cargo vessels would not be operating in. Under CEQA, Alternative 2 would not result in  
39           changes in drainage patterns and would therefore not result in runoff increases that could  
40           affect eelgrass in the Shallow Water Habitat.

1                    *Mitigation Measures*

2                    No mitigation is required.

3                    *Residual Impacts*

4                    Impacts would be less than significant.

5                    **NEPA Impact Determination**

6                    The No Federal Action Alternative would have the same conditions as the NEPA  
7                    baseline, as explained in Section 2.6.2 in Chapter 2; therefore, there would be no  
8                    incremental difference between Alternative 2 and the NEPA baseline. As a consequence,  
9                    Alternative 2 would result in no impact under NEPA.

10                   *Mitigation Measures*

11                   No mitigation is required.

12                   *Residual Impacts*

13                   There would be no impacts.

14                   **Impact BIO-3b: Operation of Alternative 2 would not interfere with**  
15                   **wildlife movement/migration corridors.**

16                   **CEQA Impact Determination**

17                   Because there are no true wildlife movement or migration corridors at the Project site,  
18                   there would be no interference with movement or migration as a result of ongoing  
19                   operations at the APL Terminal. Migration by bird species that visit or pass through the  
20                   area would not be affected under CEQA by any changes in terminal operations because  
21                   no new structures would be present that could impede their movement.

22                   *Mitigation Measures*

23                   No mitigation is required.

24                   *Residual Impacts*

25                   There would be no impacts.

26                   **NEPA Impact Determination**

27                   The No Federal Action Alternative would have the same conditions as the NEPA  
28                   baseline, as explained in Section 2.6.2 in Chapter 2; therefore, there would be no  
29                   incremental difference between Alternative 2 and the NEPA baseline. As a consequence,  
30                   Alternative 2 would result in no impact under NEPA.

31                   *Mitigation Measures*

32                   No mitigation is required.

33                   *Residual Impacts*

34                   There would be no impacts.

1                   **Impact BIO-4b: Operation of Alternative 2 would not substantially**  
2                   **disrupt local biological communities.**

3                   **CEQA Impact Determination**

4                   Under Alternative 2, operations at the existing Project site would continue with  
5                   increasing vessel calls through 2027. Any disruption to biological communities resulting  
6                   from operations of the terminal under CEQA is expected to be less than significant.

7                   *Mitigation Measures*

8                   No mitigation is required.

9                   *Residual Impacts*

10                  Impacts would be less than significant.

11                  **NEPA Impact Determination**

12                  The No Federal Action Alternative would have the same conditions as the NEPA  
13                  baseline, as explained in Section 2.6.2 in Chapter 2; therefore, there would be no  
14                  incremental difference between Alternative 2 and the NEPA baseline. As a consequence,  
15                  Alternative 2 would result in no impact under NEPA.

16                  *Mitigation Measures*

17                  No mitigation is required.

18                  *Residual Impacts*

19                  There would be no impacts.

20                  **Impact BIO-4c: Operation of the Project could introduce non-native**  
21                  **species into the Harbor that could substantially disrupt local**  
22                  **biological communities.**

23                  **CEQA Impact Determination**

24                  Under Alternative 2, there would be an additional number of vessels operating at the APL  
25                  Terminal; therefore, there would still be the potential for introduction of non-native  
26                  species. As described under Impact BIO-4c for the proposed Project, the potential for  
27                  introduction of additional exotic species via ballast water would be low from vessels  
28                  entering from or going outside the EEZ due to current ballast water regulations. The  
29                  potential for introduction of exotic species via vessel hulls would be increased in  
30                  proportion to the increase in number of vessels. However, vessel hulls are generally  
31                  coated with antifouling paints and cleaned at intervals to reduce the frictional drag from  
32                  growths of organisms on the hull (Global Security, 2007). This would reduce the  
33                  potential for transport of exotic species. For these reasons, Alternative 2 has a low  
34                  potential to increase the introduction of non-native species into the Harbor that could  
35                  substantially disrupt local biological communities, but such effects could still occur under  
36                  CEQA.

37                  *Mitigation Measures*

38                  As described for the proposed Project, no feasible mitigation is currently available to  
39                  totally prevent introduction of invasive species via vessel hulls or even ballast water,



1 due to the lack of a proven technology. New technologies are being explored, and, if  
2 methods become available in the future, they would be implemented as required at  
3 that time.

#### 4 *Residual Impacts*

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

### 7 **NEPA Impact Determination**

8 The No Federal Action Alternative would have the same conditions as the NEPA  
9 baseline, as explained in Section 2.6.2 in Chapter 2; therefore, there would be no  
10 incremental difference between Alternative 2 and the NEPA baseline. As a consequence,  
11 Alternative 2 would result in no impact under NEPA.

#### 12 *Mitigation Measures*

13 No mitigation is required.

#### 14 *Residual Impacts*

15 There would be no impacts.

### 16 **3.3.4.3.2.3 Alternative 3 – Reduced Project: Four New Cranes**

17 Under Alternative 3, four new cranes would be added to the existing wharf along Berths  
18 302-305 and only minor improvements to the existing APL Terminal would be made  
19 utility infrastructure and conversion of dry container storage to reefers). No other upland  
20 terminal improvements would be constructed. The existing terminal is berth-constrained,  
21 and adding the additional four cranes would improve the terminal's efficiency.

22 The total acreage of backlands under Alternative 3 would remain at approximately  
23 291 acres, which would be less than the proposed Project. This alternative would not  
24 include the extension of the existing wharf, construction of a new berth, dredging, or the  
25 relocation and improvement of various gates and entrance lanes.

26 Based on the throughput projections, TEU throughput under Alternative 3 would be less  
27 than the proposed Project, with an expected throughput of approximately 2.58 million  
28 TEUs by 2027. This would translate into 338 annual ship calls at Berths 302-305. In  
29 addition, this alternative would result in up to 8,725 peak daily truck trips (2,306,460  
30 annual), and up to 2,544 annual one-way rail trip movements. Configuration of all other  
31 landside terminal components would be identical to the existing terminal.

32 **Impact BIO-1a: Construction activities would not cause a loss of**  
33 **individuals or habitat of a state- or federally listed endangered,**  
34 **threatened, rare, protected, or candidate species, or a Species of**  
35 **Special Concern or the loss of federally listed critical habitat.**

### 36 **CEQA Impact Determination**

37 Because there would be only minor upland construction on the developed portion of the  
38 terminal and no in-water construction, there would be no loss of individuals or habitat of  
39 special-status species under CEQA.

1 *Mitigation Measures*

2 No mitigation is required.

3 *Residual Impacts*

4 There would be no impacts.

5 **NEPA Impact Determination**

6 Because there would be only minor upland construction on the developed portion of the  
7 terminal relative to the NEPA baseline and no in-water construction, there would be no  
8 loss of individuals or habitat of special-status species under NEPA.

9 *Mitigation Measures*

10 No mitigation is required.

11 *Residual Impacts*

12 There would be no impacts.

13 **Impact BIO-2a: Construction activities would not result in a**  
14 **substantial reduction or alteration of a state, federally, or locally**  
15 **designated natural habitat, special aquatic site, or plant community,**  
16 **including wetlands.**

17 **CEQA Impact Determination**

18 Because there would be only minor upland construction on the developed portion of the  
19 terminal and no in-water construction, there would be no loss of individuals or habitat.  
20 There would also be no discernible effects to EFH under CEQA.

21 *Mitigation Measures*

22 No mitigation is required.

23 *Residual Impacts*

24 There would be no impacts.

25 **NEPA Impact Determination**

26 Because there would be only minor upland construction on the developed portion of the  
27 terminal, minor over-water construction (relative to the NEPA baseline), and no in-water  
28 construction, there would be no loss of individuals or habitat. There would also be no  
29 discernible effects to EFH under NEPA.

30 *Mitigation Measures*

31 No mitigation is required.

32 *Residual Impacts*

33 There would be no impacts.

1                   **Impact BIO-3a: Construction activities would not interfere with**  
2                   **wildlife movement/migration corridors.**

3                   **CEQA Impact Determination**

4                   Because there would be only minor upland construction on the developed portion of the  
5                   terminal and no in-water construction, there would be no interference with wildlife  
6                   movement or migration corridors under CEQA.

7                   *Mitigation Measures*

8                   No mitigation is required.

9                   *Residual Impacts*

10                  There would be no impacts.

11                  **NEPA Impact Determination**

12                  Because there would be only minor upland construction on the developed portion of the  
13                  terminal, minor over-water construction (relative to the NEPA baseline), and no in-water  
14                  construction, there would be interference with wildlife movement or migration corridors  
15                  under NEPA.

16                  *Mitigation Measures*

17                  No mitigation is required.

18                  *Residual Impacts*

19                  There would be no impacts.

20                  **Impact BIO-4a: Construction activities would not substantially**  
21                  **disrupt local biological communities.**

22                  **CEQA Impact Determination**

23                  Because there would be no dredging or wharf construction and only minor upland  
24                  construction on the existing terminal, there would not be any disruption of local  
25                  biological communities under CEQA.

26                  *Mitigation Measures*

27                  No mitigation is required.

28                  *Residual Impacts*

29                  There would be no impacts.

30                  **NEPA Impact Determination**

31                  Because there would be no dredging or wharf construction and only minor improvements  
32                  to the existing terminal (similar to the NEPA baseline), there would not be any disruption  
33                  of local biological communities under NEPA.

1                    *Mitigation Measures*  
2                    No mitigation is required.

3                    *Residual Impacts*  
4                    There would be no impacts.

5                    **Impact BIO-5: Construction activities would not result in a**  
6                    **permanent loss of marine habitat.**

7                    **CEQA Impact Determination**

8                    Because there would be no fill, there would not be any loss of marine habitat under  
9                    CEQA.

10                  *Mitigation Measures*  
11                  No mitigation is required.

12                  *Residual Impacts*  
13                  There would be no impacts.

14                  **NEPA Impact Determination**

15                  No impacts would occur because no marine habitat would be lost under NEPA.

16                  *Mitigation Measures*  
17                  No mitigation is required.

18                  *Residual Impacts*  
19                  There would be no impacts.

20                  **Impact BIO-1b: Operations would not cause a loss of individuals or**  
21                  **habitat for a state- or federally listed endangered, threatened, rare,**  
22                  **protected, or candidate species, or a Species of Special Concern or**  
23                  **the loss of federally listed critical habitat.**

24                  **CEQA Impact Determination**

25                  Under Alternative 3, the number of ship calls at the Project site would increase through  
26                  2027 to 338, increasing the potential for vessel strikes with protected species (as  
27                  described in Impact BIO-1b for the proposed Project). Although considered less than  
28                  significant because of the low probability of vessel strikes, any increase in vessel traffic  
29                  caused by the Project may incrementally increase the potential for whale strikes under  
30                  CEQA.

31                  *Mitigation Measures*  
32                  No mitigation is required. However, as described under the proposed Project, the  
33                  potential for impacts under Alternative 3 would be further reduced with  
34                  implementation of mitigation measure **MM AQ-10**.

35                  *Residual Impacts*  
36                  Impacts would be less than significant.

## NEPA Impact Determination

Under Alternative 3, the number of ship calls at the APL Terminal would increase through 2027 to 338, increasing the potential for vessel collisions with protected species (relative to the NEPA baseline, and similar to Impact BIO-1b for the proposed Project). Although considered less than significant because of the low probability of vessel strikes, any increase in vessel traffic caused by the Project may incrementally increase the potential for whale strikes under NEPA.

### *Mitigation Measures*

No mitigation is required. However, as described under the proposed Project, the potential for impacts under Alternative 3 would be further reduced with implementation of mitigation measure **MM AQ-10**.

### *Residual Impacts*

Impacts would be less than significant.

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

## CEQA Impact Determination

Operation of the APL Terminal under Alternative 3 would not result in a substantial reduction or alteration of special habitat, site, or community, including wetlands. Operations at the terminal would continue, and there would be no disruption of EFH. Alternative 3 would not result in changes in drainage patterns and would therefore not result in runoff increases that could affect eelgrass in the Shallow Water Habitat under CEQA.

### *Mitigation Measures*

No mitigation is required.

### *Residual Impacts*

Impacts would be less than significant.

## NEPA Impact Determination

Operation of the APL Terminal under Alternative 3 would not result in a substantial reduction or alteration of special habitat, site, or community, including wetlands, relative to the NEPA baseline. Although operations at the terminal would continue and would exceed operations under the NEPA baseline, there would be no disruption of EFH. Runoff from the Project site is not expected to disrupt eelgrass beds present in the Shallow Water Habitat/Seaplane Lagoon, adjacent to the east side of the terminal because no change in runoff patterns relative to the NEPA baseline would occur.

1                    *Mitigation Measures*

2                    No mitigation is required.

3                    *Residual Impacts*

4                    Impacts would be less than significant.

5                    **Impact BIO-3b: Operation of Alternative 3 would not interfere with**  
6                    **wildlife movement/migration corridors.**

7                    **CEQA Impact Determination**

8                    Because there are no true wildlife movement or migration corridors at the Project site,  
9                    there would be no interference with movement or migration as a result of ongoing  
10                    operations at the Project site. Under Alternative 3, four additional cranes would be  
11                    installed at Berths 302-305 to increase efficiency. Because there are already cranes at the  
12                    terminal and throughout the Port Complex, and because birds are adept at avoiding  
13                    obstructions, the addition of four more cranes is not anticipated to impede bird  
14                    movements under CEQA.

15                    *Mitigation Measures*

16                    No mitigation is required.

17                    *Residual Impacts*

18                    There would be no impacts.

19                    **NEPA Impact Determination**

20                    Because there are no true wildlife movement or migration corridors at the Project site,  
21                    there would be no interference with movement or migration as a result of ongoing  
22                    operations at the APL Terminal. Under Alternative 3, four additional cranes would be  
23                    installed at Berths 302-305 to increase efficiency, which are not included in the NEPA  
24                    baseline. Since there are already cranes at the terminal, and throughout the Port Complex,  
25                    and because birds are adept at avoiding obstructions, the addition of four more cranes is  
26                    not anticipated to impede bird movements under NEPA.

27                    *Mitigation Measures*

28                    No mitigation is required.

29                    *Residual Impacts*

30                    There would be no impacts.

31                    **Impact BIO-4b: Operation of Alternative 3 would not substantially**  
32                    **disrupt local biological communities.**

33                    **CEQA Impact Determination**

34                    Under Alternative 3, operations at the existing APL Terminal would continue with  
35                    increasing vessel calls through 2027. It is estimated there would be 338 vessel calls by  
36                    2027, compared with 247 as the CEQA baseline. There is no indication of any disruption  
37                    to biological communities resulting from operations of the terminal. The potential for  
38                    accidental spills would continue. Based on compliance with applicable regulations, and

1 the nature and frequency of past spill events (see Section 3.8, Hazards and Hazardous  
2 Materials), impacts due to accidental spills are considered less than significant under  
3 CEQA.

4 *Mitigation Measures*

5 No mitigation is required.

6 *Residual Impacts*

7 Impacts would be less than significant

8 **NEPA Impact Determination**

9 Under Alternative 3, operations at the existing APL Terminal would continue with  
10 increasing vessel calls through 2027. It is estimated there would be 338 vessel calls by  
11 2027, compared with 286 as the NEPA baseline. There is no indication of any disruption  
12 to biological communities resulting from operations of the terminal under NEPA.

13 *Mitigation Measures*

14 No mitigation is required.

15 *Residual Impacts*

16 Impacts would be less than significant.

17 **Impact BIO-4c: Operation of the Project could introduce non-native**  
18 **species into the Harbor that could substantially disrupt local**  
19 **biological communities.**

20 **CEQA Impact Determination**

21 Under Alternative 3, there would be an additional number of vessels operating at the APL  
22 Terminal; therefore, there would still be the potential for introduction of non-native  
23 species. As described under Impact BIO-4c for the proposed Project, the potential for  
24 introduction of additional exotic species via ballast water would be low from vessels  
25 entering from or going outside the EEZ due to current ballast water regulations. The  
26 potential for introduction of exotic species via vessel hulls would be increased in  
27 proportion to the increase in number of vessels. However, vessel hulls are generally  
28 coated with antifouling paints and cleaned at intervals to reduce the frictional drag from  
29 growths of organisms on the hull (Global Security, 2007). This would reduce the  
30 potential for transport of exotic species. For these reasons, Alternative 3 has a low  
31 potential to increase the introduction of non-native species into the Harbor that could  
32 substantially disrupt local biological communities, but such effects could still occur under  
33 CEQA.

34 *Mitigation Measures*

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

1 *Residual Impacts*

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

4 **NEPA Impact Determination**

5 Under Alternative 3, there would be an additional number of vessels operating at the APL  
6 Terminal; therefore, there would still be the potential for introduction of non-native  
7 species. As described under Impact BIO-4c for the proposed Project, the potential for  
8 introduction of additional exotic species via ballast water would be low from vessels  
9 entering from or going outside the EEZ due to current ballast water regulations. The  
10 potential for introduction of exotic species via vessel hulls would be increased in  
11 proportion to the increase in number of vessels. However, vessel hulls are generally  
12 coated with antifouling paints and cleaned at intervals to reduce the frictional drag from  
13 growths of organisms on the hull (Global Security, 2007). This would reduce the  
14 potential for transport of exotic species. For these reasons, Alternative 3 has a low  
15 potential to increase the introduction of non-native species into the Harbor that could  
16 substantially disrupt local biological communities, but such effects could still occur under  
17 NEPA.

18 *Mitigation Measures*

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

24 *Residual Impacts*

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

27 **3.3.4.3.2.4 Alternative 4 – Reduced Project: No New Wharf**

28 Under Alternative 4, six cranes would be added to the existing terminal wharf at Berths  
29 302-305, and the 41-acre fill area adjacent to the APL Terminal would be developed as  
30 container yard backlands. EMS would relinquish the 30 acres of backlands under space  
31 assignment. EMS would not add the nine acres of land behind Berth 301 or the two acres  
32 at the main gate to its permit. Because no new wharf would be constructed at Berth 306,  
33 the 41-acre backland would be operated using traditional methods and would not be  
34 expected to transition to use of automated equipment. As the existing wharf would not be  
35 extended to create Berth 306, no dredging would occur.

36 Under Alternative 4, the total terminal acreage would be 302 acres, which is less than the  
37 proposed Project. Based on the throughput projections, TEU throughput would be less  
38 than the proposed Project, with an expected throughput of approximately 2.78 million  
39 TEUs by 2027. This would translate into 338 annual ship calls at Berths 302-305. In  
40 addition, Alternative 4 would result in up to 9,401 peak daily truck trips (2,485,050  
41 annual), and up to 2,563 annual one-way rail trip movements. Configuration of all other  
42 landside terminal components (i.e., Main Gate improvements) would be identical to the  
43 proposed Project.



1           **Impact BIO-1a: Construction activities could cause a loss of**  
2           **individuals or habitat of a state- or federally listed endangered,**  
3           **threatened, rare, protected, or candidate species, or a Species of**  
4           **Special Concern or the loss of federally listed critical habitat.**

5           **CEQA Impact Determination**

6           Under Alternative 4, there would not be any dredging or wharf construction, but the  
7           41-acre backlands would be developed as a container yard. There are no sensitive  
8           plant species on the 41-acre backlands. Development of the area as backlands is  
9           scheduled to start in the first quarter 2013, which overlaps with the nesting season  
10          (February 15 – September 1) for elegant and Caspian tern. If the elegant and Caspian  
11          tern utilize the 41-acre are for nesting in 2013, site development could result in a  
12          significant impact on nesting and likely delays in construction to avoid harming the birds  
13          and nest in compliance with the MBTA under CEQA.

14                   *Mitigation Measures*

15           As with the proposed Project, mitigation measure **MM BIO-1** would be implemented  
16           to avoid impacts to possible elegant and Caspian tern nesting on the 41-acre area.

17                   *Residual Impacts*

18           Impacts would be less than significant.

19           **NEPA Impact Determination**

20          Under Alternative 4, there would not be any dredging or wharf construction, but the  
21          41-acre backlands would be developed as a container yard, which is not included in the  
22          NEPA baseline. There are no sensitive plant species on the 41-acre backlands.  
23          Development of the area as backlands is scheduled to start in the first quarter 2013, which  
24          overlaps with the nesting season (February 15 – September 1) of elegant and Caspian  
25          tern. If the elegant and Caspian tern utilize the 41-acre are for nesting in 2013, site  
26          development could result in a significant impact on nesting under NEPA.

27                   *Mitigation Measures*

28           As with the proposed Project, mitigation measure **MM BIO-1** would be implemented  
29           to avoid impacts to possible elegant and Caspian tern nesting on the 41-acre area.

30                   *Residual Impacts*

31           Impacts would be less than significant.

32           **Impact BIO-2a: Construction activities would not result in a**  
33           **substantial reduction or alteration of a state, federally, or locally**  
34           **designated natural habitat, special aquatic site, or plant community,**  
35           **including wetlands.**

36           **CEQA Impact Determination**

37          Because there would be no new construction on or in the water at the Project site  
38          (including dredging and wharf construction) under Alternative 4, there would be no  
39          degradation of, or reduction in, aquatic habitat. There are no special upland habitats or  
40          sensitive natural communities identified at the proposed site that would be affected by

1 development of the backlands. There are approximately 30.6 acres of eelgrass habitat in  
2 the Pier 300 Shallow Water Habitat and Seaplane Lagoon; however, backlands  
3 development is not expected to affect subtidal eelgrass beds because runoff would be  
4 controlled with BMPs and would not be discharged to the habitat area (i.e., runoff would  
5 be discharged along the Pier 300 Channel). The nearest kelp beds to the Project site are  
6 located adjacent to the entrance to Fish Harbor, and kelp distribution in the Port Complex  
7 is generally located at the outer breakwaters and riprap structures in the Outer Harbors  
8 that face harbor entrances (SAIC, 2010). Giant kelp does not occur in areas directly off  
9 the APL Terminal. There are no mudflats or marshes near the Project site that would be  
10 affected by Alternative 4 construction. There would also be no discernible effects to  
11 EFH because there would be no in-water construction. The SWPPP implemented by the  
12 tenant currently at the APL Terminal has been successful in preventing water quality  
13 exceedances and maintaining water quality sufficient for growth of eelgrass (EMS, 2010).  
14 A similar program would be implemented as part of Alternative 4 to ensure continued  
15 protection of these resources during construction. This program would include standard  
16 BMPs, such as use of sediment barriers, to minimize runoff, which could affect EFH and  
17 eelgrass under CEQA.

#### 18 *Mitigation Measures*

19 No mitigation is required.

#### 20 *Residual Impacts*

21 Impacts would be less than significant.

### 22 **NEPA Impact Determination**

23 As with the NEPA baseline, because there would be no new construction on or in the  
24 water at the Project site (including dredging and wharf construction) under Alternative 4,  
25 there would be no degradation of, or reduction in, aquatic habitat. There are no special  
26 upland habitats or sensitive natural communities identified at the proposed Project site  
27 that would be affected by development of the backlands. There are approximately  
28 30.6 acres of eelgrass habitat in the Pier 300 Shallow Water Habitat and Seaplane Lagoon;  
29 however, backlands development is not expected to affect subtidal eelgrass beds because  
30 runoff would be controlled with BMPs and would not be discharged to the habitat area  
31 (i.e., runoff would be discharged along the Pier 300 Channel). The nearest kelp beds to  
32 the Project site are located adjacent to the entrance to Fish Harbor, and kelp distribution  
33 in the Port Complex is generally located at the outer breakwaters and riprap structures in  
34 the Outer Harbors that face harbor entrances (SAIC, 2010). Giant kelp does not occur in  
35 areas directly off the APL Terminal. There are no mudflats or marshes near the Project  
36 site that would be affected by Alternative 4 construction. There would also be no  
37 discernible effects to EFH because there would be no in-water construction. The SWPPP  
38 implemented by the tenant currently at the APL Terminal has been successful in  
39 preventing water quality exceedances and maintaining water quality sufficient for growth  
40 of eelgrass (EMS, 2010). A similar program would be implemented as part of  
41 Alternative 4 to ensure continued protection of these resources during construction. This  
42 program would include standard BMPs, such as use of sediment barriers, to minimize  
43 runoff, which could affect EFH and eelgrass under NEPA.

44

1                    *Mitigation Measures*

2                    No mitigation is required.

3                    *Residual Impacts*

4                    Impacts would be less than significant.

5                    **Impact BIO-3a: Construction activities would not interfere with**  
6                    **wildlife movement/migration corridors.**

7                    **CEQA Impact Determination**

8                    No known terrestrial wildlife migration corridors are present at the proposed Project site.  
9                    The only defined migratory species in the Harbor are birds. California least tern is a  
10                    migratory bird species that nests on Pier 400, while Caspian tern, elegant tern, and royal  
11                    tern have nested on the 41-acre fill site; development of the backlands under Alternative  
12                    4 would not interfere with the aerial migration of these species. Movement to and from  
13                    foraging areas in the Harbor also would not be affected by Alternative 4 construction  
14                    activities. Construction activities within the proposed Project site would not block or  
15                    interfere with migration or movement of any of these species covered under the MBTA  
16                    because the work would be in a small portion of the Project site where the birds occur  
17                    and the birds could easily fly around or over the work. There are no anticipated effects  
18                    from backlands development on fishes or aquatic invertebrates, including EFH, or on  
19                    marine mammals and sea turtles under CEQA.

20                    *Mitigation Measures*

21                    No mitigation is required.

22                    *Residual Impacts*

23                    Impacts would be less than significant.

24                    **NEPA Impact Determination**

25                    No known terrestrial wildlife migration corridors are present at the proposed Project site.  
26                    The only defined migratory species in the Harbor are birds. California least tern is a  
27                    migratory bird species that nests on Pier 400, while Caspian tern, elegant tern, and royal  
28                    tern have nested on the 41-acre fill site. Although Alternative 4 includes upland and  
29                    over-water development not included in the NEPA baseline, the improvements would not  
30                    interfere with the aerial migration of these species. Movement to and from foraging areas  
31                    in the Harbor also would not be affected by Alternative 4 construction activities.  
32                    Construction activities within the proposed Project site would not block or interfere with  
33                    migration or movement of any of these species covered under the MBTA because the  
34                    work would be in a small portion of the Project site where the birds occur and the birds  
35                    could easily fly around or over the work. There are no anticipated effects from backlands  
36                    development on fishes or aquatic invertebrates, including EFH, or on marine mammals  
37                    and sea turtles under NEPA.

1 *Mitigation Measures*

2 No mitigation is required.

3 *Residual Impacts*

4 Impacts would be less than significant.

5 **Impact BIO-4a: Construction activities would not substantially**  
6 **disrupt local biological communities.**

7 **CEQA Impact Determination**

8 Because there would be no dredging or wharf construction, there would not be any  
9 disruption of local biological communities. In addition, noise from night construction is  
10 not expected to result in significant impacts to biological resources because few  
11 birds/wildlife are scarce in upland areas and upland construction would not affect  
12 underwater noise levels under CEQA.

13 *Mitigation Measures*

14 No mitigation is required.

15 *Residual Impacts*

16 There would be no impacts.

17 **NEPA Impact Determination**

18 Because there would be no dredging or wharf construction (similar to the NEPA  
19 baseline), there would not be any disruption of local biological communities. In addition,  
20 noise from night construction is not expected to result in significant impacts to biological  
21 resources because few birds/wildlife are scarce in upland areas and upland construction  
22 would not affect underwater noise levels under NEPA.

23 *Mitigation Measures*

24 No mitigation is required.

25 *Residual Impacts*

26 There would be no impacts.

27 **Impact BIO-5: Construction activities would not result in a**  
28 **permanent loss of marine habitat.**

29 **CEQA Impact Determination**

30 No impacts would occur because no marine habitat would be lost under CEQA.

31 *Mitigation Measures*

32 No mitigation is required.

33 *Residual Impacts*

34 There would be no impacts.

## NEPA Impact Determination

As with the NEPA baseline, no impacts would occur under Alternative 4 because no marine habitat would be lost under NEPA.

### *Mitigation Measures*

No mitigation is required.

### *Residual Impacts*

There would be no impacts.

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

## CEQA Impact Determination

Under Alternative 4, the number of ship calls at the Project site would increase through 2027 to 338, increasing the potential for vessel strikes with protected species (as described in Impact BIO-1b for the proposed Project). Although considered less than significant because of the low probability of vessel strikes, any increase in vessel traffic caused by Alternative 4 may incrementally increase the potential for whale strikes under CEQA.

### *Mitigation Measures*

No mitigation is required. However, as described under the proposed Project, the potential for impacts under Alternative 4 would be further reduced with implementation of mitigation measure **MM AQ-10**.

### *Residual Impacts*

Impacts would be less than significant.

## NEPA Impact Determination

Under Alternative 4, the number of ship calls at the Project site would increase through 2027 to 338, increasing the potential for vessel strikes with protected species relative to the NEPA baseline (as described in Impact BIO-1b for the proposed Project). As described under the proposed Project, the potential for impacts resulting from vessel strikes under Alternative 4 is not significant under NEPA.

### *Mitigation Measures*

No mitigation is required. However, as described under the proposed Project, the potential for impacts under Alternative 4 would be further reduced with implementation of mitigation measure **MM AQ-10**.

### *Residual Impacts*

Impacts would be less than significant.

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

5                   **CEQA Impact Determination**

6                   Operation of the APL Terminal under Alternative 4 would not result in a substantial  
7                   reduction or alteration of special habitat, site, or community, including wetlands.  
8                   Operations at the terminal would continue, and there would be no disruption of EFH.  
9                   Runoff from the newly paved areas under Alternative 4 would be routed southward,  
10                  treated via BMP devices, and discharged to the Pier 300 Channel. Under CEQA, the  
11                  runoff would not be expected to adversely affect eelgrass beds present in the Shallow  
12                  Water Habitat or Seaplane Lagoon due to the large separation distance (over 2,900 ft).

13                  *Mitigation Measures*

14                  No mitigation is required.

15                  *Residual Impacts*

16                  Impacts would be less than significant.

17                  **NEPA Impact Determination**

18                  Although Alternative 4 would operate at a higher level than the NEPA baseline, it would  
19                  not result in a substantial reduction or alteration of special habitat, site, or community,  
20                  including wetlands. Operations at the terminal would continue, and there would be no  
21                  disruption of EFH. Runoff from the newly paved areas under Alternative 4 would be  
22                  routed southward, treated via BMP devices, and discharged to the Pier 300 Channel.  
23                  Under NEPA, the runoff would not be expected to adversely affect eelgrass beds present  
24                  in the Shallow Water Habitat or Seaplane Lagoon due to the large separation distance  
25                  (over 2,900 ft).

26                  *Mitigation Measures*

27                  No mitigation is required.

28                  *Residual Impacts*

29                  Impacts would be less than significant.

30                  **Impact BIO-3b: Operation of Alternative 4 would not interfere with**  
31                  **wildlife movement/migration corridors.**

32                  **CEQA Impact Determination**

33                  Because there are no true wildlife movement or migration corridors at the proposed site,  
34                  there would be no interference with movement or migration as a result of ongoing  
35                  operations at the APL Terminal under CEQA.

1 *Mitigation Measures*

2 No mitigation is required.

3 *Residual Impacts*

4 There would be no impacts.

5 **NEPA Impact Determination**

6 Although Alternative 4 would have upland and over-water development not included in  
7 the NEPA baseline, because there are no true wildlife movement or migration corridors at  
8 the proposed site, there would be no interference with movement or migration as a result  
9 of increased terminal operations under NEPA.

10 *Mitigation Measures*

11 No mitigation is required.

12 *Residual Impacts*

13 There would be no impacts.

14 **Impact BIO-4b: Operation of Alternative 4 would not substantially**  
15 **disrupt local biological communities.**

16 **CEQA Impact Determination**

17 Under Alternative 4, operations at the existing Project site would continue with  
18 increasing vessel calls through 2027. It is estimated there would be 338 vessel calls by  
19 2027, compared with 247 as the CEQA baseline. Similar to the proposed Project, no  
20 disruptions of biological communities resulting from operations of the terminal are  
21 expected under Alternative 4. The potential for accidental spills would continue. Based  
22 on compliance with applicable regulations, and the nature and frequency of past spill  
23 events (see Section 3.8, Hazards and Hazardous Materials), impacts due to accidental  
24 spills are considered less than significant under CEQA.

25 *Mitigation Measures*

26 No mitigation is required.

27 *Residual Impacts*

28 Impacts would be less than significant.

29 **NEPA Impact Determination**

30 Under Alternative 4, operations at the existing Project site would continue with  
31 increasing vessel calls through 2027. It is estimated there would be 338 vessel calls by  
32 2027, compared with 286 as the NEPA baseline. Similar to the proposed Project, no  
33 disruptions to biological communities resulting from operations of the terminal under  
34 Alternative 4 are expected under NEPA.

1                    *Mitigation Measures*

2                    No mitigation is required.

3                    *Residual Impacts*

4                    Impacts would be less than significant.

5                    **Impact BIO-4c: Operation of the Project could introduce non-native**  
6                    **species into the Harbor that could substantially disrupt local**  
7                    **biological communities.**

8                    **CEQA Impact Determination**

9                    Under Alternative 4, there would be an additional number of vessels operating at the APL  
10                    Terminal; therefore, there would still be the potential for introduction of non-native  
11                    species. As described under Impact BIO-4c for the proposed Project, the potential for  
12                    introduction of additional exotic species via ballast water would be low from vessels  
13                    entering from or going outside the EEZ due to current ballast water regulations. The  
14                    potential for introduction of exotic species via vessel hulls would be increased in  
15                    proportion to the increase in number of vessels. However, vessel hulls are generally  
16                    coated with antifouling paints and cleaned at intervals to reduce the frictional drag from  
17                    growths of organisms on the hull (Global Security, 2007). This which would reduce the  
18                    potential for transport of exotic species. For these reasons, Alternative 4 has a low  
19                    potential to increase the introduction of non-native species into the Harbor that could  
20                    substantially disrupt local biological communities, but such effects could still occur under  
21                    CEQA.

22                    *Mitigation Measures*

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

28                    *Residual Impacts*

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

31                    **NEPA Impact Determination**

32                    Under Alternative 4, there would be an additional number of vessels operating at the APL  
33                    Terminal relative to the NEPA baseline; therefore, there would still be the potential for  
34                    introduction of non-native species. As described under Impact BIO-4c for the proposed  
35                    Project, the potential for introduction of additional exotic species via ballast water would  
36                    be low from vessels entering from or going outside the EEZ due to current ballast water  
37                    regulations. The potential for introduction of exotic species via vessel hulls would be  
38                    increased in proportion to the increase in number of vessels. However, vessel hulls are  
39                    generally coated with antifouling paints and cleaned at intervals to reduce the frictional  
40                    drag from growths of organisms on the hull (Global Security, 2007). This would reduce  
41                    the potential for transport of exotic species. For these reasons, Alternative 4 has a low  
42                    potential to increase the introduction of non-native species into the Harbor that could



1 substantially disrupt local biological communities, but such effects could still occur under  
2 NEPA.

### 3 *Mitigation Measures*

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

### 9 *Residual Impacts*

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

## 12 **3.3.4.3.2.5 Alternative 5 – Reduced Project: No Space Assignment**

13 Alternative 5 would improve the existing terminal, construct a new wharf (1,250 ft)  
14 creating Berth 306, add 12 new cranes to Berths 302-306, add 56 acres for backlands,  
15 wharfs, and gates improvements, construct electrification infrastructure in the backlands  
16 behind Berths 305-306, and relinquish the 30 acres currently on space assignment. This  
17 alternative would be the same as the proposed Project, except that EMS would relinquish  
18 the 30 acres of backlands under space assignment. As with the proposed Project, the 41-  
19 acre backlands and Berth 306 under Alternative 5 could utilize traditional container  
20 operations, electric automated operations, or a combination of the two over time.  
21 Dredging of the Pier 300 Channel along the new wharf at Berth 306 (approximately  
22 20,000 cy) would occur, with the dredged material beneficially reused, and/or disposed of  
23 at an approved disposal site (such as the CDF at Berths 243-245 and/or Cabrillo shallow  
24 water habitat) or, if needed, disposed of at an ocean disposal site (i.e., LA-2).

25 Under Alternative 5, the total gross terminal acreage would be 317 acres, which is less  
26 than the proposed Project. TEU throughput would be the same as the proposed Project,  
27 with an expected throughput of approximately 3.2 million TEUs by 2027. This would  
28 translate into 390 annual ship calls at Berths 302-306. In addition, this alternative would  
29 result in up to 11,361 peak daily truck trips (3,003,157 annual) including drayage, and up  
30 to 2,953 annual one-way rail trip movements. Configuration of all other landside  
31 terminal components would be identical to the existing terminal.

### 32 **Impact BIO-1a: Construction activities could cause a loss of** 33 **individuals or habitat of a state- or federally listed endangered,** 34 **threatened, rare, protected, or candidate species, or a Species of** 35 **Special Concern or the loss of federally listed critical habitat.**

36 Construction impacts for Alternative 5 would be essentially the same as those described  
37 for the proposed Project (Impact BIO-1a). The impacts due to dredging and piling  
38 installation would be the same as those for the proposed Project.

### 39 **CEQA Impact Determination**

40 Construction activities of Alternative 5 are not likely to result in the loss of individuals or  
41 the reduction of existing habitat, of a state or federally listed endangered, threatened, rare,  
42 protected, candidate, or sensitive species or a species of special concern. In-water  
43 construction would cause localized activity, noise, and turbidity that could affect birds

1 and marine mammals. However, these impacts would be temporary and limited to the  
2 waters in the vicinity of construction activities. Implementation of required water quality  
3 monitoring during dredging according to the requirements of the RWQCB, as well as  
4 implementation of standard dredging BMPs via adaptive management of the dredging  
5 would minimize potential impacts to sensitive species. Impacts related to dredging  
6 would be less than significant under CEQA.

7 Potential biological impacts from disposal of dredged sediments would depend on the  
8 disposal method. However, for all in-water disposal options (such as confined aquatic  
9 disposal or at the LA-2 ODMDS), potential impacts include: water quality impacts from  
10 turbidity or contaminants and smothering of resident fishes and invertebrates. Impacts  
11 from disposal at the LA-2 (as well as the LA-3) disposal site was evaluated during the  
12 site designation process (USEPA and USACE, 2005). Sediments were screened to  
13 determine acceptability of disposal at different locations. Sediments suitable for  
14 unconfined aquatic disposal would (1) be used as fill at the Cabrillo shallow water habitat,  
15 (2) potentially provide fill for the Berths 243-245 CDF, and (3) potentially disposed of at  
16 the LA-2 ODMDS. Unsuitable sediments would be used for fill in the Berths 243-245  
17 CDF. Biological impacts due to construction and fill of the CDF, as well as expansion  
18 and fill of the CSWH, were evaluated in the *Final Supplemental Environmental Impact  
19 Statement / Final Supplemental Environmental Impact Report (EIS/EIR) for the Port of  
20 Los Angeles Channel Deepening Project* (USACE and LAHD, 2009). This evaluation  
21 included mitigation for habitat loss at the Berths 243-245 CDF. Any temporary water  
22 quality impacts would be minimized as discussed by pre-dredge screening, water quality  
23 monitoring, and adaptive management and use of BMPs.

24 If the elegant and Caspian tern utilize the 41-acre are for nesting in 2013, site  
25 development could result in a significant impact on nesting because development of the  
26 area as backlands is scheduled to start in the first quarter 2013, which overlaps with the  
27 nesting season (February 15 – September 1) for elegant and Caspian tern.  
28 Implementation of mitigation measure **MM BIO-1** would avoid potentially significant  
29 impacts during the breeding period for terns. Concrete pile-driving is anticipated to result  
30 in disturbance (Level B harassment) to marine mammals (particularly harbor seals and  
31 sea lions, which would be the marine mammals most likely to occur in the vicinity of  
32 Pier 300) in the vicinity of pile-driving operations. Impacts would not be significant;  
33 however, impacts on marine mammals resulting from noise associated with pile-driving  
34 would be further reduced with implementation of standard condition of approval  
35 **SC BIO-1**. This would ensure that marine mammals would be readily able to avoid  
36 pile-driving areas, and no injury to marine mammals from pile-driving sounds would be  
37 expected.

#### 38 *Mitigation Measures*

39 As described under the proposed Project, the potential for impacts could be  
40 minimized with implementation of mitigation measure **MM BIO-1** and standard  
41 condition of approval **SC BIO-1**.

#### 42 *Residual Impacts*

43 Impacts would be less than significant.

## NEPA Impact Determination

Construction impacts for Alternative 5 would be greater than the NEPA baseline, and essentially the same as those described for the proposed Project (Impact BIO-1a). The impacts due to dredging and piling installation would be the same as those for the proposed Project. Development of the area as backlands is scheduled to start in the first quarter 2013, which overlaps with the nesting season (February 15 – September 1) of elegant and Caspian tern. If the elegant and Caspian tern utilize the 41-acre are for nesting in 2013, site development could result in a significant impact on nesting.

Construction activities of Alternative 5 are not likely to result in the loss of individuals or the reduction of existing habitat, of a state or federally listed endangered, threatened, rare, protected, candidate, or sensitive species or a species of special concern. In-water construction would cause localized activity, noise, and turbidity that could affect birds and marine mammals. However, these impacts would be temporary and limited to the waters in the vicinity of construction activities. Implementation of required water quality monitoring during dredging according to the requirements of the RWQCB and implementation of standard dredging BMPs via adaptive management of the dredging would minimize potential impacts to sensitive species. Impacts related to dredging would be less than significant under NEPA.

Potential biological impacts from disposal of dredged sediments would depend on the disposal method. However, for all in-water disposal options (such as confined aquatic disposal or at the LA-2 ODMDS), potential impacts include: water quality impacts from turbidity or contaminants and smothering of resident fishes and invertebrates. Impacts from disposal at the LA-2 (as well as the LA-3) disposal site was evaluated during the site designation process (USEPA and USACE, 2005). Sediments were screened to determine acceptability of disposal at different locations. Sediments suitable for unconfined aquatic disposal would (1) be used as fill at the Cabrillo shallow water habitat, (2) potentially provide fill for the Berths 243-245 CDF, and (3) potentially disposed of at the LA-2 ODMDS. Unsuitable sediments would be used for fill in the Berths 243-245 CDF. Biological impacts due to construction and fill of the CDF, as well as expansion and fill of the Cabrillo shallow water habitat, were evaluated in the *Final Supplemental Environmental Impact Statement / Final Supplemental Environmental Impact Report (EIS/EIR) for the Port of Los Angeles Channel Deepening Project* (USACE and LAHD, 2009). This evaluation included mitigation for habitat loss at the Berths 243-245 CDF. Any temporary water quality impacts would be minimized as discussed by pre-dredge screening, water quality monitoring, and adaptive management and use of BMPs.

If the elegant and Caspian tern utilize the 41-acre are for nesting in 2013, site development could result in a significant impact on nesting because development of the area as backlands is scheduled to start in the first quarter 2013, which overlaps with the nesting season (February 15 – September 1) for elegant and Caspian tern. Implementation of mitigation measure **MM BIO-1** would avoid potentially significant impacts during the breeding period for terns. Concrete pile-driving is anticipated to result in disturbance (Level B harassment) to marine mammals (particularly harbor seals and sea lions, which would be the marine mammals most likely to occur in the vicinity of Pier 300) in the vicinity of pile-driving operations. Impacts would not be significant; however, impacts on marine mammals resulting from noise associated with pile-driving would be further reduced with implementation of standard condition of approval **SC BIO-1**. This would ensure that marine mammals would be readily able to avoid

1 pile-driving areas, and no injury to marine mammals from pile-driving sounds would be  
2 expected.

### 3 *Mitigation Measures*

4 As described under the proposed Project, the potential for impacts could be  
5 minimized with implementation of mitigation measure **MM BIO-1** and standard  
6 condition of approval **SC BIO-1**.

### 7 *Residual Impacts*

8 Impacts would be less than significant.

### 9 **Impact BIO-2a: Construction activities would not result in a** 10 **substantial reduction or alteration of a state, federally, or locally** 11 **designated natural habitat, special aquatic site, or plant community,** 12 **including wetlands.**

13 Construction impacts for Alternative 5 would be essentially the same as those described  
14 for the proposed Project (Impact BIO-2a). There are no special aquatic habitats and  
15 sensitive natural communities identified at the proposed Project site that would be  
16 affected by construction of Alternative 5. There are approximately 30.6 acres of eelgrass  
17 habitat in the Pier 300 Shallow Water Habitat/Seaplane Lagoon area; however,  
18 Alternative 5 construction is not expected to affect subtidal eelgrass beds. Prior to  
19 installation of in-water structures, eelgrass surveys would be conducted as required under  
20 the *Southern California Eelgrass Mitigation Policy* (NMFS, 1991 as amended).  
21 Although the absence of eelgrass along Berth 306 in the Pier 300 Channel has been  
22 confirmed, if eelgrass is found in the vicinity of any of the structures, a plan would be  
23 developed to ensure that there would be no net loss of eelgrass habitat, consistent with the  
24 policy. However, because the depths at the proposed construction site (-48 ft MLLW or  
25 deeper) are generally inadequate for eelgrass growth, Alternative 5 would probably have  
26 no direct impact on eelgrass and associated biological communities.

27 Based on water quality monitoring data summarized in Impact BIO-1a for the proposed  
28 Project, turbidity would be limited to between a few hundred feet and 1,000 ft from  
29 dredging operations. The nearest eelgrass beds are approximately 2,900 ft from the  
30 nearest (eastern) edge of the proposed dredge and in-water construction area. Results  
31 from required water quality monitoring would also be used to document the extent of the  
32 dredge plume, and adaptive management measures (such as implementation of BMPs, or  
33 compliance with permit conditions such as use of a silt curtain) would be implemented to  
34 reduce impacts from turbidity and siltation. Therefore, effects from dredging/pile-driving  
35 on eelgrass are not expected. There is no eelgrass or giant kelp in the vicinity of the  
36 Berth 306 wharf, so shading from the new wharf would not impact these resources.

37 The addition of a negligible amount of sediment at the Cabrillo shallow water habitat  
38 would not affect existing eelgrass beds at Cabrillo Beach by removal or burial. Turbidity  
39 caused by fill, including deposition of suspended sediment on the plant surfaces, could  
40 affect eelgrass by reducing light penetration and photosynthesis by eelgrass. The extent  
41 and duration of such effects would depend on the amount of suspended sediment and  
42 water currents at the time of the work. However, because turbidity is not expected to  
43 extend beyond 300 feet (91 m) of the disposal location it would be unlikely to adversely  
44 affect productivity of the eelgrass. Deposition of sediment on the eelgrass would be low  
45 because much of the suspended sediment would settle out before reaching the eelgrass

1 beds. These effects would occur only during construction with rapid recovery (a few  
2 months) of any plants damaged by the sediment.

3 Potential biological impacts from disposal of dredged sediments would depend on the  
4 disposal method. Impacts from disposal at the LA-2 disposal site were evaluated during  
5 the site designation process (USEPA and USACE, 2005). Any temporary water quality  
6 impacts would be minimized as discussed by pre-dredge screening, water quality  
7 monitoring, and adaptive management and use of BMPs. Fill would not be allowed at  
8 special aquatic sites, including wetlands, eelgrass beds, or kelp beds.

9 The nearest kelp beds to the Project site are located adjacent to the entrance to Fish  
10 Harbor, and kelp distribution in the Port Complex is generally located at the outer  
11 breakwaters and riprap structures in the Outer Harbors that face harbor entrances  
12 (SAIC, 2010). Giant kelp does not occur in waters directly off the APL Terminal, and  
13 the nearest beds (at the entrance to Fish Harbor) are more than 1,600 ft from the western  
14 edge of the proposed dredge area. Based on water quality monitoring data summarized in  
15 Impact BIO-1a for the proposed Project, water quality effects associated with Alternative  
16 5 are expected to be transitory, lasting for less than one tide cycle following active  
17 dredging, and covering an area generally within 1,000 ft of the activity, and often less  
18 than 300 ft. Turbidity may also be temporarily increased during installation of piles (or  
19 other subtidal construction activities that take place near the seafloor). However, the  
20 extent would generally be much less than the area affected by dredging, probably  
21 affecting a radius of no more than about 100 ft from the activity. Therefore, effects from  
22 dredging/pile-driving on giant kelp are not expected. There are no mudflats or marshes  
23 near the Project site that would be affected by construction of Alternative 5. Impacts to  
24 EFH during construction would be localized and temporary.

25 The SWPPP implemented by the tenant currently at the APL Terminal has been  
26 successful in preventing water quality exceedances and maintaining water quality  
27 sufficient for growth of eelgrass (EMS, 2010). A similar program would be implemented  
28 as part of Alternative 5 to ensure continued protection of these resources during  
29 construction. This program would include standard BMPs, such as use of sediment  
30 barriers, to minimize runoff that could affect EFH and eelgrass.

### 31 **CEQA Impact Determination**

32 Construction of Alternative 5 is not expected to affect subtidal eelgrass habitat in the  
33 Pier 300 Shallow Water Habitat/Seaplane Lagoon area or at the Cabrillo shallow water  
34 habitat, either from runoff or from turbidity during dredging. The nearest Giant kelp beds  
35 to the APL Terminal are located at the entrance to Fish Harbor more than 1,600 ft from  
36 the western edge of the proposed dredge area. Based on water quality monitoring data  
37 summarized in Impact BIO-1a, water quality effects are expected to be transitory and are  
38 not expected to significantly affect the kelp beds. There are no mudflats or marshes near  
39 the terminal site that would be affected by Alternative 5 construction. Impacts to EFH  
40 during construction would be localized and temporary and not significant under CEQA.

#### 41 *Mitigation Measures*

42 No mitigation is required.

#### 43 *Residual Impacts*

44 Impacts would be less than significant.

## NEPA Impact Determination

Construction of Alternative 5 would result in limited upland construction, in-water, and over-water construction activities not included in the NEPA baseline. Construction of Alternative 5 is not expected to affect subtidal eelgrass habitat in the Pier 300 Shallow Water Habitat/Seaplane Lagoon area or at the Cabrillo shallow water habitat, either from runoff or from turbidity during dredging. The nearest Giant kelp beds to the APL Terminal are located at the entrance to Fish Harbor more than 1,600 ft from the western edge of the proposed dredge area. Based on water quality monitoring data summarized in Impact BIO-1a, water quality effects are expected to be transitory and are not expected to significantly affect the kelp beds. There are no mudflats or marshes near the terminal site that would be affected by Alternative 5 construction. Impacts to EFH during construction would be localized and temporary and not significant under NEPA.

### *Mitigation Measures*

No mitigation is required.

### *Residual Impacts*

Impacts would be less than significant.

## **Impact BIO-3a: Construction activities would not interfere with wildlife movement/migration corridors.**

Construction impacts for Alternative 5 would be essentially the same as those described for the proposed Project.

## CEQA Impact Determination

No known terrestrial wildlife migration corridors are present at the proposed Project site. Construction activities within the proposed Project site would not block or interfere with migration or movement of any bird species because the work would be in a small portion of the Harbor area where the birds occur and the birds could easily fly around or over the work.

Fish species present in the Harbor would be subject to temporary acoustic and possibly water quality impacts during dredging and wharf construction. Potential impacts from dredging (turbidity and potential resuspension of contaminated sediments) under Alternative 5 would be the same as for the proposed Project for dredging, and are considered localized and temporary. The sound pressure waves from pile-driving could cause mortality of a few fish in the Coastal Pelagics FMP, but these species are abundant in the Harbor and loss of a few individuals would not cause a substantial reduction of their populations. These impacts could result in temporary avoidance of the construction areas. However, these effects would be temporary, lasting for a few days at a time. There would be no physical barriers to movement, and the baseline condition for fish and wildlife access would be essentially unchanged under CEQA.

Potential biological impacts from disposal of dredged sediments would depend on the disposal method. However, impacts from disposal at the LA-2 (as well as the LA-3) disposal site was evaluated during the site designation process (USEPA and USACE, 2005). Biological impacts due to construction and fill of the CDF, as well as expansion and fill of the Cabrillo shallow water habitat, were evaluated in the *Final Supplemental Environmental Impact Statement / Final Supplemental Environmental Impact Report*

1 *(EIS/EIR) for the Port of Los Angeles Channel Deepening Project* (USACE and LAHD,  
2 2009). No interference with wildlife movement/migration corridors would occur as part  
3 of Alternative 5 under CEQA.

4 Overall, the Harbor and specifically the location of the Project is subject to a high degree  
5 of ongoing commercial activity, including the movement of large vessels, and frequent  
6 maintenance dredging. Alternative 5-related construction vessel traffic to and from the  
7 Harbor (i.e., tugboats carrying dredged sediments) would not interfere with whale  
8 migrations along the coast, because these vessels would represent a small proportion of  
9 the total Port-related commercial traffic in the area, and each vessel would have a low  
10 probability of encountering migrating whales during transit through coastal waters  
11 because these animals are generally sparsely distributed offshore and rarely enter the Port  
12 Complex (LAHD and USACE, 2007).

### 13 *Mitigation Measures*

14 No mitigation is required. Implementation of standard condition of approval **SC**  
15 **BIO-1** would further reduce impacts.

### 16 *Residual Impacts*

17 Impacts would be less than significant.

## 18 **NEPA Impact Determination**

19 Alternative 5 would include upland, over-water, and in-water development not included  
20 in the NEPA baseline. No known terrestrial wildlife migration corridors are present at  
21 the proposed Project site. Construction activities within the proposed Project site would  
22 not block or interfere with migration or movement of any bird species because the work  
23 would be in a small portion of the Harbor area where the birds occur and the birds could  
24 easily fly around or over the work.

25 Fish species present in the Harbor would be subject to temporary acoustic and possibly  
26 water quality impacts during dredging and wharf construction. Potential impacts from  
27 dredging (turbidity and potential resuspension of contaminated sediments) under  
28 Alternative 5 would be the same as for the proposed Project for dredging, and are  
29 considered localized and temporary. The sound pressure waves from pile-driving could  
30 cause mortality of a few fish in the Coastal Pelagics FMP, but these species are abundant  
31 in the Harbor and loss of a few individuals would not cause a substantial reduction of  
32 their populations. These impacts could result in temporary avoidance of the construction  
33 areas. However, these effects would be temporary, lasting for a few days at a time.  
34 There would be no physical barriers to movement, and the baseline condition for fish and  
35 wildlife access would be essentially unchanged under NEPA.

36 Potential biological impacts from disposal of dredged sediments would depend on the  
37 disposal method. However, impacts from disposal at the LA-2 (as well as the LA-3)  
38 disposal site was evaluated during the site designation process (USEPA and USACE,  
39 2005). Biological impacts due to construction and fill of the CDF, as well as expansion  
40 and fill of the Cabrillo shallow water habitat, were evaluated in the *Final Supplemental*  
41 *Environmental Impact Statement / Final Supplemental Environmental Impact Report*  
42 *(EIS/EIR) for the Port of Los Angeles Channel Deepening Project* (USACE and LAHD,  
43 2009). No interference with wildlife movement/migration corridors would occur as part  
44 of Alternative 5 under NEPA.

1 Overall, the Harbor, and specifically the location of the Project, is subject to a high  
2 degree of ongoing commercial activity, including the movement of large vessels, and  
3 frequent maintenance dredging. Alternative 5-related construction vessel traffic to and  
4 from the Harbor (i.e., tugboats carrying dredged sediments) would not interfere with  
5 whale migrations along the coast, because these vessels would represent a small  
6 proportion of the total Port-related commercial traffic in the area, and each vessel would  
7 have a low probability of encountering migrating whales during transit through coastal  
8 waters because these animals are generally sparsely distributed offshore and rarely enter  
9 the Port Complex (LAHD and USACE, 2007).

#### 10 *Mitigation Measures*

11 No mitigation is required. Implementation of standard condition of approval SC  
12 **BIO-1** would further reduce impacts.

#### 13 *Residual Impacts*

14 Impacts would be less than significant.

### 15 **Impact BIO-4a: Construction activities would not substantially** 16 **disrupt local biological communities.**

#### 17 **CEQA Impact Determination**

18 Because the terrestrial portions of the Project site are largely developed, impacts on  
19 terrestrial biological communities would be limited. Plant communities on the backlands  
20 site are mostly introduced, weedy species, with Russian thistle (tumbleweed) the most  
21 abundant species. In addition, noise from night construction is not expected to result in  
22 significant impacts to biological resources because few birds/wildlife are scarce in upland  
23 areas and upland construction would not affect underwater noise levels

24 Construction impacts for Alternative 5 would be essentially the same as those described  
25 for the proposed Project (Impact BIO-4a). Construction activities at the proposed Project  
26 site, particularly pile-driving, could cause short-term impacts on individuals (e.g. marine  
27 mammals and fishes, including those with designated EFH) in the immediate vicinity of  
28 pile-driving. However, no substantial disruption of biological communities would result  
29 from Alternative 5 construction, and impacts are considered insignificant under CEQA.

30 Potential biological impacts from disposal of dredged sediments would depend on the  
31 disposal method. However, for all in-water disposal options (such as confined aquatic  
32 disposal or at the LA-2 ODMDS), potential impacts include: water quality impacts from  
33 turbidity or contaminants and smothering of resident fishes and invertebrates. Impacts  
34 from disposal at the LA-2 (as well as the LA-3) disposal site was evaluated during the  
35 site designation process (USEPA and USACE, 2005). Biological impacts due to  
36 construction and fill of the CDF, as well as expansion and fill of the Cabrillo shallow  
37 water habitat, were evaluated in the *Final Supplemental Environmental Impact Statement /*  
38 *Final Supplemental Environmental Impact Report (EIS/EIR) for the Port of Los Angeles*  
39 *Channel Deepening Project* (USACE and LAHD, 2009). Any temporary water quality  
40 impacts would be minimized as discussed by pre-dredge screening, water quality  
41 monitoring, and adaptive management and use of BMPs.

42 Construction activities that have the potential to introduce or redistribute invasive species  
43 would be less than significant. All construction impacts that could substantially disrupt



1 local biological communities resulting from Alternative 5 would be less than significant  
2 under CEQA.

### 3 *Mitigation Measures*

4 No mitigation is required. As described under the proposed Project, the potential for  
5 impacts could be further reduced with implementation of mitigation measure  
6 **MM BIO-1** and standard condition of approval **SC BIO-1**.

### 7 *Residual Impacts*

8 Impacts would be less than significant.

## 9 **NEPA Impact Determination**

10 Alternative 5 would include upland, over-water, and in-water development not included  
11 in the NEPA baseline. However, because the terrestrial portions of the Project site are  
12 largely developed, impacts on terrestrial biological communities would be limited. Plant  
13 communities on the backlands site are mostly introduced, weedy species, with Russian  
14 thistle (tumbleweed) the most abundant species. In addition, noise from night  
15 construction is not expected to result in significant impacts to biological resources  
16 because few birds/wildlife are scarce in upland areas and upland construction would not  
17 affect underwater noise levels.

18 Construction activities at the terminal site, particularly pile-driving, could cause short-  
19 term impacts on individuals (e.g. marine mammals and fishes, including those with  
20 designated EFH) in the immediate vicinity of pile-driving. However, no substantial  
21 disruption of biological communities would result from Alternative 5 construction, and  
22 impacts are considered insignificant under NEPA.

23 Potential biological impacts from disposal of dredged sediments would depend on the  
24 disposal method. However, for all in-water disposal options (such as confined aquatic  
25 disposal or at the LA-2 ODMDS), potential impacts include: water quality impacts from  
26 turbidity or contaminants and smothering of resident fishes and invertebrates. Impacts  
27 from disposal at the LA-2 (as well as the LA-3) disposal site was evaluated during the  
28 site designation process (USEPA and USACE, 2005). Biological impacts due to  
29 construction and fill of the CDF, as well as expansion and fill of the Cabrillo shallow  
30 water habitat, were evaluated in the *Final Supplemental Environmental Impact Statement /*  
31 *Final Supplemental Environmental Impact Report (EIS/EIR) for the Port of Los Angeles*  
32 *Channel Deepening Project* (USACE and LAHD, 2009). Any temporary water quality  
33 impacts would be minimized as discussed by pre-dredge screening, water quality  
34 monitoring, and adaptive management and use of BMPs.

35 Construction activities that have the potential to introduce or redistribute invasive species  
36 would be less than significant. All construction impacts that could substantially disrupt  
37 local biological communities resulting Alternative 5 would be less than significant under  
38 NEPA.

### 39 *Mitigation Measures*

40 No mitigation is required. As described under the proposed Project, the potential for  
41 impacts could be further reduced with implementation of mitigation measure  
42 **MM BIO-1** and standard condition of approval **SC BIO-1**.

1 *Residual Impacts*

2 Impacts would be less than significant.

3 **Impact BIO-5: Construction activities would not result in a**  
4 **permanent loss of marine habitat.**

5 **CEQA Impact Determination**

6 As with the proposed Project, no impacts would occur under Alternative 5 because no  
7 marine habitat would be lost. Although new piles would be added to the water column,  
8 piles provide hard substrate usable as habitat by marine organisms under CEQA.

9 *Mitigation Measures*

10 No mitigation is required.

11 *Residual Impacts*

12 There would be no impacts.

13 **NEPA Impact Determination**

14 Alternative 5 would include upland, over-water, and in-water development not included  
15 in the NEPA baseline. As with the proposed Project, no impacts would occur under  
16 Alternative 5 because no marine habitat would be lost. Although new piles would be  
17 added to the water column, piles provide hard substrate usable as habitat by marine  
18 organisms under NEPA.

19 *Mitigation Measures*

20 No mitigation is required.

21 *Residual Impacts*

22 There would be no impacts.

23 **Impact BIO-1b: Operations would not cause a loss of individuals or**  
24 **habitat for a state- or federally listed endangered, threatened, rare,**  
25 **protected, or candidate species, or a Species of Special Concern or**  
26 **the loss of federally listed critical habitat.**

27 Operation of new and upgraded terminal facilities at the terminal site under Alternative 5  
28 would be similar to the proposed Project and would not adversely affect any of the state  
29 or federally listed, or special concern bird species listed in Tables 3.3-3 and 3.3-4.  
30 Operation of the backland facilities (e.g., cranes, railyard, and container transfers) would  
31 not measurably change the numbers or species of common birds in that area and, thus,  
32 would not affect foraging. The increase in vessel traffic of up to approximately one ship  
33 call every 2 to 3 days at the APL Terminal would cause a short interval of disturbance  
34 throughout the route from Angel's Gate to Berths 302-306 but would not result in a loss  
35 of habitat or individuals for sensitive birds that use the water surface for resting or  
36 foraging.

37 An estimated 143 additional vessel calls per year above the CEQA baseline ship calls of  
38 247 to the Port and 104 vessels over the NEPA baseline of 286 vessels annually would  
39 result from Alternative 5 by the year 2027. This increase would occur gradually over

1 time. Acoustic impacts from the increased vessel activity would be the same as those  
2 identified for the proposed Project. Potential impacts due to vessel strikes resulting from  
3 the increased shipping traffic would also be the same as those identified for the proposed  
4 Project and are considered insignificant.

### 5 **CEQA Impact Determination**

6 Terminal activity under Alternative 5 would be greater than the CEQA baseline;  
7 however, operational activities would result in no loss of habitat for rare, threatened,  
8 endangered, protected, or candidate species, or Species of Special Concern. No impacts  
9 to critical habitat would occur because no critical habitat is present. However, increased  
10 ship calls may affect some species. Underwater sound from Alternative 5-related vessels  
11 would affect few, if any, marine mammals; impacts, therefore, would be less than  
12 significant under CEQA. Impacts of Alternative 5-related vessel traffic on marine  
13 mammals would be considered less than significant because of the low probability of  
14 vessel strikes and Alternative 5 vessel strikes would not be expected to occur. Although  
15 the likelihood of such a collision is low, such collisions occur and may cause an impact to  
16 species listed on the ESA, especially blue whales. Therefore, although considered less  
17 than significant because of the low probability of vessel strikes, any increase in vessel  
18 traffic caused by Alternative 5 may incrementally increase the potential for whale strikes  
19 under CEQA.

#### 20 *Mitigation Measures*

21 No mitigation is required. However, as described under the proposed Project, the  
22 potential for vessel collisions with marine mammals under Alternative 5 would be  
23 further reduced with implementation of mitigation measure **MM AQ-10**.

#### 24 *Residual Impacts*

25 Impacts would be less than significant.

### 26 **NEPA Impact Determination**

27 Alternative 5 would result in greater operational throughput than the NEPA baseline  
28 (104 additional vessel calls per year above the NEPA baseline ship calls of 286 vessel  
29 calls annually by the year 20270. Operational impacts under Alternative 5 would be  
30 similar to those of the proposed Project.

31 Terminal activity under Alternative 5 would be greater than the NEPA baseline; however,  
32 operational activities would result in no loss of habitat for rare, threatened, endangered,  
33 protected, or candidate species, or Species of Special Concern. No impacts to critical  
34 habitat would occur because no critical habitat is present. However, increased ship calls  
35 may affect some species. Underwater sound from Alternative 5-related vessels would  
36 affect few, if any, marine mammals; impacts, therefore, would be less than significant  
37 under NEPA. Impacts of Project-related vessel traffic on marine mammals would be  
38 considered less than significant because of the low probability of vessel strikes and  
39 Project vessel strikes would not be expected to occur. Although the likelihood of such a  
40 collision is low, such collisions occur and may cause an impact to species listed on the  
41 ESA, especially blue whales. Therefore, although considered less than significant  
42 because of the low probability of vessel strikes, any increase in vessel traffic caused by  
43 Alternative 5 may incrementally increase the potential for whale strikes under NEPA.

### *Mitigation Measures*

No mitigation is required. However, as described under the proposed Project, the potential for impacts resulting from vessel collisions with marine mammals under Alternative 5 would be further reduced with implementation of mitigation measure **MM AQ-10**.

### *Residual Impacts*

Impacts would be less than significant.

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

Operation of terminal facilities under Alternative 5 would have minimal effects on EFH. Although the estimated number of vessels would add to the number of noise events, they would not substantially add to the overall underwater noise level. The addition of up to one ship call every 2 to 3 days would not adversely affect FMP species present in the Outer Harbor or in the vicinity of Pier 300 because the additional trips proposed for Alternative 5 are infrequent. Schooling fish, such as sardines and anchovy, likely would ignore the ship movements and sound, or temporarily move out of the way. Runoff from the new facilities would not substantially reduce or alter EFH in Harbor waters because water quality standards for protection of marine life would not be exceeded (see Section 3.14, Water Quality, Sediments, and Oceanography).

As described in Impact BIO-2a, no SEAs or natural plant communities are present that could be affected by operation of terminal facilities under Alternative 5. No wetlands or mudflats are present at the proposed Project site, and those in other areas of the Harbor are not located in or near (more than 1 mile away) the channels that would be used by vessels transiting to or from the APL Terminal.

Eelgrass beds are located in the Shallow Water Habitat and Seaplane Lagoon adjacent to the Project site. Vessel operations at the APL Terminal are not expected to directly affect eelgrass beds because they are located in shallower areas north of the Berths 302-306 that cargo vessels would not be operating in. In addition, runoff from the newly paved areas under Alternative 5 would be routed southward, treated via BMP devices, and discharged to the Pier 300 Channel. The runoff is not expected to adversely affect eelgrass beds present in the Shallow Water Habitat or Seaplane Lagoon due to the large separation distance (over 2,900 ft).

### **CEQA Impact Determination**

Activity at the terminal under the Alternative 5 would be greater than the CEQA baseline; however, operational activities on land and in the water would not substantially reduce or alter EFH for the reasons described above, and no significant impacts to EFH would occur under CEQA. No SEAs, natural plant communities, mudflats, or wetlands are present. Potential impacts to eelgrass resulting from runoff are not expected under CEQA.

1                    *Mitigation Measures*

2                    No mitigation is required.

3                    *Residual Impacts*

4                    Impacts would be less than significant.

5                    **NEPA Impact Determination**

6                    Activity in the terminal under Alternative 5 would be greater than the NEPA baseline;  
7                    however, operational activities on land and in the water would not substantially reduce or  
8                    alter EFH for the reasons described above, and no significant impacts to EFH would  
9                    occur under NEPA. No SEAs, natural plant communities, mudflats, or wetlands are  
10                   present. Potential impacts to eelgrass resulting from runoff are not expected under  
11                   NEPA.

12                   *Mitigation Measures*

13                   No mitigation is required.

14                   *Residual Impacts*

15                   Impacts would be less than significant.

16                   **Impact BIO-3b: Operation of Alternative 5 would not interfere with**  
17                   **wildlife movement/migration corridors.**

18                   **CEQA Impact Determination**

19                   No barriers to wildlife passage would result from operation of Alternative 5. The type of  
20                   operational activity that would occur within the Harbor (vessel traffic) would gradually  
21                   increase to an additional 143 calls per year in 2027, and would have no effect on wildlife  
22                   movement or migration within the Harbor under CEQA.

23                   *Mitigation Measures*

24                   No mitigation is required.

25                   *Residual Impacts*

26                   There would be no impacts.

27                   **NEPA Impact Determination**

28                   Although Alternative 5 would include upland, over-water, and in-water development not  
29                   included in the NEPA baseline, no barriers to wildlife passage would result from  
30                   operation of Alternative 5. The type of operational activity that would occur within the  
31                   Harbor (vessel traffic) would slightly increase by up to 104 vessel calls per year, and  
32                   would have no effect on wildlife movement or migration within the Harbor under NEPA.

33                   *Mitigation Measures*

34                   No mitigation is required.

35                   *Residual Impacts*

36                   There would be no impacts.

1                   **Impact BIO-4b: Operation of Alternative 5 would not substantially**  
2                   **disrupt local biological communities.**

3                   **CEQA Impact Determination**

4                   Operational impacts potentially resulting from Alternative 5 include effects from: the  
5                   new wharf at Berth 306, runoff, noise/light from new terminal operations, and effects  
6                   from increased vessel traffic. A remote potential exists for an accidental vessel spill that  
7                   could harm biological resources in the Harbor or ocean to occur during Alternative 5  
8                   operation. Based on compliance with applicable regulations, and the nature and  
9                   frequency of past spill events (see Section 3.8, Hazards and Hazardous Materials),  
10                  impacts due to accidental spills are considered less than significant. Upland spills from  
11                  terminal operations are not expected to result in significant impacts for the reason  
12                  discussed under the proposed Project. Although terminal operations would extend over a  
13                  larger area and be more intensive than the CEQA baseline, terminal operations under  
14                  Alternative 5 would not substantially disrupt biological communities through runoff of  
15                  contaminants in the vicinity of the Project site. Existing runoff and storm drain discharge  
16                  controls, as well as conditions of all Alternative 5-specific permits, would be  
17                  implemented (see Section 3.14, Water Quality, Sediments, and Oceanography). New  
18                  lights added to the Project site would all be low-glare lights with reduced light emissions.  
19                  Most of the new lights would also be located away from the edge of the water,  
20                  minimizing potential impacts to marine resources. As described in detail for the  
21                  proposed Project, the presence of new wharf structures, increased vessel traffic, or new  
22                  lighting would not substantially disrupt biological communities in the Harbor under  
23                  CEQA.

24                                 *Mitigation Measures*

25                                 No mitigation is required.

26                                 *Residual Impacts*

27                                 Impacts would be less than significant.

28                   **NEPA Impact Determination**

29                   Operational impacts potentially resulting from Alternative 5 include effects from: the  
30                   new wharf at Berth 306, runoff, noise/light from new terminal operations, and effects  
31                   from increased vessel traffic. A remote potential exists for an accidental vessel spill that  
32                   could harm biological resources in the Harbor or ocean to occur during Alternative 5  
33                   operation. Based on compliance with applicable regulations, and the nature and  
34                   frequency of past spill events (see Section 3.8, Hazards and Hazardous Materials),  
35                   impacts due to accidental spills are considered less than significant. Upland spills from  
36                   terminal operations are not expected to result in significant impacts for the reason  
37                   discussed under the proposed Project. Although terminal operations would extend over a  
38                   larger area and be more intensive than the NEPA baseline, terminal operations under  
39                   Alternative 5 would not substantially disrupt biological communities through runoff of  
40                   contaminants in the vicinity of the Project site. Existing runoff and storm drain discharge  
41                   controls, as well as conditions of all Alternative 5-specific permits, would be  
42                   implemented (see Section 3.14, Water Quality, Sediments, and Oceanography). New  
43                   lights added to the Project site would all be low-glare lights with reduced light emissions.  
44                   Most of the new lights would also be located away from the edge of the water,  
45                   minimizing potential impacts to marine resources. As described in detail for the

1 proposed Project, the presence of new wharf structures, increased vessel traffic, or new  
2 lighting would not substantially disrupt biological communities in the Harbor under  
3 NEPA.

#### 4 *Mitigation Measures*

5 No mitigation is required.

#### 6 *Residual Impacts*

7 Impacts would be less than significant.

8 **Impact BIO-4c: Operation of the Alternative 5 could introduce non-**  
9 **native species into the Harbor that could substantially disrupt local**  
10 **biological communities.**

### 11 **CEQA Impact Determination**

12 Under Alternative 5, there would be an additional number of vessels operating at the APL  
13 Terminal; therefore, there would still be the potential for introduction of non-native  
14 species. As described under Impact BIO-4c for the proposed Project, the potential for  
15 introduction of additional exotic species via ballast water would be low from vessels  
16 entering from or going outside the EEZ due to current ballast water regulations, as well as  
17 practices and procedures of APL and seagoing vessel crews. The potential for  
18 introduction of exotic species via vessel hulls would be increased in proportion to the  
19 increase in number of vessels. However, vessel hulls are generally coated with  
20 antifouling paints and cleaned at intervals to reduce the frictional drag from growths of  
21 organisms on the hull (Global Security, 2007). This would reduce the potential for  
22 transport of exotic species. For these reasons, Alternative 5 has a low potential to  
23 increase the introduction of non-native species into the Harbor that could substantially  
24 disrupt local biological communities, but such effects could still occur and are considered  
25 significant under CEQA.

#### 26 *Mitigation Measures*

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

#### 32 *Residual Impacts*

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

### 35 **NEPA Impact Determination**

36 Under Alternative 5, there would be an additional number of vessels operating at the APL  
37 Terminal relative to the NEPA baseline; therefore, there would still be the potential for  
38 introduction of non-native species. As described under Impact BIO-4c for the proposed  
39 Project, the potential for introduction of additional exotic species via ballast water would  
40 be low from vessels entering from or going outside the EEZ due to current ballast water  
41 regulations, as well as practices and procedures of APL and seagoing vessel crews. The  
42 potential for introduction of exotic species via vessel hulls would be increased in

1 proportion to the increase in number of vessels. However, vessel hulls are generally  
2 coated with antifouling paints and cleaned at intervals to reduce the frictional drag from  
3 growths of organisms on the hull (Global Security, 2007). This would reduce the  
4 potential for transport of exotic species. For these reasons, Alternative 5 has a low  
5 potential to increase the introduction of non-native species into the Harbor that could  
6 substantially disrupt local biological communities, but such effects could still occur and  
7 are considered significant under NEPA.

#### 8 *Mitigation Measures*

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

#### 14 *Residual Impacts*

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

### 17 **3.3.4.3.2.6 Alternative 6 – Proposed Project with Expanded On-Dock Railyard**

18 Alternative 6 would be the same as the proposed Project; however, the existing on-dock  
19 railyard on the terminal would be redeveloped and expanded. Under this alternative,  
20 approximately 10 acres of backlands would be removed from container storage for the  
21 railyard expansion. Alternative 6 would improve the existing terminal, develop the  
22 existing 41-acre fill area as backlands, add 1,250 ft of new wharf creating Berth 306, and  
23 dredge the Pier 300 Channel along Berth 306. Under this alternative, 12 new cranes  
24 would be added to the wharves along Berths 302-306, for a total of 24 cranes. As with  
25 the proposed Project, the 41-acre backlands and Berth 306 under Alternative 6 could  
26 utilize traditional container operations, electric automated operations, or a combination of  
27 the two over time. Dredging of the Pier 300 Channel along Berth 306 would occur  
28 (removal of approximately 20,000 cy of material), with the dredged material beneficially  
29 reused and/or disposed of at an approved disposal site (such as the CDF at Berths 243-  
30 245 and/or Cabrillo shallow water habitat) or, if needed, disposed of at an ocean disposal  
31 site (i.e., LA-2). Total terminal acreage (347) would be the same as the proposed Project.

32 Based on the throughput projections, TEU throughput would be the same as the proposed  
33 Project, with an expected throughput of approximately 3.2 million TEUs by 2027. This  
34 would translate into 390 annual ship calls at Berths 302-306. In addition, Alternative 6  
35 would result in up to 10,830 peak daily truck trips (2,862,760 annual), and up to  
36 2,953 annual rail trip movements. Configuration of all other landside terminal  
37 components would be identical to the existing terminal.

#### 38 **Impact BIO-1a: Construction activities could cause a loss of** 39 **individuals or habitat of a state- or federally listed endangered,** 40 **threatened, rare, protected, or candidate species, or a Species of** 41 **Special Concern or the loss of federally listed critical habitat.**

42 Construction impacts for Alternative 6 would be the same as those described for the  
43 proposed Project and Alternative 5. The impacts due to dredging and associated



1 beneficial reuse and/or disposal of the material and piling installation would be the same  
2 as those for the proposed Project.

### 3 **CEQA Impact Determination**

4 Construction activities of Alternative 6 are not likely to result in the loss of individuals or  
5 the reduction of existing habitat, of a state- or federally listed endangered, threatened,  
6 rare, protected, candidate, or sensitive species or a species of special concern. In-water  
7 construction would cause localized activity, noise, and turbidity that could affect birds  
8 and marine mammals. However, these impacts would be temporary and limited to the  
9 waters in the vicinity of construction activities. Implementation of required water quality  
10 monitoring during dredging according to the requirements of the RWQCB, as well as  
11 implementation of standard dredging BMPs via adaptive management of the dredging  
12 would minimize potential impacts to sensitive species. Impacts related to dredging  
13 would be less than significant under CEQA.

14 Potential biological impacts from disposal of dredged sediments would depend on the  
15 disposal method. However, for all in-water disposal options (such as confined aquatic  
16 disposal or at the LA-2 ODMDS), potential impacts include: water quality impacts from  
17 turbidity or contaminants and smothering of resident fishes and invertebrates. Impacts  
18 from disposal at the LA-2 (as well as the LA-3) disposal site was evaluated during the  
19 site designation process (USEPA and USACE, 2005). Sediments were screened to  
20 determine acceptability of disposal at different locations. Sediments suitable for  
21 unconfined aquatic disposal would (1) be used as fill at the Cabrillo shallow water habitat,  
22 (2) potentially provide fill for the Berths 243-245 CDF, and (3) potentially be disposed of  
23 at the LA-2 ODMDS. Unsuitable sediments would be used for fill in the Berths 243-245  
24 CDF. Biological impacts due to construction and fill of the CDF, as well as expansion  
25 and fill of the Cabrillo shallow water habitat, were evaluated in the *Final Supplemental*  
26 *Environmental Impact Statement / Final Supplemental Environmental Impact Report*  
27 *(EIS/EIR) for the Port of Los Angeles Channel Deepening Project* (USACE and LAHD,  
28 2009). This evaluation included mitigation for habitat loss at the Berths 243-245 CDF.  
29 Any temporary water quality impacts would be minimized as discussed by pre-dredge  
30 screening, water quality monitoring, and adaptive management and use of BMPs.

31 Development of the area as backlands is scheduled to start in the first quarter 2013, which  
32 overlaps with the nesting season (February 15 – September 1) for elegant and Caspian  
33 tern. If the elegant and Caspian tern utilize the 41-acre are for nesting in 2013, site  
34 development could result in a significant impact on nesting. Implementation of  
35 mitigation measure **MM BIO-1** would avoid potentially significant impacts during the  
36 breeding period for terns. Concrete pile-driving is anticipated to result in disturbance  
37 (Level B harassment) to marine mammals (particularly harbor seals and sea lions, which  
38 would be the marine mammals most likely to occur in the vicinity of Pier 300) in the  
39 vicinity of pile-driving operations. Impacts would not be significant; however, impacts  
40 on marine mammals resulting from noise associated with pile-driving would be further  
41 reduced with implementation of standard condition of approval **SC BIO-1**. This would  
42 ensure that marine mammals would be readily able to avoid pile-driving areas, and no  
43 injury to marine mammals from pile-driving sounds would be expected under CEQA.

44

### *Mitigation Measures*

As described under the proposed Project, the potential for impacts could be minimized with implementation of mitigation measure **MM BIO-1** and standard condition of approval **SC BIO-1**.

### *Residual Impacts*

Impacts would be less than significant.

## **NEPA Impact Determination**

Alternative 6 would include upland, over-water, and in-water development not included in the NEPA baseline. Construction impacts for Alternative 6 would be the same as those described for the proposed Project and Alternative 5. The impacts due to dredging and associated beneficial reuse and/or disposal of the material, and piling installation would be the same as those for the proposed Project.

Potential biological impacts from disposal of dredged sediments would depend on the disposal method. However, for all in-water disposal options (such as confined aquatic disposal or at the LA-2 ODMDS), potential impacts include: water quality impacts from turbidity or contaminants and smothering of resident fishes and invertebrates. Impacts from disposal at the LA-2 (as well as the LA-3) disposal site was evaluated during the site designation process (USEPA and USACE, 2005). Sediments were screened to determine acceptability of disposal at different locations. Sediments suitable for unconfined aquatic disposal would (1) be used as fill at the Cabrillo shallow water habitat, (2) potentially provide fill for the Berths 243-245 CDF, and (3) potentially be disposed of at the LA-2 ODMDS. Unsuitable sediments would be used for fill in the Berths 243-245 CDF. Biological impacts due to construction and fill of the CDF, as well as expansion and fill of the Cabrillo shallow water habitat, were evaluated in the *Final Supplemental Environmental Impact Statement / Final Supplemental Environmental Impact Report (EIS/EIR) for the Port of Los Angeles Channel Deepening Project* (USACE and LAHD, 2009). This evaluation included mitigation for habitat loss at the Berths 243-245 CDF. Any temporary water quality impacts would be minimized as discussed by pre-dredge screening, water quality monitoring, and adaptive management and use of BMPs.

Development of the area as backlands is scheduled to start in the first quarter 2013, which overlaps with the nesting season (February 15 – September 1) of elegant and Caspian tern. If the elegant and Caspian tern utilize the 41-acre area for nesting in 2013, site development could result in a significant impact on nesting. Implementation of mitigation measure **MM BIO-1** would avoid potentially significant impacts during the breeding period for terns. Concrete pile-driving is anticipated to result in disturbance (Level B harassment) to marine mammals (particularly harbor seals and sea lions, which would be the marine mammals most likely to occur in the vicinity of Pier 300) in the vicinity of pile-driving operations. Impacts would not be significant; however, impacts on marine mammals resulting from noise associated with pile-driving would be further reduced with implementation of standard condition of approval **SC BIO-1**. This would ensure that marine mammals would be readily able to avoid pile-driving areas, and no injury to marine mammals from pile-driving sounds would be expected under NEPA.

### *Mitigation Measures*

As described under the proposed Project, the potential for impacts could be minimized with implementation of mitigation measure **MM BIO-1** and standard condition of approval **SC BIO-1**.

### *Residual Impacts*

Impacts would be less than significant.

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

Construction impacts for Alternative 6 would be the same as those described for the proposed Project and Alternative 5 (Impact BIO-2a).

### **CEQA Impact Determination**

There are no special aquatic habitats and sensitive natural communities identified in the area of the Project that would be affected by Alternative 6 construction. As with the proposed Project, effects from dredging /pile-driving on kelp/eelgrass are not expected. There is no eelgrass or giant kelp in the vicinity of the proposed Berth 306 wharf, so shading from the new wharf would not impact these resources. There are no mudflats or marshes near the Project site that would be affected by Alternative 6 construction under CEQA.

The addition of a negligible amount of sediment at the Cabrillo shallow water habitat would not affect existing eelgrass beds at Cabrillo Beach by removal or burial. Turbidity caused by fill, including deposition of suspended sediment on the plant surfaces, could affect eelgrass by reducing light penetration and photosynthesis by eelgrass. The extent and duration of such effects would depend on the amount of suspended sediment and water currents at the time of the work. However, because turbidity is not expected to extend beyond 300 feet (91 m) of the disposal location it would be unlikely to adversely affect productivity of the eelgrass. Deposition of sediment on the eelgrass would be low because much of the suspended sediment would settle out before reaching the eelgrass beds. These effects would occur only during construction with rapid recovery (a few months) of any plants damaged by the sediment.

Potential biological impacts from disposal of dredged sediments would depend on the disposal method. Impacts from disposal at the LA-2 (as well as the LA-3) disposal site was evaluated during the site designation process (USEPA and USACE, 2005). Any temporary water quality impacts would be minimized as discussed by pre-dredge screening, water quality monitoring, and adaptive management and use of BMPs.

Impacts to EFH during construction would be localized and temporary. The SWPPP implemented by the tenant currently at the APL Terminal has been successful in preventing water quality exceedances and maintaining water quality sufficient for growth of eelgrass (EMS, 2010). A similar program would be implemented as part of Alternative 6 to ensure continued protection of these resources during construction. This program would include standard BMPs, such as use of sediment barriers, to minimize

1 runoff, which could affect EFH and eelgrass. Impacts due to Alternative 6 construction  
2 would be less than significant under CEQA.

3 *Mitigation Measures*

4 No mitigation is required.

5 *Residual Impacts*

6 Impacts would be less than significant.

7 **NEPA Impact Determination**

8 Alternative 6 would include upland, over-water, and in-water development not included  
9 in the NEPA baseline. Construction impacts for Alternative 6 would be the same as those  
10 described for the proposed Project and Alternative 5 (Impact BIO-2a). There are no  
11 special aquatic habitats and sensitive natural communities identified in the area of the  
12 Project that would be affected by Alternative 6 construction. As with the proposed  
13 Project, effects from dredging /pile-driving on kelp/eelgrass are not expected. There is  
14 no eelgrass or giant kelp in the vicinity of the proposed Berth 306 wharf, so shading from  
15 the new wharf would not impact these resources. There are no mudflats or marshes near  
16 the Project site that would be affected by Alternative 6 construction under NEPA.

17 The addition of a negligible amount of sediment at the Cabrillo shallow water habitat  
18 would not affect existing eelgrass beds at Cabrillo Beach by removal or burial. Turbidity  
19 caused by fill, including deposition of suspended sediment on the plant surfaces, could  
20 affect eelgrass by reducing light penetration and photosynthesis by eelgrass. The extent  
21 and duration of such effects would depend on the amount of suspended sediment and  
22 water currents at the time of the work. However, because turbidity is not expected to  
23 extend beyond 300 feet (91 m) of the disposal location it would be unlikely to adversely  
24 affect productivity of the eelgrass. Deposition of sediment on the eelgrass would be low  
25 because much of the suspended sediment would settle out before reaching the eelgrass  
26 beds. These effects would occur only during construction with rapid recovery (a few  
27 months) of any plants damaged by the sediment.

28 Potential biological impacts from disposal of dredged sediments would depend on the  
29 disposal method. Impacts from disposal at the LA-2 (as well as the LA-3) disposal site  
30 was evaluated during the site designation process (USEPA and USACE, 2005). Any  
31 temporary water quality impacts would be minimized as discussed by pre-dredge  
32 screening, water quality monitoring, and adaptive management and use of BMPs.  
33 Impacts to EFH during construction would be localized and temporary. The SWPPP  
34 implemented by the tenant currently at the APL Terminal has been successful in  
35 preventing water quality exceedances and maintaining water quality sufficient for growth  
36 of eelgrass (EMS, 2010). A similar program would be implemented as part of  
37 Alternative 6 to ensure continued protection of these resources during construction. This  
38 program would include standard BMPs, such as use of sediment barriers, to minimize  
39 runoff, which could affect EFH and eelgrass. Impacts due to Alternative 6 construction  
40 would be less than significant under NEPA.

41

1                    *Mitigation Measures*

2                    No mitigation is required.

3                    *Residual Impacts*

4                    Impacts would be less than significant.

5                    **Impact BIO-3a: Construction activities would not interfere with**  
6                    **wildlife movement/migration corridors.**

7                    Construction impacts for Alternative 6 would be the same as those described for the  
8                    proposed Project.

9                    **CEQA Impact Determination**

10                  No known terrestrial wildlife migration corridors are present at the proposed Project site.  
11                  Construction activities within the proposed Project site would not block or interfere with  
12                  migration or movement of any bird species because the work would be in a small portion  
13                  of the Harbor area where the birds occur and the birds could easily fly around or over the  
14                  work.

15                  Fish species present in the Harbor would be subject to temporary acoustic and possibly  
16                  water quality impacts during dredging and wharf construction. Potential impacts from  
17                  dredging (turbidity and potential resuspension of contaminated sediments) under  
18                  Alternative 6 would be the same as for the proposed Project for dredging, and are  
19                  considered localized and temporary. The sound pressure waves from pile-driving could  
20                  cause mortality of a few fish in the Coastal Pelagics FMP, but these species are abundant  
21                  in the Harbor and loss of a few individuals would not cause a substantial reduction of  
22                  their populations. These impacts could result in temporary avoidance of the construction  
23                  areas. However, these effects would be temporary, lasting for a few days at a time.  
24                  There would be no physical barriers to movement, and the baseline condition for fish and  
25                  wildlife access would be essentially unchanged under CEQA.

26                  Potential biological impacts from disposal of dredged sediments would depend on the  
27                  disposal method. However, impacts from disposal at the LA-2 (as well as the LA-3)  
28                  disposal site was evaluated during the site designation process (USEPA and USACE,  
29                  2005). Biological impacts due to construction and fill of the CDF, as well as expansion  
30                  and fill of the Cabrillo shallow water habitat, were evaluated in the *Final Supplemental*  
31                  *Environmental Impact Statement / Final Supplemental Environmental Impact Report*  
32                  *(EIS/EIR) for the Port of Los Angeles Channel Deepening Project* (USACE and LAHD,  
33                  2009). No interference with wildlife movement/migration corridors would occur as part  
34                  of Alternative 6. Potential impacts from dredged material disposal on wildlife, fish, or  
35                  marine mammal migration would be evaluated and minimized/mitigated separately as  
36                  part of the fill project under CEQA.

37                  Overall, the Harbor and specifically the location of the Project is subject to a high degree  
38                  of ongoing commercial activity, including the movement of large vessels, and frequent  
39                  maintenance dredging. Alternative 6-related construction vessel traffic to and from the  
40                  Harbor (i.e., tugboats carrying dredged sediments) would not interfere with whale  
41                  migrations along the coast, because these vessels would represent a small proportion of  
42                  the total Port-related commercial traffic in the area, and each vessel would have a low  
43                  probability of encountering migrating whales during transit through coastal waters

1 because these animals are generally sparsely distributed offshore and rarely enter the Port  
2 Complex (LAHD and USACE, 2007).

### 3 *Mitigation Measures*

4 No mitigation is required. Implementation of standard condition of approval **SC**  
5 **BIO-1** would further reduce impacts.

### 6 *Residual Impacts*

7 Impacts would be less than significant.

## 8 **NEPA Impact Determination**

9 Alternative 6 would include upland, over-water, and in-water development not included  
10 in the NEPA baseline. Construction impacts for Alternative 6 would be the same as those  
11 described for the proposed Project. No known terrestrial wildlife migration corridors are  
12 present at the proposed Project site. Construction activities within the proposed Project  
13 site would not block or interfere with migration or movement of any bird species because  
14 the work would be in a small portion of the Harbor area where the birds occur and the  
15 birds could easily fly around or over the work.

16 Fish species present in the Harbor would be subject to temporary acoustic and possibly  
17 water quality impacts during dredging and wharf construction. Potential impacts from  
18 dredging (turbidity and potential resuspension of contaminated sediments) under  
19 Alternative 6 would be the same as for the proposed Project for dredging, and are  
20 considered localized and temporary. The sound pressure waves from pile-driving could  
21 cause mortality of a few fish in the Coastal Pelagics FMP, but these species are abundant  
22 in the Harbor and loss of a few individuals would not cause a substantial reduction of  
23 their populations. These impacts could result in temporary avoidance of the construction  
24 areas. However, these effects would be temporary, lasting for a few days at a time.  
25 There would be no physical barriers to movement, and the baseline condition for fish and  
26 wildlife access would be essentially unchanged under NEPA.

27 Potential biological impacts from disposal of dredged sediments would depend on the  
28 disposal method. However, impacts from disposal at the LA-2 (as well as the LA-3)  
29 disposal site was evaluated during the site designation process (USEPA and USACE,  
30 2005). Biological impacts due to construction and fill of the CDF, as well as expansion  
31 and fill of the Cabrillo shallow water habitat, were evaluated in the *Final Supplemental*  
32 *Environmental Impact Statement / Final Supplemental Environmental Impact Report*  
33 *(EIS/EIR) for the Port of Los Angeles Channel Deepening Project* (USACE and LAHD,  
34 2009). No interference with wildlife movement/migration corridors would occur as part  
35 of Alternative 6 under NEPA.

36 Overall, the Harbor and specifically the location of the Project is subject to a high degree  
37 of ongoing commercial activity, including the movement of large vessels, and frequent  
38 maintenance dredging. Alternative 6-related construction vessel traffic to and from the  
39 Harbor (i.e., tugboats carrying dredged sediments) would not interfere with whale  
40 migrations along the coast, because these vessels would represent a small proportion of  
41 the total Port-related commercial traffic in the area, and each vessel would have a low  
42 probability of encountering migrating whales during transit through coastal waters  
43 because these animals are generally sparsely distributed offshore and rarely enter the Port  
44 Complex (LAHD and USACE, 2007).

1                    *Mitigation Measures*

2                    No mitigation is required. Implementation of standard condition of approval **SC**  
3                    **BIO-1** would further reduce impacts.

4                    *Residual Impacts*

5                    Impacts would be less than significant.

6                    **Impact BIO-4a: Construction activities would not substantially**  
7                    **disrupt local biological communities.**

8                    **CEQA Impact Determination**

9                    Because the terrestrial portions of the proposed Project site are largely developed,  
10                    impacts on terrestrial biological communities resulting from Alternative 6 would be  
11                    limited. Plant communities on the backlands site are mostly introduced, weedy species,  
12                    with Russian thistle (tumbleweed) the most abundant species. In addition, noise from  
13                    night construction is not expected to result in significant impacts to biological resources  
14                    because few birds/wildlife are scarce in upland areas and upland construction would not  
15                    affect underwater noise levels. Construction impacts for Alternative 6 would be  
16                    essentially the same as those described for the proposed Project (Impact BIO-4a).  
17                    Construction activities at the proposed Project site, particularly pile-driving, could cause  
18                    short-term impacts on individuals (e.g. marine mammals and fishes, including those with  
19                    designated EFH) in the immediate vicinity of pile-driving. However, no substantial  
20                    disruption of biological communities would result from Alternative 6 construction, and  
21                    impacts are considered insignificant. In addition, with implementation of standard  
22                    condition of approval **SC BIO-1**, the pile-driving would initiate with a soft start, which  
23                    would minimize impacts to fish and marine mammals near construction activities, as they  
24                    would leave the area.

25                    Potential biological impacts from disposal of dredged sediments would depend on the  
26                    disposal method. However, for all in-water disposal options (such as confined aquatic  
27                    disposal or at the LA-2 ODMDS), potential impacts include: water quality impacts from  
28                    turbidity or contaminants and smothering of resident fishes and invertebrates. Impacts  
29                    from disposal at the LA-2 (as well as the LA-3) disposal site was evaluated during the  
30                    site designation process (USEPA and USACE, 2005). Biological impacts due to  
31                    construction and fill of the CDF, as well as expansion and fill of the Cabrillo shallow  
32                    water habitat, were evaluated in the *Final Supplemental Environmental Impact Statement /*  
33                    *Final Supplemental Environmental Impact Report (EIS/EIR) for the Port of Los Angeles*  
34                    *Channel Deepening Project* (USACE and LAHD, 2009). Any temporary water quality  
35                    impacts would be minimized as discussed by pre-dredge screening, water quality  
36                    monitoring, and adaptive management and use of BMPs.

37                    Construction activities that have the potential to introduce or redistribute invasive species  
38                    would be less than significant. All construction impacts that could substantially disrupt  
39                    local biological communities resulting from Alternative 6 would be less than significant  
40                    under CEQA.

41                    *Mitigation Measures*

42                    No mitigation is required. As described under the proposed Project, the potential for  
43                    impacts could be further reduced with implementation of mitigation measure  
44                    **MM BIO-1** and standard condition of approval **SC BIO-1**.

1 *Residual Impacts*

2 Impacts would be less than significant.

3 **NEPA Impact Determination**

4 Alternative 6 would include upland, overwater, and in-water development not included in  
5 the NEPA baseline. Construction impacts for Alternative 6 would be essentially the same  
6 as those described for the proposed Project (Impact BIO-4a). Because the terrestrial  
7 portions of the Project site are largely developed, impacts on terrestrial biological  
8 communities resulting from Alternative 6 would be limited. Plant communities on the  
9 backlands site are mostly introduced, weedy species, with Russian thistle (tumbleweed)  
10 the most abundant species. In addition, noise from night construction is not expected to  
11 result in significant impacts to biological resources because few birds/wildlife are scarce  
12 in upland areas and upland construction would not affect underwater noise levels.

13 Construction activities at the proposed Project site, particularly pile-driving, could cause  
14 short-term impacts on individuals (e.g. marine mammals and fishes, including those with  
15 designated EFH) in the immediate vicinity of pile-driving. However, no substantial  
16 disruption of biological communities would result from Alternative 6 construction, and  
17 impacts are considered insignificant. In addition, with implementation of standard  
18 condition of approval **SC BIO-1**, the pile-driving would initiate with a soft start, which  
19 would minimize impacts to fish and marine mammals near construction activities, as they  
20 would leave the area.

21 Potential biological impacts from disposal of dredged sediments would depend on the  
22 disposal method. However, for all in-water disposal options (such as confined aquatic  
23 disposal or at the LA-2 ODMDS), potential impacts include: water quality impacts from  
24 turbidity or contaminants and smothering of resident fishes and invertebrates. Impacts  
25 from disposal at the LA-2 (as well as the LA-3) disposal site was evaluated during the  
26 site designation process (USEPA and USACE, 2005). Biological impacts due to  
27 construction and fill of the CDF, as well as expansion and fill of the Cabrillo shallow  
28 water habitat, were evaluated in the *Final Supplemental Environmental Impact Statement /*  
29 *Final Supplemental Environmental Impact Report (EIS/EIR) for the Port of Los Angeles*  
30 *Channel Deepening Project* (USACE and LAHD, 2009). Construction activities that  
31 have the potential to introduce or redistribute invasive species would be less than  
32 significant. All construction impacts that could substantially disrupt local biological  
33 communities resulting from Alternative 6 would be less than significant under NEPA.

34 *Mitigation Measures*

35 No mitigation is required. However, as with the proposed Project, the potential for  
36 impacts under Alternative 6 could be further reduced with implementation of  
37 mitigation measure **MM BIO-1** and standard condition of approval **SC BIO-1**.

38 *Residual Impacts*

39 Impacts would be less than significant.



1                   **Impact BIO-5: Construction activities would not result in a**  
2                   **permanent loss of marine habitat.**

3                   **CEQA Impact Determination**

4                   No impacts would occur because no marine habitat would be lost. Although new piles  
5                   would be added to the water column, piles provide hard substrate usable as habitat by  
6                   marine organisms under CEQA.

7                   *Mitigation Measures*

8                   No mitigation is required.

9                   *Residual Impacts*

10                  There would be no impacts.

11                  **NEPA Impact Determination**

12                  Alternative 6 would include upland, over-water, and in-water development not included  
13                  in the NEPA baseline. No impacts would occur because no habitat would be lost.  
14                  Although new piles would be added to the water column, piles provide hard substrate  
15                  usable as habitat by marine organisms under NEPA.

16                  *Mitigation Measures*

17                  No mitigation is required.

18                  *Residual Impacts*

19                  There would be no impacts.

20                  **Impact BIO-1b: Operations would not cause a loss of individuals or**  
21                  **habitat for a state- or federally listed endangered, threatened, rare,**  
22                  **protected, or candidate species, or a Species of Special Concern or**  
23                  **the loss of federally listed critical habitat.**

24                  Operation of new and upgraded terminal facilities at the Project site under Alternative 6  
25                  would not adversely affect any of the state or federally listed, or special concern bird  
26                  species listed in Tables 3.3-3 and 3.3-4. Operation of the backland facilities (e.g., cranes,  
27                  railyard, and container transfers) would not measurably change the numbers or species of  
28                  common birds in that area and, thus, would not affect foraging. The increase in vessel  
29                  traffic of up to approximately one ship call every 2 to 3 days at the APL Terminal would  
30                  cause a short interval of disturbance throughout the route from Angel's Gate to Berths  
31                  302-306 but would not result in a loss of habitat or individuals for sensitive birds that use  
32                  the water surface for resting or foraging.

33                  An estimated 143 additional vessel calls per year above the CEQA baseline ship calls of  
34                  247 to the Port and 104 vessels over the NEPA baseline of 286 vessels annually would  
35                  result from Alternative 6 by the year 2027. This increase would occur gradually over  
36                  time. Acoustic impacts from the increased vessel activity would be the same as those  
37                  identified for the proposed Project. Potential impacts due to vessel strikes resulting from  
38                  the increased shipping traffic under Alternative 6 would also be the same as those  
39                  identified for the proposed Project and are considered insignificant.

## CEQA Impact Determination

Terminal activity under Alternative 6 would be greater than the CEQA baseline; however, operational activities would result in no loss of habitat for rare, threatened, endangered, protected, or candidate species, or Species of Special Concern. No impacts to critical habitat would occur because no critical habitat is present. However, increased ship calls may affect some species. Underwater sound from Alternative 6-related vessels would affect few, if any, marine mammals; impacts, therefore, would be less than significant under CEQA. Impacts of Alternative 6-related vessel traffic on marine mammals would be considered less than significant because of the low probability of vessel strikes and Alternative 6 vessel strikes would not be expected to occur. Although the likelihood of such a collision is low, such collisions occur and may cause an impact to species listed on the ESA, especially blue whales. Therefore, although considered less than significant because of the low probability of vessel strikes, any increase in vessel traffic caused by Alternative 6 may incrementally increase the potential for whale strikes under CEQA.

### *Mitigation Measures*

No mitigation is required. However, as described under the proposed Project, the potential for impacts under Alternative 6 would be further reduced with implementation of mitigation measure **MM AQ-10**.

### *Residual Impacts*

Impacts would be less than significant.

## NEPA Impact Determination

Alternative 6 would include upland, over-water, and in-water development not included in the NEPA baseline. Operation of new and upgraded terminal facilities at the APL Terminal would not adversely affect any of the state- or federally listed, or special concern bird species listed in Tables 3.3-3 and 3.3-4. Operation of the backland facilities (e.g., cranes, railyard, and container transfers) would not measurably change the numbers or species of common birds in that area and, thus, would not affect foraging. The increase in vessel traffic of up to one ship call every 2 to 3 days would cause a short interval of disturbance throughout the route from Angels Gate to Berths 302-306 but would not result in a loss of habitat or individuals for sensitive birds that use the water surface for resting or foraging.

An estimated 104 additional vessel calls per year above the NEPA baseline ship calls of 286 vessel calls annually to the Port would result from Alternative 6 by the year 2027. This increase would occur gradually over time. Acoustic impacts from the increased vessel activity would be the same as those identified for the proposed Project. Potential impacts due to vessel strikes resulting from the increased shipping traffic under Alternative 6 would also be the same as those identified for the proposed Project and are considered insignificant under NEPA.

Terminal activity under Alternative 6 would be greater than the NEPA baseline; however, operational activities would result in no loss of habitat for rare, threatened, endangered, protected, or candidate species, or Species of Special Concern. No impacts to critical habitat would occur because no critical habitat is present. However, increased ship calls may affect some species. Underwater sound from Alternative 6-related vessels would

1 affect few, if any, marine mammals; impacts, therefore, would be less than significant  
2 under NEPA. Impacts of Alternative 6-related vessel traffic on marine mammals would  
3 be considered less than significant because of the low probability of vessel strikes and  
4 Alternative 6 vessel strikes would not be expected to occur. Although the likelihood of  
5 such a collision is low, such collisions occur and may cause an impact to species listed on  
6 the ESA, especially blue whales. Therefore, although considered less than significant  
7 because of the low probability of vessel strikes, any increase in vessel traffic caused by  
8 Alternative 6 may incrementally increase the potential for whale strikes under NEPA.

#### 9 *Mitigation Measures*

10 No mitigation is required. However, as described under the proposed Project, the  
11 potential for impacts under Alternative 6 would be further reduced with  
12 implementation of mitigation measure **MM AQ-10**.

#### 13 *Residual Impacts*

14 Impacts would be less than significant.

### 15 **Impact BIO-2b: Operations would not result in a substantial** 16 **reduction or alteration of a state, federally, or locally designated** 17 **natural habitat, special aquatic site, or plant community, including** 18 **wetlands.**

19 Operation of terminal facilities under Alternative 6 would have minimal effects on EFH.  
20 Although, the estimated number of vessels would add to the number of noise events, they  
21 would not substantially add to the overall underwater noise level. The addition of up to  
22 one ship call every 2 to 3 days would not adversely affect FMP species present in the  
23 Outer Harbor or in the vicinity of Pier 300 because the additional trips proposed for  
24 Alternative 6 are infrequent. Schooling fish, such as sardines and anchovy, likely would  
25 ignore the ship movements and sound, or temporarily move out of the way. Runoff from  
26 the new facilities would not substantially reduce or alter EFH in Harbor waters, because  
27 water quality standards for protection of marine life would not be exceeded (see Section  
28 3.14, Water Quality, Sediments, and Oceanography).

29 As described in Impact BIO-2a, no SEAs or natural plant communities are present that  
30 could be affected by operation of terminal facilities under Alternative 6. No wetlands or  
31 mudflats are present at the proposed Project site, and those in other areas of the Harbor  
32 are not located in or near (more than 1 mile away) the channels that would be by vessels  
33 transiting to or from the APL Terminal.

34 Eelgrass beds are located in the Shallow Water Habitat and Seaplane Lagoon adjacent to  
35 the Project site. Vessel operations at the APL Terminal under Alternative 6 are not  
36 expected to directly affect eelgrass beds because they are located in shallower areas north  
37 of the Berths 302-306 that cargo vessels would not be operating in. Runoff from the  
38 newly paved areas under Alternative 6 would be routed southward, treated via BMP  
39 devices, and discharged to the Pier 300 Channel. The runoff is not expected to adversely  
40 affect eelgrass beds present in the Shallow Water Habitat or Seaplane Lagoon due to the  
41 large separation distance (over 2,900 ft).

## CEQA Impact Determination

Activity at the terminal under the Alternative 6 would be greater than the CEQA baseline; however, operational activities on land and in the water would not substantially reduce or alter EFH for the reasons described above, and no significant impacts to EFH would occur under CEQA. No SEAs, natural plant communities, mudflats, or wetlands are present. Potential impacts to eelgrass resulting from runoff are not expected under CEQA.

### *Mitigation Measures*

No mitigation is required.

### *Residual Impacts*

Impacts would be less than significant.

## NEPA Impact Determination

Alternative 6 would include greater operational throughput than the NEPA baseline; however, operational activities on land and in the water would not substantially reduce or alter EFH for the reasons described above, and no significant impacts to EFH would occur under CEQA. No SEAs, natural plant communities, mudflats, or wetlands are present. Potential impacts to eelgrass resulting from runoff are not expected under NEPA.

### *Mitigation Measures*

No mitigation is required.

### *Residual Impacts*

Impacts would be less than significant.

## **Impact BIO-3b: Operation of Alternative 6 would not interfere with wildlife movement/migration corridors.**

### **CEQA Impact Determination**

No barriers to wildlife passage would result from operation of Alternative 6. The type of operational activity that would occur within the Harbor (vessel traffic) would gradually increase to an additional 143 calls per year in 2027, and would have no effect on wildlife movement or migration within the Harbor under CEQA.

### *Mitigation Measures*

No mitigation is required.

### *Residual Impacts*

There would be no impacts.

## **NEPA Impact Determination**

Alternative 6 would include upland, over-water, and in-water development not included in the NEPA baseline. No barriers to wildlife passage would result from operation of Alternative 6. The type of operational activity that would occur within the Harbor (vessel

1 traffic) would slightly increase by 52 to 104 vessel calls per year, and would have no  
2 effect on wildlife movement or migration within the Harbor under NEPA.

### 3 *Mitigation Measures*

4 No mitigation is required.

### 5 *Residual Impacts*

6 There would be no impacts.

## 7 **Impact BIO-4b: Operation of Alternative 6 would not substantially** 8 **disrupt local biological communities.**

### 9 **CEQA Impact Determination**

10 Operational impacts potentially resulting from Alternative 6 include effects from: the  
11 new wharf at Berth 306, runoff, noise and light from new terminal operations, and effects  
12 from increased vessel traffic. A remote potential exists for an accidental vessel spill that  
13 could harm biological resources in the Harbor or ocean to occur during Alternative 6  
14 operation. Based on compliance with applicable regulations, and the nature and  
15 frequency of past spill events (see Section 3.8, Hazards and Hazardous Materials),  
16 impacts due to accidental spills are considered less than significant. Upland spills from  
17 terminal operations under Alternative 6 are not expected to result in significant impacts  
18 for the reason discussed under the proposed Project. Although terminal operations would  
19 extend over a larger area and be more intensive than the CEQA baseline, terminal  
20 operations under Alternative 6 would not substantially disrupt biological communities  
21 through runoff of contaminants in the vicinity of the Project site. Existing runoff and  
22 storm drain discharge controls, as well as conditions of all Alternative 6-specific permits,  
23 would be implemented (see Section 3.14, Water Quality, Sediments, and Oceanography).  
24 New lights added to the Project site would all be low-glare lights with reduced light  
25 emissions. Most of the new lights would also be located away from the edge of the  
26 water, minimizing potential impacts to marine resources. For the reasons described for  
27 the proposed Project, the presence of new wharf structures, increased vessel traffic, or  
28 new lighting under Alternative 6 would not substantially disrupt biological communities  
29 in the Harbor under CEQA.

### 30 *Mitigation Measures*

31 No mitigation is required.

### 32 *Residual Impacts*

33 Impacts would be less than significant.

### 34 **NEPA Impact Determination**

35 Operational impacts potentially resulting from Alternative 6 include effects from: the  
36 new wharf at Berth 306, runoff, noise and light from new terminal operations, and effects  
37 from increased vessel traffic that are not included in the NEPA baseline. A remote  
38 potential exists for an accidental vessel spill that could harm biological resources in the  
39 Harbor or ocean to occur during Alternative 6 operation. Based on compliance with  
40 applicable regulations, and the nature and frequency of past spill events (see Section 3.8,  
41 Hazards and Hazardous Materials), impacts due to accidental spills are considered less  
42 than significant. Upland spills from terminal operations under Alternative 6 are not

1 expected to result in significant impacts for the reason discussed under the proposed  
2 Project. Although terminal operations would extend over a larger area and be more  
3 intensive than the NEPA baseline, terminal operations under Alternative 6 would not  
4 substantially disrupt biological communities through runoff of contaminants in the  
5 vicinity of the Project site. Existing runoff and storm drain discharge controls, as well as  
6 conditions of all Alternative 6-specific permits, would be implemented (see Section 3.14,  
7 Water Quality, Sediments, and Oceanography). New lights added to the Project site  
8 would all be low-glare lights with reduced light emissions. Most of the new lights would  
9 also be located away from the edge of the water, minimizing potential impacts to marine  
10 resources. For the reasons described for the proposed Project, the presence of new wharf  
11 structures, increased vessel traffic, or new lighting under Alternative 6 would not  
12 substantially disrupt biological communities in the Harbor under NEPA.

#### 13 *Mitigation Measures*

14 No mitigation is required.

#### 15 *Residual Impacts*

16 Impacts would be less than significant.

### 17 **Impact BIO-4c: Operation of the Project could introduce non-native** 18 **species into the Harbor that could substantially disrupt local** 19 **biological communities.**

#### 20 **CEQA Impact Determination**

21 Under Alternative 6, there would be an additional number of vessels operating at the APL  
22 Terminal; therefore, there would still be the potential for introduction of non-native  
23 species. As described under Impact BIO-4c for the proposed Project, the potential for  
24 introduction of additional exotic species via ballast water would be low from vessels  
25 entering from or going outside the EEZ due to current ballast water regulations, as well as  
26 practices and procedures of APL and seagoing vessel crews. The potential for  
27 introduction of exotic species via vessel hulls under Alternative 6 would be increased in  
28 proportion to the increase in number of vessels. However, vessel hulls are generally  
29 coated with antifouling paints and cleaned at intervals to reduce the frictional drag from  
30 growths of organisms on the hull (Global Security, 2007). This would reduce the  
31 potential for transport of exotic species. For these reasons, Alternative 6 has a low  
32 potential to increase the introduction of non-native species into the Harbor that could  
33 substantially disrupt local biological communities, but such effects could still occur and  
34 are considered significant under CEQA.

#### 35 *Mitigation Measures*

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

#### 41 *Residual Impacts*

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

## NEPA Impact Determination

Under Alternative 6, there would be an additional number of vessels operating at the APL Terminal relative to the NEPA baseline; therefore, there would still be the potential for introduction of non-native species. As described under Impact BIO-4c for the proposed Project, the potential for introduction of additional exotic species via ballast water would be low from vessels entering from or going outside the EEZ due to current ballast water regulations, as well as practices and procedures of APL and seagoing vessel crews. The potential for introduction of exotic species via vessel hulls under Alternative 6 would be increased in proportion to the increase in number of vessels. However, vessel hulls are generally coated with antifouling paints and cleaned at intervals to reduce the frictional drag from growths of organisms on the hull (Global Security, 2007). This would reduce the potential for transport of exotic species. For these reasons, Alternative 6 has a low potential to increase the introduction of non-native species into the Harbor that could substantially disrupt local biological communities, but such effects could still occur and are considered significant under NEPA.

### *Mitigation Measures*

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

### *Residual Impacts*

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

## 3.3.4.4 Summary of Impact Determinations

Table 3.3-6 summarizes the CEQA and NEPA impact determinations of the proposed Project and its alternatives related to Biological Resources, as described in the detailed discussions above. This table is meant to allow easy comparison among the potential impacts of the proposed Project and its alternatives with respect to this resource. Identified potential impacts may be based on federal, state, and City of Los Angeles significance criteria, Port criteria, and the scientific judgment of the report preparers.

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

**Table 3.3-6: Summary Matrix of Potential Impacts and Mitigation Measures for Biological Resources Associated with the Proposed Project and Alternatives**

| Alternative      | Environmental Impacts  | Impact Determination   | Mitigation Measures   | Impacts after Mitigation    |
|------------------|--|--|---|-----------------------------|
| Proposed Project | <b>BIO-1a:</b> Construction activities could cause a loss of individuals or habitat of a state- or federally listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or the loss of federally listed critical habitat. | CEQA: Potentially significant impact (if elegant or Caspian terns use the 41-acre area for nesting); impacts to other sensitive species or habitat would be less than significant. | <b>MM BIO-1: Conduct nesting bird surveys and avoid impacts to nesting birds at the Project site.</b>         | CEQA: Less than significant |
|                  |  | NEPA: Potentially significant impact (if elegant or Caspian terns use the 41-acre area for nesting); impacts to other sensitive species or habitat would be less than significant. | <b>SC BIO-1: Avoid marine mammals.</b>  | NEPA: Less than significant |
|                  | <b>BIO-2a:</b> Construction activities would not result in a substantial reduction or alteration of a state, federally, or locally designated natural habitat, special aquatic site, or plant community, including wetlands.   | CEQA: Less than significant  | Mitigation not required   | CEQA: Less than significant |
|                  |  | NEPA: Less than significant  |   | NEPA: Less than significant |
|                  | <b>BIO-3a:</b> Construction activities would not interfere with wildlife movement/migration corridors.   | CEQA: Less than significant  | Mitigation not required; however, <b>SC BIO-1</b> would further reduce any potential impact.                  | CEQA: Less than significant |
|                  |  | NEPA: Less than significant  |   | NEPA: Less than significant |
|                  | <b>BIO-4a:</b> Construction activities would not substantially disrupt local biological communities.   | CEQA: Less than significant  | Mitigation not required; however, <b>MM BIO-1 and SC BIO-1</b> would further reduce any potential for impact. | CEQA: Less than significant |
|                  |  | NEPA: Less than significant  |   | NEPA: Less than significant |
|                  | <b>BIO-5:</b> Construction activities would not result in a permanent loss of marine habitat.  | CEQA: No impact  | Mitigation not required   | CEQA: No impact             |
|                  |  | NEPA: No impact  |   | NEPA: No impact             |
|                  | <b>BIO-1b:</b> Operations would not cause a loss of individuals or habitat for a state- or federally listed  | CEQA: Less than significant  | Mitigation not required; however, mitigation  | CEQA: Less than significant |



**Table 3.3-6: Summary Matrix of Potential Impacts and Mitigation Measures for Biological Resources Associated with the Proposed Project and Alternatives**

| Alternative  | Environmental Impacts   | Impact Determination   | Mitigation Measures  | Impacts after Mitigation   |
|--|---|--|--|--|
|  | endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or the loss of federally listed critical habitat.  | NEPA: Less than significant  | measure <b>MM AQ-10</b> would further reduce any potential for impact. | NEPA: Less than significant  |
|  | <b>BIO-2b:</b> Operations would not result in a substantial reduction or alteration of a state, federally, or locally designated natural habitat, special aquatic site, or plant community, including wetlands. | CEQA: Less than significant for EFH and eelgrass beds; no impact to other natural habitats, special aquatic sites, or plant communities  | Mitigation not required  | CEQA: Less than significant for EFH and eelgrass beds; no impact for other natural habitats, special aquatic sites, or plant communities |
|  |   | NEPA: Less than significant for EFH and eelgrass; no impacts to other natural habitats, special aquatic sites, or plant communities  |  | NEPA: Less than significant for EFH and eelgrass; no impact for other natural habitats, special aquatic sites, or plant communities      |
|  | <b>BIO-3b:</b> Operation of the proposed Project would not interfere with wildlife movement/migration corridors.  | CEQA: No impact  | Mitigation not required  | CEQA: No impact  |
|  |   | NEPA: No impact  |  | NEPA: No impact  |
|  | <b>BIO-4b:</b> Operation of the proposed Project would not substantially disrupt local biological communities.  | CEQA: Less than significant  | Mitigation not required  | CEQA: Less than significant  |
|  |   | NEPA: Less than significant  |  | NEPA: Less than significant  |
|  | <b>BIO-4c:</b> Operation of the proposed Project could introduce non-native species into the Harbor that could substantially disrupt local biological communities.  | CEQA: Significant  | No feasible mitigation is currently available                          | CEQA: Significant and unavoidable  |
|  |   | NEPA: Significant  |  | NEPA: Significant and unavoidable  |
|  | Alternative 1 – No Project  | <b>BIO-1a:</b> Construction activities would not cause a loss of individuals or habitat of a state- or federally listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or the loss of federally listed critical habitat. | CEQA: No impact  | Mitigation not required  |
| NEPA: Not applicable   |   |  | Mitigation not applicable  | NEPA: Not applicable   |
| <b>BIO-2a:</b> Construction activities would not result in a substantial reduction or alteration of a state, federally, or locally designated natural habitat, special aquatic site, or plant community, including wetlands. |   | CEQA: No impact  | Mitigation not required  | CEQA: No impact  |
|  |   | NEPA: Not applicable   | Mitigation not applicable  | NEPA: Not applicable   |
| <b>BIO-3a:</b> Construction activities would not interfere with wildlife movement/migration corridors.   |   | CEQA: No impact  | Mitigation not required  | CEQA: No impact  |
|  |   | NEPA: Not applicable   | Mitigation not applicable  | NEPA: Not applicable   |

**Table 3.3-6: Summary Matrix of Potential Impacts and Mitigation Measures for Biological Resources Associated with the Proposed Project and Alternatives**

| Alternative                          | Environmental Impacts  | Impact Determination  | Mitigation Measures                           | Impacts after Mitigation  |
|--------------------------------------|--|---|---|---|
|                                      | <b>BIO-4a:</b> Construction activities would not substantially disrupt local biological communities.   | CEQA: No impact   | Mitigation not required                       | CEQA: No impact   |
|                                      |  | NEPA: Not applicable  | Mitigation not applicable                     | NEPA: Not applicable  |
|                                      | <b>BIO-5:</b> Construction activities would not result in a permanent loss of marine habitat.  | CEQA: No impact   | Mitigation not required                       | CEQA: No impact   |
|                                      |  | NEPA: Not applicable  | Mitigation not applicable                     | NEPA: Not applicable  |
|                                      | <b>BIO-1b:</b> Operations would not cause a loss of individuals or habitat for a state- or federally listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or the loss of federally listed critical habitat.             | CEQA: Less than significant   | Mitigation not required                       | CEQA: Less than significant   |
|                                      |  | NEPA: Not applicable  | Mitigation not applicable                     | NEPA: Not applicable  |
|                                      | <b>BIO-2b:</b> Operations would not result in a substantial reduction or alteration of a state, federally, or locally designated natural habitat, special aquatic site, or plant community, including wetlands.  | CEQA: Less than significant to EFH and eelgrass; no impact to other natural habitats or plant communities | Mitigation not required                       | CEQA: Less than significant to EFH and eelgrass; no impact to natural habitats or plant communities |
|                                      |  | NEPA: Not applicable  | Mitigation not applicable                     | NEPA: Not applicable  |
|                                      | <b>BIO-3b:</b> Operation of Alternative 1 would not interfere with wildlife movement/migration corridors.  | CEQA: No impact   | Mitigation not required                       | CEQA: No impact   |
|                                      |  | NEPA: Not applicable  | Mitigation not applicable                     | NEPA: Not applicable  |
|                                      | <b>BIO-4b:</b> Operation of Alternative 1 would not substantially disrupt local biological communities.  | CEQA: Less than significant   | Mitigation not required                       | CEQA: Less than significant   |
|                                      |  | NEPA: Not applicable  | Mitigation not applicable                     | NEPA: Not applicable  |
|                                      | <b>BIO-4c:</b> Operation of Alternative 1 could introduce non-native species into the Harbor that could substantially disrupt local biological communities.  | CEQA: Significant   | No feasible mitigation is currently available | CEQA: Significant and unavoidable   |
|                                      |  | NEPA: Not applicable  | Mitigation not applicable                     | NEPA: Not applicable  |
| Alternative 2 –<br>No Federal Action | <b>BIO-1a:</b> Construction activities would not cause a loss of individuals or habitat of a state- or federally listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or the loss of federally listed critical habitat. | CEQA: No impact   | Mitigation not required                       | CEQA: No impact   |
|                                      |  | NEPA: No impact   |   | NEPA: No impact   |
|                                      | <b>BIO-2a:</b> Construction activities would not result in a substantial reduction or alteration of a state,   | CEQA: No impact   | Mitigation not required                       | CEQA: No impact   |

**Table 3.3-6: Summary Matrix of Potential Impacts and Mitigation Measures for Biological Resources Associated with the Proposed Project and Alternatives**

| Alternative | Environmental Impacts  | Impact Determination  | Mitigation Measures  | Impacts after Mitigation  |
|-------------|--|---|--|---|
|             | federally, or locally designated natural habitat, special aquatic site, or plant community, including wetlands.  | NEPA: No impact   |  | NEPA: No impact   |
|             | <b>BIO-3a:</b> Construction activities would not interfere with wildlife movement/migration corridors.   | CEQA: No impact<br>NEPA: No impact  | Mitigation not required  | CEQA: No impact<br>NEPA: No impact  |
|             | <b>BIO-4a:</b> Construction activities would not substantially disrupt local biological communities.   | CEQA: No impact<br>NEPA: No impact  | Mitigation not required  | CEQA: No impact<br>NEPA: No impact.   |
|             | <b>BIO-5:</b> Construction activities would not result in a permanent loss of marine habitat.  | CEQA: No impact<br>NEPA: No impact  | Mitigation not required  | CEQA: No impact<br>NEPA: No impact  |
|             | <b>BIO-1b:</b> Operations would not cause a loss of individuals or habitat for a state- or federally listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or the loss of federally listed critical habitat. | CEQA: Less than significant<br>NEPA: No impact  | Mitigation not required; however, mitigation measure <b>MM AQ-10</b> would further reduce any potential for impact.<br>Mitigation not required | CEQA: Less than significant<br>NEPA: No impact  |
|             | <b>BIO-2b:</b> Operations would not result in a substantial reduction or alteration of a state, federally, or locally designated natural habitat, special aquatic site, or plant community, including wetlands.  | CEQA: Less than significant to EFH and eelgrass; no impacts to other natural habitats, special aquatic sites, or plant communities<br>NEPA: No impact | Mitigation not required  | CEQA: Less than significant to EFH and eelgrass; no impacts to other natural habitats, special aquatic sites, or plant communities<br>NEPA: No impact |
|             | <b>BIO-3b:</b> Operation of Alternative 2 would not interfere with wildlife movement/migration corridors.  | CEQA: No impact<br>NEPA: No impact  | Mitigation not required  | CEQA: No impact<br>NEPA: No impact  |
|             | <b>BIO-4b:</b> Operation of Alternative 2 would not substantially disrupt local biological communities.  | CEQA: Less than significant<br>NEPA: No impact  | Mitigation not required  | CEQA: Less than significant<br>NEPA: No impact  |
|             | <b>BIO-4c:</b> Operation of Alternative 2 could introduce non-native species into the Harbor that could substantially disrupt local biological communities.  | CEQA: Significant<br>NEPA: No impact  | No feasible mitigation is currently available<br>Mitigation not required   | CEQA: Significant and unavoidable<br>NEPA: No impact  |

**Table 3.3-6: Summary Matrix of Potential Impacts and Mitigation Measures for Biological Resources Associated with the Proposed Project and Alternatives**

| Alternative   | Environmental Impacts  | Impact Determination   | Mitigation Measures   | Impacts after Mitigation   |
|---|--|--|---|--|
| Alternative 3 –<br>Reduced Project: Four New Cranes | <b>BIO-1a:</b> Construction activities would not cause a loss of individuals or habitat of a state- or federally listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or the loss of federally listed critical habitat. | CEQA: No impact  | Mitigation not required   | CEQA: No impact  |
|   |  | NEPA: No Impact  |   | NEPA: No impact  |
|   | <b>BIO-2a:</b> Construction activities would not result in a substantial reduction or alteration of a state, federally, or locally designated natural habitat, special aquatic site, or plant community, including wetlands.   | CEQA: No impact  | Mitigation not required   | CEQA: No impact  |
|   |  | NEPA: No impact  |   | NEPA: No impact  |
|   | <b>BIO-3a:</b> Construction activities would not interfere with wildlife movement/migration corridors.   | CEQA: No impact  | Mitigation not required   | CEQA: No impact  |
|   |  | NEPA: No impact  |   | NEPA: No impact  |
|   | <b>BIO-4a:</b> Construction activities would not substantially disrupt local biological communities.   | CEQA: No impact  | Mitigation not required   | CEQA: No impact  |
|   |  | NEPA: No impact  |   | NEPA: No impact  |
|   | <b>BIO-5:</b> Construction activities would not result in a permanent loss of marine habitat.  | CEQA: No impact  | Mitigation not required   | CEQA: No impact  |
|   |  | NEPA: No impact  |   | NEPA: No impact  |
|   | <b>BIO-1b:</b> Operations would not cause a loss of individuals or habitat for a state- or federally listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or the loss of federally listed critical habitat.             | CEQA: Less than significant  | Mitigation not required; however, mitigation measure <b>MM AQ-10</b> would further reduce any potential for impact. | CEQA: Less than significant  |
|   |  | NEPA: Less than significant  |   | NEPA: Less than significant  |
|   | <b>BIO-2b:</b> Operations would not result in a substantial reduction or alteration of a state, federally, or locally designated natural habitat, special aquatic site, or plant community, including wetlands.  | CEQA: Less than significant to EFH and eelgrass; no impacts to other natural habitats, special aquatic sites, or plant communities | Mitigation not required   | CEQA: Less than significant to EFH and eelgrass; no impacts to other natural habitats, special aquatic sites, or plant communities |
|   |  | NEPA: Less than significant to EFH and eelgrass; no impacts to other natural habitats, special aquatic sites, or plant communities |   | NEPA: Less than significant to EFH and eelgrass; no impacts to other natural habitats, special aquatic sites, or plant communities |
| <b>BIO-3b:</b> Operation of Alternative 3 would not | CEQA: No impact  | Mitigation not required  | CEQA: No impact   |  |

**Table 3.3-6: Summary Matrix of Potential Impacts and Mitigation Measures for Biological Resources Associated with the Proposed Project and Alternatives**

| Alternative  | Environmental Impacts   | Impact Determination   | Mitigation Measures   | Impacts after Mitigation          |
|--|---|--|---|-----------------------------------|
|  | interfere with wildlife movement/migration corridors.   | NEPA: No impact  |   | NEPA: No impact                   |
|  | <b>BIO-4b:</b> Operation of Alternative 3 would not substantially disrupt local biological communities.   | CEQA: Less than significant  | Mitigation not required   | CEQA: Less than significant       |
|  |   | NEPA: Less than significant  |   | NEPA: Less than significant       |
|  | <b>BIO-4c:</b> Operation of Alternative 3 could introduce non-native species into the Harbor that could substantially disrupt local biological communities. | CEQA: Significant  | No feasible mitigation is currently available   | CEQA: Significant and unavoidable |
|  |   | NEPA: Significant  |   | NEPA: Significant and unavoidable |
|  | Alternative 4 –<br>Reduced Project: No New Wharf  | <b>BIO-1a:</b> Construction activities could cause a loss of individuals or habitat of a state- or federally listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or the loss of federally listed critical habitat. | CEQA: Potentially significant impact (if elegant or Caspian terns use the 41-acre area for nesting); impacts to other sensitive species or habitat would be less than significant | <b>MM BIO-1</b>                   |
| NEPA: Potentially significant impact (if elegant or Caspian terns use the 41-acre area for nesting); impacts to other sensitive species or habitat would be less than significant  |   |  | NEPA: Less than significant   |                                   |
| <b>BIO-2a:</b> Construction activities would not result in a substantial reduction or alteration of a state, federally, or locally designated natural habitat, special aquatic site, or plant community, including wetlands. |   | CEQA: Less than significant  | Mitigation not required   | CEQA: Less than significant       |
|  |   | NEPA: Less than significant  |   | NEPA: Less than significant       |
| <b>BIO-3a:</b> Construction activities would not interfere with wildlife movement/migration corridors.   |   | CEQA: Less than significant  | Mitigation not required   | CEQA: Less than significant       |
|  |   | NEPA: Less than significant  |   | NEPA: Less than significant       |
| <b>BIO-4a:</b> Construction activities would not substantially disrupt local biological communities.   |   | CEQA: No impact  | Mitigation not required   | CEQA: No impact                   |
|  |   | NEPA: No impact  |   | NEPA: No impact                   |
| <b>BIO-5:</b> Construction activities would not result in a permanent loss of marine habitat   |   | CEQA: No impact  | Mitigation not required   | CEQA: No impact                   |
|  |   | NEPA: No impact  |   | NEPA: No impact                   |

**Table 3.3-6: Summary Matrix of Potential Impacts and Mitigation Measures for Biological Resources Associated with the Proposed Project and Alternatives**

| Alternative  | Environmental Impacts  | Impact Determination  | Mitigation Measures   | Impacts after Mitigation   |
|--|--|---|---|--|
|  | <b>BIO-1b:</b> Operations would not cause a loss of individuals or habitat for a state- or federally listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or the loss of federally listed critical habitat.         | CEQA: Less than significant   | Mitigation not required; however, mitigation measure <b>MM AQ-10</b> would further reduce any potential for impact. | CEQA: Less than significant  |
|  |  | NEPA: Less than significant   |   | NEPA: Less than significant  |
|  | <b>BIO-2b:</b> Operations would not result in a substantial reduction or alteration of a state, federally, or locally designated natural habitat, special aquatic site, or plant community, including wetlands.  | CEQA: Less than significant to EFH and eelgrass; no impacts to other natural habitats, special aquatic sites, or plant communities  | Mitigation not required   | CEQA: Less than significant to EFH and eelgrass; no impacts to other natural habitats, special aquatic sites, or plant communities |
|  |  | NEPA: Less than significant to EFH and eelgrass; no impacts to other natural habitats, special aquatic sites, or plant communities  |   | NEPA: Less than significant to EFH and eelgrass; no impacts to other natural habitats, special aquatic sites, or plant communities |
|  | <b>BIO-3b:</b> Operation of Alternative 4 would not interfere with wildlife movement/migration corridors   | CEQA: No impact   | Mitigation not required   | CEQA: No impact  |
|  |  | NEPA: No impact   |   | NEPA: No impact  |
|  | <b>BIO-4b:</b> Operation of Alternative 4 would not substantially disrupt local biological communities.  | CEQA: Less than significant   | Mitigation not required   | CEQA: Less than significant  |
|  |  | NEPA: Less than significant   |   | NEPA: Less than significant  |
|  | <b>BIO-4c:</b> Operation of Alternative 4 could introduce non-native species into the Harbor that could substantially disrupt local biological communities.  | CEQA: Significant   | No feasible mitigation is currently available   | CEQA: Significant and unavoidable  |
|  |  | NEPA: Significant   |   | NEPA: Significant and unavoidable  |
| Alternative 5 –<br>Reduced Project: No<br>Space Assignment | <b>BIO-1a:</b> Construction activities could cause a loss of individuals or habitat of a state- or federally listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or the loss of federally listed critical habitat. | CEQA: Potentially significant impact (if elegant or Caspian terns use the 41-acre area for nesting); impacts to other sensitive species or habitat would be less than significant | <b>MM BIO-1</b><br><b>SC BIO-1</b>  | CEQA: Less than significant  |
|  |  | NEPA: Potentially significant impact (if elegant or Caspian   |   | NEPA: Less than significant  |

**Table 3.3-6: Summary Matrix of Potential Impacts and Mitigation Measures for Biological Resources Associated with the Proposed Project and Alternatives**

| Alternative | Environmental Impacts  | Impact Determination   | Mitigation Measures   | Impacts after Mitigation   |
|-------------|--|--|---|--|
|             |  | terns use the 41-acre area for nesting); impacts to other sensitive species or habitat would be less than significant                |   |  |
|             | <b>BIO-2a:</b> Construction activities would not result in a substantial reduction or alteration of a state, federally, or locally designated natural habitat, special aquatic site, or plant community, including wetlands.                                 | CEQA: Less than significant  | Mitigation not required   | CEQA: Less than significant  |
|             |  | NEPA: Less than significant  |   | NEPA: Less than significant  |
|             | <b>BIO-3a:</b> Construction activities would not interfere with wildlife movement/migration corridors.   | CEQA: Less than significant  | Mitigation not required; however, <b>SC BIO-1</b> would further reduce any potential impact.                        | CEQA: Less than significant  |
|             |  | NEPA: Less than significant  |   | NEPA: Less than significant  |
|             | <b>BIO-4a:</b> Construction activities would not substantially disrupt local biological communities.   | CEQA: Less than significant  | Mitigation not required; however, <b>MM BIO-1 and SC BIO-1</b> would further reduce any potential for impact.       | CEQA: Less than significant  |
|             |  | NEPA: Less than significant  |   | NEPA: Less than significant  |
|             | <b>BIO-5:</b> Construction activities would not result in a permanent loss of marine habitat.  | CEQA: No impact  | Mitigation not required   | CEQA: No impact  |
|             |  | NEPA: No impact  |   | NEPA: No impact  |
|             | <b>BIO-1b:</b> Operations would not cause a loss of individuals or habitat for a state- or federally listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or the loss of federally listed critical habitat. | CEQA: Less than significant  | Mitigation not required; however, mitigation measure <b>MM AQ-10</b> would further reduce any potential for impact. | CEQA: Less than significant  |
|             |  | NEPA: Less than significant  |   | NEPA: Less than significant  |
|             | <b>BIO-2b:</b> Operations would not result in a substantial reduction or alteration of a state, federally, or locally designated natural habitat, special aquatic site, or plant community, including wetlands.  | CEQA: Less than significant for EFH and eelgrass; no impacts for other natural habitats, special aquatic sites, or plant communities | Mitigation not required   | CEQA: Less than significant for EFH and eelgrass; no impacts for other natural habitats, special aquatic sites, or plant communities |
|             |  | NEPA: Less than significant impact for EFH and eelgrass; no impacts for other natural habitats, special aquatic sites,               |   | NEPA: Less than significant for EFH and eelgrass; no impacts for other natural habitats, special aquatic sites, or plant             |

**Table 3.3-6: Summary Matrix of Potential Impacts and Mitigation Measures for Biological Resources Associated with the Proposed Project and Alternatives**

| Alternative   | Environmental Impacts  | Impact Determination  | Mitigation Measures  | Impacts after Mitigation    |
|---|--|---|--|-----------------------------|
|   |  | or plant communities  |  | communities                 |
|   | <b>BIO-3b:</b> Operation of Alternative 5 would not interfere with wildlife movement/migration corridors   | CEQA: No impact   | Mitigation not required  | CEQA: No impact             |
|   |  | NEPA: No impact   |  | NEPA: No impact             |
|   | <b>BIO-4b:</b> Operation of Alternative 5 would not substantially disrupt local biological communities.  | CEQA: Less than significant   | Mitigation not required  | CEQA: Less than significant |
| NEPA: Less than significant   |  | NEPA: Less than significant   |  |                             |
| <b>BIO-4c:</b> Operation of Alternative 5 could introduce non-native species into the Harbor that could substantially disrupt local biological communities. | CEQA: Significant  | No feasible mitigation is currently available   | CEQA: Significant and unavoidable  |                             |
|   | NEPA: Significant  |   | NEPA: Significant and unavoidable  |                             |
| Alternative 6 –<br>Proposed Project with Expanded On-Dock Railyard  | <b>BIO-1a:</b> Construction activities could cause a loss of individuals or habitat of a state- or federally listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or the loss of federally listed critical habitat. | CEQA: Potentially significant impact (if elegant or Caspian terns use the 41-acre area for nesting); impacts to other sensitive species or habitat would be less than significant | <b>MM BIO-1</b><br><b>SC BIO-1</b>   | CEQA: Less than significant |
|   |  | NEPA: Potentially significant impact (if elegant or Caspian terns use the 41-acre area for nesting); impacts to other sensitive species or habitat would be less than significant |  | NEPA: Less than significant |
|   | <b>BIO-2a:</b> Construction activities would not result in a substantial reduction or alteration of a state, federally, or locally designated natural habitat, special aquatic site, or plant community, including wetlands.   | CEQA: Less than significant   | Mitigation not required  | CEQA: Less than significant |
|   |  | NEPA: Less than significant   |  | NEPA: Less than significant |
|   | <b>BIO-3a:</b> Construction activities would not interfere with wildlife movement/migration corridors.   | CEQA: Less than significant   | Mitigation not required; however, <b>SC BIO-1</b> would further reduce any potential impact. | CEQA: Less than significant |
|   |  | NEPA: Less than significant   |  | NEPA: Less than significant |
|   | <b>BIO-4a:</b> Construction activities would not substantially disrupt local biological communities.   | CEQA: Less than significant   | Mitigation not required; however, <b>MM BIO-1 and</b>  | CEQA: Less than significant |



**Table 3.3-6: Summary Matrix of Potential Impacts and Mitigation Measures for Biological Resources Associated with the Proposed Project and Alternatives**

| Alternative | Environmental Impacts  | Impact Determination   | Mitigation Measures   | Impacts after Mitigation   |
|-------------|--|--|---|--|
|             |  | NEPA: Less than significant  | <b>SC BIO-1</b> would further reduce any potential for impact.  | NEPA: Less than significant  |
|             | <b>BIO-5:</b> Construction activities would not result in a permanent loss of marine habitat.  | CEQA: No impact<br>NEPA: No impact   | Mitigation not required   | CEQA: No impact<br>NEPA: No impact   |
|             | <b>BIO-1b:</b> Operations would not cause a loss of individuals or habitat for a state- or federally listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or the loss of federally listed critical habitat. | CEQA: Less than significant  | Mitigation not required; however, mitigation measure <b>MM AQ-10</b> would further reduce any potential for impact. | CEQA: Less than significant  |
|             |  | NEPA: Less than significant  |   | NEPA: Less than significant  |
|             | <b>BIO-2b:</b> Operations would not result in a substantial reduction or alteration of a state, federally, or locally designated natural habitat, special aquatic site, or plant community, including wetlands.  | CEQA: Less than significant for EFH and eelgrass; no impacts for other natural habitats, special aquatic sites, or plant communities | Mitigation not required   | CEQA: Less than significant for EFH and eelgrass; no impacts for other natural habitats, special aquatic sites, or plant communities |
|             |  | NEPA: Less than significant for EFH and eelgrass; no impacts for other natural habitats, special aquatic sites, or plant communities |   | NEPA: Less than significant for EFH and eelgrass; no impacts for other natural habitats, special aquatic sites, or plant communities |
|             | <b>BIO-3b:</b> Operation of Alternative 6 would not interfere with wildlife movement/migration corridors.  | CEQA: No impact<br>NEPA: No impact   | Mitigation not required   | CEQA: No impact<br>NEPA: No impact   |
|             |  | CEQA: Less than significant<br>NEPA: Less than significant   |   | Mitigation not required  |
|             | <b>BIO-4c:</b> Operation of Alternative 6 could introduce non-native species into the Harbor that could substantially disrupt local biological communities.  | CEQA: Significant  | No feasible mitigation is currently available   |  |
|             |  | NEPA: Significant  |   | NEPA: Significant and unavoidable  |

### 3.3.4.5 Mitigation Monitoring

Mitigation measures for biological resources (**MM BIO-1**) and air quality (**MM AQ-10**), as well as a standard condition of approval (**SC BIO-1**) are applicable to the proposed Project and Alternatives 5 and 6. Due to disturbance of the 41-acre backlands, mitigation measure **MM BIO-1** also applies to Alternative 4. Following is the monitoring program for mitigation measure **MM BIO-1**:

| <b>Impact BIO-2a: Construction activities would cause a loss of individuals or habitat of a state- or federally listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or the loss of federally listed critical habitat. While the potential for such losses is considered insignificant, the following measure would further reduce potential impacts:</b> |  |
|--|--|
| Mitigation Measure   | <b>MM BIO-1: Conduct nesting bird surveys and avoid impacts to nesting birds at the Project site.</b> This measure applies only if construction on the 41-acre undeveloped area is to occur between February 15 and September 1. Prior to ground-disturbing activities, a qualified biologist shall conduct surveys for the presence of tern nests on the 41-acre backlands, and within the proposed Project site that contains potential nesting bird habitat. Surveys shall be conducted no later than 1 week prior to the clearing, removal, or grubbing of any vegetation or ground disturbance. If active nests of species protected under the MBTA and/or similar provisions of the California Fish and Game Code (i.e., native birds including but not limited to the black-crowned night heron) are located, then a barrier installed at a 50–100 foot radius from the nest(s) shall be established. The barrier will remain until a qualified biologist determines that the young have fledged or the nest is no longer active. |
| Timing   | If construction occurs between Feb. 15 and Sept. 1, surveys will be conducted within 2 weeks of ground clearing activities.  |
| Methodology  | Biologists survey site for active bird nests. If present, a barrier installed at a 50–100 foot radius from the nest(s) shall be established and construction will avoid those sites. The barrier will remain until a qualified biologist determines that the young have fledged or the nest is no longer active.   |
| Responsible Parties  | LAHD/USACE   |
| Residual Impacts   | Not significant after mitigation.  |

Following is the standard condition of approval applicable to the proposed Project and Alternatives 5 and 6:

**SC BIO-1. Avoid marine mammals.** Although it is expected that marine mammals will voluntarily move away from the area at the commencement of the vibratory or “soft start” of pile-driving activities, as a precautionary measure, pile-driving activities occurring as part of the wharf extension shall include establishment of a safety zone, and the area surrounding the operations will be monitored by a qualified marine biologist for pinnipeds. A 100-meter-radius safety zone will be established around the pile-driving site and monitored for marine mammals. As the pile-driving site will move with each new pile, the 100-meter safety zone shall move accordingly.

Prior to commencement of pile-driving, observers on shore or by boat will survey the safety zone to ensure that no marine mammals are seen within the zone before pile-driving of a pile segment begins. If a marine mammal is observed within 10 meter of pile-driving operations, pile-driving shall be delayed until the marine mammals moves out of the area. If a marine mammal in the 100-meter safety zone is observed, but more than 10 meter away, the contractor shall wait at least 15 minutes to commence pile-

1 driving. If the marine mammal has not left the 100-meter safety zone after 15 minutes,  
2 pile-driving can commence with a “soft start”. This 15-minute criterion is based on a  
3 study indicating that pinnipeds dive for a mean time of 0.50 minutes to 3.33 minutes; the  
4 15-minute delay will allow a more than sufficient period of observation to be reasonably  
5 sure the animal has left the proposed Project vicinity.

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

12 The monitoring program for mitigation measure **MM AQ-10** can be found in Section  
13 3.2.4.6 (in Section 3.2, Air Quality, Meterology, and Greenhouse Gases).

### 14 **3.3.5 Significant Unavoidable Impacts**

15 For the proposed Project and Alternatives 1 through 6, Impact BIO-4c, introduction of  
16 non-native species that substantially disrupt local biological communities, potential  
17 impacts would remain significant and unavoidable because no feasible mitigation is  
18 currently available.

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