

4.3 Biological Resources

This section describes environmental and regulatory settings related to offshore and onshore biological resources in the vicinity of the proposed E&B Oil and Gas Development Project (Project) Site; identifies impacts to these biological resources from the Proposed Project; identifies cumulative impacts from the Proposed Project and other projects in the region; and recommends mitigation measures to reduce those impacts.

The scope of this analysis includes all sites potentially affected by the Proposed Project, which include the existing City Maintenance Yard, the new City Maintenance Yard location and the location of the pipelines. However, the areas potentially affected directly by the Proposed Project constitute mostly previously disturbed and built out areas with little or no biological resources that could be impacted. This section also focuses on areas that could be affected as a result of an oil spill and includes descriptions of the offshore environment and onshore biological resources such as the Greenbelt. The onshore and offshore areas that could be potentially affected by an oil spill are described as general Project areas throughout the rest of this section.

This following description of the affected marine and onshore environment is based on a reconnaissance-level field survey conducted October 23, 2013, queries of the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB), Project plans and graphic renderings, the City of Hermosa Beach Local Coastal Plan (LCP), and other relevant data sources, including environmental documents that examine the environmental conditions of the Santa Monica Bay and Southern California Bight (SCB) region (CDFG 2001, CDFG and CINMS 2001, SMBRC 2008). A MRS senior biologist performed a reconnaissance survey of the proposed Pipeline route and the Project Site by walking its entire perimeter. Limited onsite natural resources were identified in the survey. These are described below.

4.3.1 Environmental Setting

The Proposed Project is bounded by the following: to the east by Valley Drive, the Veterans Parkway (Hermosa Valley Greenbelt/Trail), Ardmore Park and, further to the east, by Ardmore Avenue and residential development; to the south by 6th Street, the Beach Cities Self Storage facility, light manufacturing land uses and, further to the south, by South Park and residential development; to the west by light manufacturing land uses, Cypress Street and, further to the west, by residential development; and to the north by light manufacturing land uses and, further to the north, by residential development and 8th Street. The site is fully developed with various buildings used as part of the Public Works Facility in addition to concrete and asphalt paving.

4.3.1.1 Onshore Resources

Urban/Landscaped

As depicted on the Proposed Project and Pipeline route map (see Section 2.0, Project Description), the entire Proposed Project, including the Pipeline route and the proposed temporary and permanent City Maintenance Yard, is located on and within existing facilities,

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paved roads, the existing SCE right of way, and parking areas. The habitat adjacent to the Proposed Pipeline route was inspected during the reconnaissance survey to ensure adequate identification of potential biological resources in the general vicinity of the Project. All of the vegetative communities surrounding the Project Site and along the Pipeline route were characterized as urban, disturbed, or developed communities, with the only open areas consisting of the vegetation located within the Hermosa Valley Greenbelt (Greenbelt). The Greenbelt runs parallel to the Proposed Pipeline route along Valley Drive for approximately 2,000 feet. The disturbed or developed vegetation communities, as these terms are used in standardized habitat classification systems, collectively refer to areas that have been modified by humans. These include urban, rural residential, and commercial and industrial landscapes and would include the assortment of ornamental trees and shrubs located within the Greenbelt.

The Greenbelt was developed in 1986 on an abandoned Santa Fe Railroad spur, which originally connected Redondo Beach Wharf to downtown Los Angeles. The Greenbelt was initially planted in the late 1980's (Veterans Parkway Master Planning Document, Manhattan Beach June 2013) and includes a jogging trail, work out stations, benches, and shade trees. The non-native trees and shrubs located within the Greenbelt include eucalyptus (*Eucalyptus* spp.), Peruvian pepper tree (*Schinus molle*), cape honeysuckle (*Tecoma capensis*), and acacia (*Acacia* sp.). Many of the trees and most of the shrubs show evidence of repeated pruning, which reduces the amount of cover at ground level. The groundcover consists of non-native grasses, ice plant (*Carpobrotus edulis*), and Boston ivy (*Parthenocissus tricuspidata*).

Although the Greenbelt consists primarily of non-native vegetation, these trees and shrubs do provide some limited resources for those wildlife species that are accustomed to heavily urbanized settings. These species, including possum (*Didelphis virginiana*) and raccoon (*Procyon lotor*), may use the accessibility and cover found on the greenbelt for a travel corridor between urban areas. The heavy human use and repeated vegetation pruning would reduce the overall value to most wildlife species. The trees and shrubs are also expected to provide canopy structure and cover suitable for numerous bird species for roosting, foraging, and nesting habitat. Bird species observed during the reconnaissance survey include mourning dove (*Zenaida macroura*), northern mockingbird (*Mimus polyglottos*) American crow (*Corvus brachyrhynchos*), house finch (*Carpodacus mexicanus*), and Anna's Hummingbird (*Calypte anna*). Such areas are important resources for perching, foraging, and nesting for raptor species that are capable of coexisting in urban areas, including the red-tailed hawk (*Buteo jamaicensis*) and American kestrel (*Falco sparverius*).

Sandy Beach

The Proposed Project Site is approximately 1,700 feet to the east of the Hermosa Beach coastline. Several stormwater lines that drain off Valley Drive run perpendicular to the proposed Pipeline route and outflow onto the sandy beach habitat (see Section 4.8, Safety, Risk of Upset and Hazards). Sandy beach habitat is typically found between the intertidal zone and areas where vegetation becomes established, typically forming foredunes or pioneer dunes. Several invertebrate species (predominantly crustaceans and worms) are adapted to the wave action and shifting sands of the intertidal zone and are able to bury themselves quickly or deeply to avoid predation and displacement due to sand movement. These invertebrates attract shorebirds that are most abundant during the fall and winter and include willet (*Tringa semipalmata*), sanderling (*Calidris alba*), western (*Calidris maudi*) and least (*Calidris minutilla*) sandpipers and various

species of gull (*Larus* spp.). There was no vegetation observed along the sandy beach habitat or any signs of any additional vegetative communities in the general area. The entire beach area is heavily used by people recreating in the area.

Coastal Sage Scrub/Southern Coastal Scrub

Coastal sage scrub and southern coastal scrub communities consist primarily of low-growing, drought-tolerant native shrubs with an understory of grasses and herbs. These communities typically occur at lower, drier sites than chaparral assemblages. Southern coastal scrub is a structurally diverse vegetation community where animals typically have numerous opportunities to find food and shelter. This community in the Project area is mostly absent and has been heavily impacted in its range by fragmentation, invasive non-native weeds, and pollution. Originally, this community would have been the dominant habitat in the Project area; it is now extremely rare in the general area and was not observed during the reconnaissance survey of the Project Site and Pipeline route

4.3.1.2 Offshore Resources

The offshore areas that could potentially be affected by the Proposed Oil Project are located in the south-central part of the Santa Monica Bay near the city of Manhattan Beach, California (Figure 2.1). Santa Monica Bay is a large, open-water embayment of the Pacific Ocean that is bordered offshore by the Santa Monica Basin, on each end by the rocky headlands of Point Dume and the Palos Verdes Peninsula, and onshore by the Los Angeles Coastal Plain and the Santa Monica Mountains (SMBRC 2008). It is the natural drainage basin for approximately 414 square miles of land within the Los Angeles Coastal Plain.

Santa Monica Bay itself is an integral part of the larger geographic region commonly known as the Southern California Bight (SCB), wherein the characteristic north-south trending coastline found off much of western North America experiences a significant curvature or indentation south of Point Conception. The SCB includes coastal southern California, the Channel Islands, and the local portion of the Pacific Ocean. The portion of the Pacific Ocean that occupies this region, from Point Conception in the north to just past San Diego in the south and extending offshore of San Nicolas Island, is characterized by complex current circulation patterns and a diverse range of marine habitats. The mainland coast and offshore islands contain rocky shores, long stretches of sandy beach, and numerous embayments.

The wide variety of habitats found in the SCB encourages a similarly rich and varied marine life. In particular, the Channel Islands are important breeding grounds for several diminishing populations of marine birds and marine mammal species. Since the Channel Islands are situated some distance from a heavily populated coastline in southern California, they also represent the best examples of pristine environments in the southern California area.

Marine biological resources that could potentially be affected by the Proposed Oil Project can be described in terms of three major habitat areas: open ocean, seafloor, and shoreline. Within the SCB, each of these three biological habitats is exceptionally diverse and productive. Marine resources of the Bay include a rich diversity of migratory and resident species of mammals, birds, fishes, and invertebrates.

Marine Birds

The SCB supports a rich population of seabirds (Baird 1993), providing a major foraging area for both residents and migrants. Seabirds can be segregated into two main groups: coastal and pelagic. Coastal seabirds feed in the pelagic realm but tend to remain within approximately five miles of the mainland shore. Common coastal seabirds include Western (*Aechmophorus occidentalis*) and Clark's grebes (*Aechmophorus clarkii*), surf scoters (*Melanitta perspicillata*), cormorants (*Phalacrocorax* spp.), loons (*Gavia* spp.), California brown pelicans (*Pelecanus occidentalis*), and gulls (Subfamily Laridae). The highest coastal seabird densities occur in the SCB during winter months. However, California brown pelican populations generally peak in the summer months when birds from large Mexican colonies migrate northward.

In contrast, pelagic seabirds spend most of their time farther from shore. As with coastal seabirds, they spend much of their time on the sea surface or diving into the water column to feed. Some of the most common offshore birds in the region include: shearwaters (*Puffinus* spp.), northern fulmars (*Fulmarus glacialis*), phalaropes (*Phalaropus* spp.), jaegers (*Stercorarius* spp.), and common murrelets (*Uria aalge*). Storm-petrels (*Oceanodroma* spp.), puffins (*Fratercula* spp.), and auklets (Family Alcidae) also frequent the offshore waters of the Project area. Seasonal population peaks vary among the taxa; most seabird rookeries in the region are located on offshore islands, predominately the northern Channel Islands; few, if any, seabirds nest on the mainland coast of the SCB (Carter et al. 1992).

Marine Mammals

Because of its transitional location between the cooler zoogeographic province to the north of Point Conception and the subtropical province to the south that comprises most of southern California's waters, the SCB supports a wide variety of marine mammals. More than 40 species of marine mammals are reported within the area, all of which are protected under the Marine Mammal Protection Act (MMPA). These include 34 species of cetaceans (whales, dolphins and porpoises) and six species of pinnipeds (seals and sea lions) (Carretta et al. 2005, Leatherwood and Reeves 1983, and Reeves et al. 1992). Additionally, the southern sea otter (*Enhydra lutris nereis*), a representative of the weasel family, Mustelidae, is also occasionally observed in the region. Six species of cetaceans are federally listed as endangered, while two species of pinnipeds and the southern sea otter are listed as threatened under the Federal Endangered Species Act (FESA).

Marine mammal species in the region can be classified into three categories: (1) migrants that pass through the area on their way to calving or feeding grounds; (2) seasonal visitors that remain for a limited time; and (3) residents that remain much or all of the year. Five whale species transit the potentially affected area during annual migrations, while all but one of the dolphin species have resident populations within the area.

Marine Turtles

Though uncommon in the region, four species of marine turtles are known to inhabit the northeastern Pacific Ocean off the coast of California, all of which are protected under the FESA. They are the green turtle (*Chelonia mydas*), the olive ridley turtle (*Lepidochelys olivacea*), the leatherback turtle (*Dermochelys coriacea*), and the loggerhead turtle (*Caretta*

caretta) (Hubbs 1977). The green, olive ridley, and loggerhead turtles are listed as federally threatened species, while the leatherback is listed as a federally endangered species.

Hard Substrate Invertebrates

Natural hard substrate in Santa Monica Bay is primarily limited to areas adjacent to rocky headlands at the north and south of the Bay, submarine canyon edges, and the short Bank region (Allen 1982). Hard-bottom habitats have a diverse and abundant assemblage of organisms that are often unique to their habitat (MBC 1993). These areas provide substrate suitable for attachment of a variety of plants and sessile invertebrates, as well as shelter and forage for more motile organisms. Sessile species utilizing hard-bottom substrate include mussels, rock scallops (Family Pectinidae), barnacles, sponges, sea anenomes, sea fans (Order Gorgonacea), feather duster worms (Family Serpulidae), wormsnails (Family Vermetidae), and sea squirts (Order Ascidiacea). Most of these sessile invertebrates feed by filtering plankton and detritus from the water column. Motile invertebrates, including crabs, octopuses, and shrimp hide in crevices or are protectively colored. Invertebrates associated with hard bottom substrates are frequently a food source for birds (in the exposed intertidal zone) and fish (in the subtidal zone).

Nearshore reefs provide substrate for giant kelp (*Macrocystis pyrifera*), feather boa kelp (*Egregia menziesii*), and palm kelp (*Pterogophora californica*), which provide additional habitat for a multitude of organisms. Since most hard bottom habitats in the Bay are of low relief, the presence of kelp often lends a vertical element to the habitat that is otherwise lacking. Because reefs are diverse and have an abundance of unique organisms, they are also important sites for recreational diving and fishing (MBC 1993). California spiny lobster (*Panulirus interruptus*), yellow and Pacific rock crabs (*Cancer* spp.), red and purple sea urchins (*Strongylocentrotus franciscanus* and *S. purpuratus*, respectively), and spot shrimp/prawn (*Pandalus platyceros*) are fished recreationally in the region (MBC 1993). Abalone, another hard substrate organism, was fished both recreationally and commercially until the 1990s.

Kelp Beds

Rocky subtidal habitats in Santa Monica Bay and throughout much of the SCB are vegetated with a wide variety of red and brown algae (MBC 1993). Red algae generally form a low turf or understory of coralline, foliose, and filamentous forms from shore to the edge of the photic zone. Brown algae are generally larger and form an overstory; locally, feather-boa kelp is dominant nearshore, while giant kelp dominates deeper areas of reefs, forming large beds at depths of 20 to 120 feet (6.1 to 36.6 m) (CDFG 2001).

Giant kelp is a large, fast-growing, perennial algae that thrives in protected nearshore waters from Baja California to Santa Cruz. Kelp usually attaches to rock outcrops or large cobbles to stay in place; however, under calm conditions kelp plants have occasionally established themselves successfully in sandy subtidal regions as well, generally by attaching themselves to worm tubes.

Giant kelp beds form an important and distinct marine habitat along the rocky coastal reaches of the SCB, particularly within the nearshore waters of the Channel Islands. While historically more widespread, during the past decade, kelp beds near the Project area have been limited to the extreme northern and southern portions of Santa Monica Bay. The rocky bottoms found offshore

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Leo Carillo State Beach, the Malibu coast, and along the Palos Verdes Shelf support the majority of the kelp stands within the Bay, although individual plants occasionally manage to gain a foothold on temporarily exposed rocks along the sandy, central portion of the Bay as well (MBC 1993).

Most hard bottom habitats in Santa Monica Bay are of low relief. The presence of kelp in such areas creates a vertically structured habitat that extends from the seafloor all the way up to the sea surface. Giant kelp beds provide food, shelter, and nursery areas for a variety of invertebrates and fishes, some of which are uniquely adapted for life in the kelp beds. Kelp bass, black perch, rubberlip seaperch, opaleye, kelp rockfish, and olive rockfish (*Sebastes serranoides*) are all commonly encountered in kelp beds. Topsmelt, kelp pipefish (*Syngnathus californiensis*), kelp perch (*Brachyistius frenatus*), giant kelpfish (*Heterostichus rostratus*), kelp clingfish (*Rimicola muscarum*), and kelp gunnel (*Apodichthys [=Ulvicola] sanctaerosae*) are fishes known to frequent the canopy, or upper reaches of the kelp forest (MBC 1993). Lower down in the water column, where the leafy canopy is not as dense, yellowtail, white sea bass (*Atractoscion [=Cynoscion] nobilis*), rubberlip seaperch, halfmoon (*Medialuna californiensis*), and halfblind goby (*Lethops connectens*) can be found. Several of these species are important commercial and recreational fishery species.

Soft Bottom Substrate

The soft-bottom habitat of Santa Monica Bay supports a diverse and abundant infauna. As many as 1,200 infaunal species have been reported from Santa Monica Bay. The abundance and distribution of infauna varies seasonally and interannually. However, infauna in the Santa Monica Bay is usually dominated, in both number of species and individuals, by polychaete worms. Polychaetes play an important role in reworking the sediments and are important constituents in the diet of many demersal fish. Other important infaunal groups include crustaceans, mollusks, and echinoderms (Phylum Echinodermata).

Epibenthic (living on the bottom) invertebrates of the Bay include sea stars, sea cucumbers, sand dollars, sea urchins, crabs, snails, and sea slugs. These organisms are larger than infaunal species, generally less common and, therefore, spaced further apart. However, sand dollars and sea urchins often occur in very dense, single-species patches that limit the abundance of other species.

Fish

The extensive soft-bottom habitat within Santa Monica Bay supports an abundant and diverse assemblage of more than 100 species of demersal (living on or just above the bottom) fish. Flatfishes (Families Pleuronectidae, Paralichthyidae, Cynoglossidae, and Bothidae), rockfishes (Family Scorpaenidae), sculpins (Family Cottidae), combfishes (Family Zaniolepididae), and eelpouts (Family Zoarcidae) make up most of the soft-bottom fish fauna in the Bay (MBC 1993). The inner shelf assemblage is dominated by speckled sanddab (*Citharichthys stigmaeus*), the middle shelf by stripetail rockfish (*Sebastes saxicola*), and the outer shelf by slender sole (*Lyopsetta exilis*) (Allen 1982).

Over hard-bottom substrates, fish assemblages generally differ in composition relative to depth. Common shallow-water families include sea basses (Family Serranidae), surfperches, rockfishes,

kelpfishes (Family Clinidae), sculpins, damselfishes (Family Pomacentridae), and wrasses (Family Labridae). Important species in Santa Monica Bay include kelp bass (*Paralabrax clathratus*), brown rockfish (*Sebastes auriculatus*), pile perch (*Damalichthys vacca*), black perch (*Embiotoca jacksoni*), white seaperch (*Phanerodon furcatus*), rubberlip seaperch (*Rhacochilus toxotes*), señorita (*Oxyjulis californica*), and opaleye (MBC 1993).

Rocky subtidal species found in Santa Monica Bay include woolly sculpin (*Clinocottus analis*), opaleye, rockpool blenny (*Hypsoblennius gilberti*), spotted kelpfish (*Gibbsonia elegans*), and California clingfish (*Gobiesox rhesodon*). In deeper waters, vermilion rockfish, bocaccio, cowcod (*Sebastes levis*), and flag rockfish (*Sebastes rubrivinctus*) dominate (Allen et al. 1976, Moore and Mearns 1980).

4.3.1.3 Rare, Endangered, and Special Status Species

Species are considered endangered if in imminent danger of extinction, or threatened if they are likely to be in danger soon, and are, therefore, given special protection under the provisions of the FESA and California Endangered Species Act (California ESA). Table 4.3-1 summarizes the Federal and State endangered, threatened, and special status species identified in the CNDDDB search that are recorded as being present or have historical records near the general project area. Many of the sensitive plant wildlife species identified in the CNDDDB query (Redondo and Venice USGS Quad Summaries 3311874/090C and 3311884/090B) as being recorded in the project area are currently described as being extirpated from the area. In addition, most of the sensitive species included in Table 4.3-1 require specific coastal dune or coastal marsh habitat that is not present in the project area, and are therefore, considered to be unlikely to be present in the project area. As required by CEQA, species that are considered sensitive resources are included below. The following discussion includes those species that were identified in the CNDDDB query, have a federal or state status including CDFW “species of special concern” and plant given status by the CNPS.

Beach Spectacle-Pod

Beach spectacle-pod (*Dythyrea maritima*) is a low growing, whitish-flowered perennial herb found in small transverse foredunes within approximately 150 to 1,000 feet of the surf. Beach spectacle-pod is usually found in areas of these fragile dunes where the sand is relatively unstable. Although historically present in the El Segundo dunes and Ballona Wetlands, much of the potentially suitable habitat for the beach spectacle-pod within the region was converted due to residential development between 1940 and 1974. This species has not been successfully reintroduced despite revegetation efforts between 1990 and 1994, and it is considered locally extinct.

Coastal Dunes Milk-Vetch

Coastal dunes milk-vetch (*Astragalus tener* var. *titi*) is a low, dwarf annual plant in the pea family (Fabaceae). This plant grows in moist depressions on clay soils in coastal terrace grasslands and in coastal strand vegetation on sand dunes. Historically, the range of the coastal dunes milk-vetch was known to include Monterey, Los Angeles, and San Diego Counties; however, it is now presumed extant at only three locations, one in Monterey County and two in San Diego County.

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**Table 4.3-1
Endangered, Threatened, and Special Status Species in Project Area**

Common Name	Scientific Name	Status	Habitat/Occurrence
Plants			
Beach spectacle-pod	<i>Dythyrea maritima</i>	ST; CNPS List 1B.1	Coastal dunes, coastal scrub. Historical records in Hermosa Beach, El Segundo and Ballona wetlands; CNDDDB (2013) describes this species as extirpated from area.
Coastal dunes milk-vetch	<i>Astragalus tener</i> var. <i>titi</i>	FE, SE	Coastal bluff scrub, coastal dunes; recorded population “probably extirpated” (CNDDDB 2013). Not in project vicinity.
Ventura marsh milk-vetch	<i>Astragalus pycnostachyus</i> var. <i>lanoissimus</i>	FE, SE	Coastal salt marsh; historically observed in Ballona Marsh; presumed extirpated (CNDDDB 2013). Not in project vicinity.
Southern tarplant	<i>Centromadia parryi</i> ssp. <i>australis</i>	CNPS List 1B.1	Marshes and swamps; historical populations located in Ballona marsh (CNDDDB 2013); no habitat present in Project vicinity.
Orcutt’s pincusion	<i>Chaaenactis glabriuscula</i> var. <i>orcuttiana</i>	CNPS List 1B.1	Coastal bluff scrub, coastal dunes. Recent observations at sand Dune Park in Manhattan Beach Facility Yard (CNDDDB 2013). No coastal dune habitat in Project footprint.
Island green dudleya	<i>Dudleya virens</i> ssp. <i>insularis</i>	CNPS List 1B.2	Coastal bluff scrub, coastal scrub; Present in Palos Verdes peninsula on coastal bluffs. No suitable habitat in Project vicinity.
Invertebrates			
Monarch butterfly	<i>Danaus plexippus</i>		Roosts located in wind protected tree groves; observed in Ballona Wetlands in 1997 and in El Segundo City park in 1970’s. No roosting habitat in Project footprint.
El Segundo blue butterfly	<i>Euphilotes battoides allyni</i>	FE	Coastal dune habitat; host plant is <i>Eriogonum parvifolium</i> . Present in El Segundo dune habitat west of LAX and in Chevron refinery and 1990 records in Malago Cove, just north of Palos Verdes Peninsula, and in Miramar Park, Redondo Beach in 2007 (CNDDDB 2013). No coastal dune habitat or <i>Eriogonum parvifolium</i> in Project vicinity, unlikely to be present.
Palos Verdes blue butterfly	<i>Glaucoopsyche lygdamus palosverdesensis</i>	FE	Restricted to seaward Palos Verdes slopes; host plant is <i>Astragalus trichopodus</i> var. <i>lonchus</i> ; record in Malaga Canyon (CNDDDB 2013). No habitat or <i>Astragalus trichopodus</i> var. <i>lonchus</i> present in Project vicinity, unlikely to be present.
Globose Dune beetle	<i>Coelus globosus</i>	SSC	Coastal sand dune habitat, most common beneath dune vegetation, recorded in Ballona Wetlands in 1995 (CNDDDB 2013). No coastal dune vegetation on Project vicinity.

**Table 4.3-1
Endangered, Threatened, and Special Status Species in Project Area**

Common Name	Scientific Name	Status	Habitat/Occurrence
Birds			
Burrowing owl	<i>Athene cunicularia</i>	SSC	Open dry annual grasslands; extirpated as breeder, observed in winter (CNDDDB 2013). No habitat present in Project area.
Belding's Savannah Sparrow	<i>Passerculus sandwichensis beldingi</i>	SE	Coastal salt marsh; recent records in Ballona Wetlands. No habitat present in Project area; species not likely in Project area.
Coastal California gnatcatcher	<i>Polioptila californica californica</i>	FT, SSC	Coastal sage scrub. Recent records in Palos Verdes peninsula, Portuguese Bend, Klondike Canyon and Coronell Canyon in scrub dominated by <i>Artemisia Californica</i> (CNDDDB 2013). No habitat present in Project area.
California brown pelican	<i>Pelecanus occidentalis californicus</i>	FP	Abundant along coastal areas. Nests on coastal islands. Likely to be occasionally present in small numbers on Beach habitat.
California gull	<i>Larus californicus</i>	SSC	Abundant along coastal areas. Nests on coastal islands. Likely to be occasionally present in small numbers on Beach habitat.
California least tern	<i>Sterna antillarum browni</i>	FE, SE/FP	Present along coastal areas. Historically nested at Venice Beach site and Ballona Creek. Likely to forage in small numbers in offshore waters.
Common loon	<i>Gavia immer</i>	SSC	Present in coastal areas. Likely to be present in small numbers in offshore waters.
Double-crested cormorant	<i>Phalacrocorax auritus</i>	SSC	Abundant along coastal areas. Nests on coastal islands. Likely to be present in small numbers in offshore waters.
Western snowy plover	<i>Charadrius alexandrinus nivosus</i>	FE, SSC	Sandy beaches; no recent breeding records (CNDDDB 2013), but likely to be present on beach during non-breeding season. (CNDDDB 2013).
Mammals			
South coast marsh vole	<i>Microtus californicus stephensi</i>	SSC	Tidal marshes; recent records in Ballona Wetlands; no marsh habitat in Project area; species not present in Project area.
Blue whale	<i>Balaenoptera musculus</i>	FE	Present in low numbers each year.
Fin whale	<i>Balaenoptera physalus</i>	FE	Present in low numbers each year in offshore waters.
Humpback whale	<i>Megaptera novaeangliae</i>	FE	Present in low numbers each year in offshore waters.
North Pacific Right whale	<i>Eubalaena japonica</i>	FE	Present in low numbers each year offshore.
Sei whale	<i>Balaenoptera borealis</i>	FE	Present in low numbers each year offshore.

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**Table 4.3-1
Endangered, Threatened, and Special Status Species in Project Area**

Common Name	Scientific Name	Status	Habitat/Occurrence
F = Federal. S = State (California). C = Candidate. E = Endangered. BCC= Bird of Conservation Concern.	FP = Fully Protected. T = Threatened. SC = Species of Concern. R = Rare		
Source: CNDDDB 2013			

Globose Dune Beetle

Globose dune beetles inhabit foredunes and sand hummocks immediately bordering the coast from Bodega Bay to Ensenada, Baja California. These beetles inhabit the sand beneath dune vegetation on which they depend for food. There are no well vegetated coastal dunes on the beaches in the Project vicinity and therefore this species is not expected to occur in the general Project areas discussed below.

El Segundo Blue Butterfly

The El Segundo blue butterfly is a small subspecies of blue butterfly that almost exclusively inhabits dune areas that support its sole host plant, the coast buckwheat. The lifecycle of the El Segundo blue butterfly is entirely reliant on the coast buckwheat; adults eat nectar, mate, and lay eggs on the flowers, developing larvae feed on the flowers, and pupae develop in the soil directly beneath the host plants. Attempts to protect the El Segundo blue butterfly from extinction have centered primarily around protecting and propagating its host plant.

Following its initial discovery in 1975, the El Segundo blue butterfly was listed as endangered in 1976. The population continued to decline throughout the 1980s. There are no well vegetated coastal dunes in the Project vicinity and therefore this species is not expected to occur in the general Project areas discussed below.

Palos Verdes Blue Butterfly

The Palos Verdes blue butterfly (*Glaucopsyche lygdamus palosverdesensis*) is one of 11 subspecies of the Silvery Blue butterfly (*Glaucopsyche lygdamus*) whose historic range probably extended over much of the Palos Verdes peninsula. Development of its dune habitat led to an endangered listing in 1980. By 1983 it was thought to be extinct; however, during a 1994 biological survey specimens were documented at the southern end of the Palos Verdes Peninsula, on the grounds of the Navy's Defense Fuel Support Center in San Pedro. At that time, the total count in the wild was estimated at approximately 214 individuals, making it what many consider to be the world's rarest butterfly. Despite successful captive rearing of the Palos Verdes blue butterfly since its rediscovery, the wild population has not grown substantially. In 1999, the count increased to 646 individuals, but then dropped to 411 adults in 2000 (Mattoni and Powers 2000). The population has continued to fluctuate over the intervening years, with the wild population in 2007 approximately 220 individuals. The Palos Verdes blue butterfly is dependent on two known host plants, locoweed (*Astragalus trichopodus* var. *lonchus*, also known as Santa Barbara milkvetch) and common deerweed (*Lotus scoparius*). It has a single adult flight period

from late January through mid-April. Since the nearest colony is south of the Proposed Site on the Palos Verdes peninsula, this species is not expected to be impacted by the Proposed Project.

There are no well vegetated coastal dunes in the project vicinity and therefore, this species is not expected to occur in the general Project areas discussed below.

Western Snowy Plover

After a decade of substantial decline in adult bird numbers (approximately 11 percent), the USFWS listed the western snowy plover (*Charadrius alexandrinus nivosus*) as threatened on March 5, 1993 (USFWS 1993). By 1991, the number of adult birds on the Pacific Coast of the U.S. had dwindled to approximately 1,200 to 1,900 birds (Lafferty 2000). Critical habitat for this species was designated in 1999 and updated in 2005 and a recovery plan for the western snowy plover was finalized in 2007 (USFWS 2007).

Historically, western snowy plovers nested on the Malibu beaches and a stretch of beach between Santa Monica and Redondo Beach (USFWS 2007). Western snowy plovers nest on beaches and salt flats that have some vegetation, and they feed on mud flats in the wetlands. Recent western snowy plover use of beaches in the Project area by winter migrants is expected, although nesting in the Project area has not been recorded since 1949 (USFWS 2007). Nevertheless, critical habitat is designated for the species on a series of Pacific coastline beaches from Washington to Southern California (USFWS 2007). Other nearby sites are Dockweiler Beach South and Hermosa Beach between 2nd and 6th Streets. The closest breeding colony to the Proposed Site is Bolsa Chica in Orange County; other colonies are in Ventura County (Santa Clara river mouth, McGrath Lagoon, and Mugu Lagoon), Santa Barbara County (Coal Oil Point), and on several of the Channel Islands.

Coastal California Gnatcatcher

The California coastal gnatcatcher is an obligate and permanent resident of low coastal sage scrub that is typically dominated by *Artemisia Californica*, *Eriogonum fasciculatum* and *Salvia mellifera*. This species' decline is a direct result of habitat loss due to urban development. Recent records indicate the presence of breeding pairs of gnatcatchers in Palos Verdes peninsula, Portuguese Bend, Klondike Canyon and Coronell Canyon in scrub dominated by *Artemisia Californica* (CNDDB 2013). There is no coastal sage scrub habitat present in Project area; therefore this species is not expected in the Project area.

California Least Tern

The California least tern (*Sterna antillarum browni*) is a summer visitor that breeds in southern California coastal habitat from late April to September. It builds nests in shallow depressions in hard or soft dirt, dried mud, or sandy areas, usually on beaches or islands cleared of vegetation. Least terns utilize the open waters of Ballona Creek and, to a lesser extent, Ballona Lagoon and the Venice Canals to forage for small fishes. A protected nesting area is on North Dockweiler State Beach near Marina del Rey.

The California least tern was federally-listed as endangered in 1970 and state-listed as endangered in 1971. This migratory shorebird species is found along the Pacific Coast of California, from San Francisco southward to Baja California. Historically, the California least

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tern nested in small aggregations scattered among sandy beaches and salt flats all along the coast (Keane 1999). However, habitat loss in the early 1900s caused a drastic reduction in both breeding sites and breeding pairs. By the 1940s, the California least tern disappeared from Los Angeles and Orange Counties (Keane 1999).

Nests consist of shallow depressions in undisturbed open sand, dirt, or dry mud close to estuaries or a dependable food supply. California least terns are colonial and create loose aggregations of nests with nests approximately 10 feet (3 m) apart. One to four eggs are laid during each breeding season.

California least terns are known to have nested on the salt and mudflats at Playa del Rey since at least 1919, and small numbers remained there into the late 1970s. However, a program established in the early 1980s to protect least tern nesting grounds, including protective fencing and predator control on the north side of the entrance to Ballona Lagoon, at nearby Venice Beach (North Dockweiler State Beach), resulted in a preferential shift to that site. Since then, the Playa site has fallen into disuse, while the numbers of nesting pairs and fledglings at Venice Beach have tripled. Nesting pairs at the site increased from less than 100 in the late 1970s, to more than 400 by 2007. Meanwhile, from 1978 through 1994 the site contributed more than 10 percent of the fledglings statewide. The area currently remains one of only two permanent California least tern nesting sites in Los Angeles County; the other site is south of the Palos Verdes Peninsula at the Port of Los Angeles (Pier 400).

Pinnipeds

Six species of pinnipeds are found offshore southern California. Four of the species are year-round residents in the SCB, while the remaining two are uncommon visitors but have previously maintained substantial populations within the region (CINMS 2005). Only two of the pinniped species, the California sea lion (*Zalophus californianus*) and the harbor seal (*Phoca vitulina*), are expected to be encountered in the areas directly offshore of the Proposed Project Site with any regularity, although the resident populations of California sea lions, northern fur seals, and northern elephant seals all maintain breeding colonies on San Miguel Island, the northernmost of the Channel Islands.

Cetaceans

Cetaceans (whales, dolphins, and porpoises) occur in the in the areas directly offshore of the Project area year-round, although the species present may vary from season to season or from year to year. Cetacean population levels are generally at their lowest in spring and their highest levels during the autumn (Dohl et al. 1983). Although a total of eight species of baleen whales occur in the SCB, the majority of these whales use the coastal waters of the SCB as migratory routes or are seasonal visitors (Carretta et al. 2005).

Five species, the California gray whale, humpback whale, blue whale, fin whale (*Balaenoptera physalus*), and minke whale (*Balaenoptera acutorostrata scammoni*) can be expected to occur within the Project area (Dohl et al. 1983, Carretta et al. 2005). The remaining three whale species are only rarely sighted in the SCB, or are generally found far offshore. Five of the whales are considered endangered under the FESA and the California Endangered Species Act.

These listings were largely in response to worldwide population declines from intensive commercial whaling.

Dolphins and Porpoises

The commonly encountered delphinids in the SCB include the common dolphin (*Delphinus delphis*), Pacific white-sided dolphin (*Lagenorhynchus obliquidens*), the northern right whale dolphin (*Lissodelphis borealis*), Risso's dolphin (*Grampus griseus*), and Dall's porpoise (*Phocoenoides dalli*). These species vary in their patterns of usage of the area and periods of peak abundances (Dohl et al. 1983).

4.3.1.4 Sensitive Habitats

Coastal Dune Scrub Communities

Several habitats (Southern Dune Scrub, Southern Coastal Salt Marsh, and Southern Coastal Bluff Scrub) located in the Project general vicinity are included in the CNDDDB query as being locally sensitive habitats. Coastal dune scrub and the associated Southern Coastal Bluff Scrub are found on the bluffs of Palos Verdes. Southern Coastal Salt Marsh is located at the mouth of Ballona Creek, and Southern dune scrub is located in the El Segundo dunes immediately west of LAX. These habitats are surrounded by urban development and therefore, are exposed to the threats of urban encroachment and habitat fragmentation. The plant and animal species associated with these habitats are especially important because of the scarcity of other available habitat in the general area. None of these habitats are present in the immediate Project vicinity.

4.3.2 Regulatory Setting

4.3.2.1 Federal Regulations

Federal Endangered Species Act (16 United States Code 153 et seq.)

The Endangered Species Act of 1973, as amended, protects and conserves threatened and endangered species and their ecosystems. The USFWS and the National Marine Fisheries Service (NMFS) administer the ESA. Section 7 of the ESA governs interagency cooperation and consultation to ensure that activities do not jeopardize the existence of threatened or endangered species or result in adverse impacts, modification, or destruction of their critical habitat.

Marine Mammal Protection Act

Under the Marine Mammal Protection Act of 1972, the Secretary of Commerce delegated the authority to protect all cetaceans and pinnipeds to the NMFS. The Secretary of the Interior is responsible for protecting sea otters and delegated this authority to the USFWS. The Marine Mammal Protection Act established a moratorium on the taking of marine mammals in waters under U.S. jurisdiction. Under the Act, "taking" includes hunting, capturing, and killing and attempting to harass, hunt, capture, or kill any marine mammal. "Harassment" is defined as any act of pursuit, torment, or annoyance that has the potential to injure a marine mammal or marine mammal stock in the wild.

Clean Water Act

The 1972 Federal Water Pollution Control Act and its 1977 amendments, collectively known as the Clean Water Act (CWA), establishes national water-quality goals. The CWA established minimum water quality standards for effluents entering federal waters, implemented through the National Pollutant Discharge Elimination System Permit (NPDES) Program. It requires states to establish standards specific to water bodies and designated the types of pollutants to be regulated, including total suspended solids and oil. The CWA also establishes guidelines for the discharge of dredged or fill materials to the waters of the United States and for the prevention of such discharges, individually or in combination with other activities, from having unacceptable adverse impacts on the environment. Compliance with the CWA is provided by approval of a NPDES permit from the California State Water Resources Control Board (SWRCB) and Regional Water Quality Control Boards (RWQCB).

Coast Guard Regulatory Authority

Primary responsibility for the enforcement of U.S. maritime laws and regulations falls upon the United States Coast Guard (USCG). The USCG is responsible for managing and regulating provisions for safe navigation of vessels in U.S. waters, as well as enforcing environmental and pollution prevention regulations. As such, the USCG regulates hazardous working conditions on the Outer Continental Shelf, manages and regulates measures for pollution prevention in territorial waters, and implements provisions in the Oil Pollution Act and the Marine Plastic Pollution Research and Control Act. The USCG conducts pollution surveillance patrols to detect oil discharges within the territorial sea and contiguous zone and has enforcement authority over violations. The USCG maintains strike team responsibilities in the event of an oil spill.

Coastal Zone Management Act

In accordance with the Coastal Zone Management Act and the Coastal Zone Act Reauthorization Amendments of 1990, all Federal activities must be consistent, to the maximum extent practicable, with the enforceable policies of each affected state's coastal zone management program. Each state's Coastal Zone Management program sets forth objectives, policies, and standards regarding public and private use of land and water resources in the coastal zone.

Oil Pollution Act of 1990

The Oil Pollution Act of 1990 established a single uniform Federal system of liability and compensation for damage caused by oil spills in U.S. navigable waters. The Act requires removal of spilled oil and establishes a national system of planning for and responding to oil spill incidents.

The Secretary of the Interior is responsible for spill prevention, oil-spill contingency plans, oil-spill containment and cleanup equipment, financial responsibility certification, and civil penalties for offshore facilities and associated pipelines in all Federal and state waters.

Migratory Bird Treaty Act (16 United States Code 703–711)

The Migratory Bird Treaty Act (MBTA) of 1918, as amended in 1972, makes it unlawful, unless permitted by regulations, to “pursue; hunt; take; capture; kill; attempt to take, capture or kill; possess; offer for sale; sell; offer to purchase; purchase; deliver for shipment; ship; cause to be

shipped; deliver for transportation; transport; cause to be transported; carry or cause to be carried by any means whatever; receive for shipment, transportation, or carriage; or export, at any time, or in any manner, any migratory bird for the protection of migratory birds or any part, nest, or egg of any such bird” (16 USC 703).

4.3.2.2 State Resource Regulations

California Endangered Species Act (California Fish and Game Code Section 2050 et seq.)

Pursuant to the CESA and Section 2081 of the Fish and Game Code, an incidental take permit from the CDFW is required for Projects that could result in the take of a state-listed Threatened or Endangered species. Under CESA, "take" is defined as an activity that would directly or indirectly kill an individual of a species. An incidental take permit authorized by CDFW under Section 2081(b) of the California Fish and Game Code would be required where a Project could result in the taking of a state-listed threatened or endangered species. The application for an incidental take permit under Section 2081(b) requires the preparation of a conservation plan, generally referred to as a Habitat Conservation Plan.

The State of California considers an endangered species as one whose prospects of survival and reproduction are in immediate jeopardy; a threatened species as one present in such small numbers throughout its range that it is likely to become an endangered species in the near future in the absence of special protection or management; and a rare species as one present in such small numbers throughout its range that it may become endangered if its present environment worsens. The rare designation applies only to California native plants. Under CESA, CDFW is authorized to issue permits authorizing incidental take of threatened and endangered species.

California Species of Special Concern is a designation that CDFW uses for some declining wildlife species that are not candidates for state listing. This designation does not provide legal protection, but signifies that CDFW recognizes that populations of these species are declining in the state and may be worthy of targeted conservation efforts to prevent their eventual listing.

California Fish and Game Code (Sections 3503, 3503.5, 3513)

These sections makes is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 explicitly provides protection for all birds of prey, including their eggs and nests. Section 3513 makes it unlawful to take or possess any migratory non-game bird as designated in the federal MBTA.

California Porter-Cologne Water Quality Control Act

Pursuant to the California Porter-Cologne Water Quality Control Act, the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCB) may require permits (“waste discharge requirements”) for the fill or alteration of “Waters of the State.” The term “Waters of the State” is defined as “any surface water or groundwater, including saline waters, within the boundaries of the state” (California Water Code, Section 13050[e]). Although “waste” is partially defined as any waste substance associated with human habitation, the SWRCB interprets this to include fill discharge into water bodies. The SWRCB

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and the RWQCBs have interpreted their authority to require waste discharge requirements to extend to any proposal to fill or alter “Waters of the State.”

California Coastal Act

The California Coastal Act (Coastal Act) became law in 1976 to provide a comprehensive framework to protect and manage coastal resources. The Coastal Act contains policies to guide local and state decision-makers in the management of coastal and marine resources. The Act identifies protective measures for nearshore marine resources.

Coastal Act Section 30230 states:

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Coastal Act Section 30231 states:

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Coastal Act Section 30232 states:

Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.

Coastal Act Section 30240 states:

Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

Lempert-Keene-Seastrand Oil Spill Prevention and Response Act

Under this Act, the Office of Oil Spill Prevention and Response (OSPR) was created and the CDFW became the lead state agency in spill response (Office of Oil Spill Prevention and Response, OSPR). The Act requires that persons causing a spill begin immediate cleanup, follow approved contingency plans, and fully mitigate impacts to wildlife. Under an Interagency Agreement with OSPR, the California Coastal Commission (CCC) operates an oil spill program and maintains an oil spill staff. Before and after a spill, CCC staff are involved in review and comment to both state (e.g., OSPR) and Federal (e.g., USCG) agencies on contingency plans and regulations related to marine vessels, marine facilities, and marine vessel routing.

4.3.2.3 Local Regulations

Los Angeles Water Quality Control Plan

The Water Quality Control Plan for the Santa Clara River and Los Angeles River Basins (Basin Plan) is the primary policy document that guides the LARWQCB. Established under the requirements of the 1969 Porter-Cologne Water Quality Control Act, the Basin Plan was originally adopted in 1975, and has been updated regularly. The most recent amendments to the Basin Plan were adopted in October 2009. The Basin Plan assigns beneficial uses (e.g., municipal water supply, water contact recreation) to all waters in the basin. The Basin Plan also sets water quality objectives, subject to approval by the EPA, intended to protect designated beneficial uses of water bodies. The water quality objectives in the Basin Plan are written to apply to specific parameters (numeric objectives) and general characteristics of the water body (narrative objectives). An example of a narrative objective in the Basin Plan is the requirement that all waters must remain free of toxic substances in concentrations causing detrimental effects on aquatic organisms. Numeric objectives specify concentrations of pollutants that are not to be exceeded in ambient waters of the basin. The water quality objectives are achieved primarily through effluent limitations embodied in the NPDES program.

4.3.3 Significance Criteria

Consistent with Appendix G of the state CEQA Guidelines, an impact would be considered significant if the lead agency determines that Project implementation would result in one or more of the following:

- Substantial adverse effects, either directly or through habitat modifications, on any species identified as being a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;
- Substantial adverse effects on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFW or USFWS;
- Substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Substantial interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or interference with the use of native wildlife nursery sites;

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- A conflict with any local policy or ordinance protecting biological resources, such as a tree preservation policy or ordinance; or
- A conflict with the provisions of an adopted Habitat Conservation Planning program, Natural Community Conservation Planning program, or other approved local, regional, or state Habitat Conservation Planning program.

4.3.4 Project Impacts and Mitigation Measures

For the analysis of potential impacts to Biological Resources, it is anticipated that most direct impacts resulting from the Proposed Project would be the result of the Pipeline installation any future potential spills from those Pipelines, and/or some tree removal activities in the area of the existing City Maintenance Yard. Drilling activities, the new City Maintenance Yard and the installation of the entire Pipeline would occur in paved areas, or in areas previously disturbed or degraded and therefore, the construction phases of the Project are not expected to disturb any native vegetation and habitats. The impact analysis focuses on the areas surrounding the Project Site that could be affected as a result of an oil spill. The main areas where biological impacts could occur are identified as the beach area and potentially affected ocean waters that could be reached through existing drainages as a result of a pipeline spill.

The following section describes the level of impact for each of the significance criteria described above in Section 4.3.4.

Sensitive Species: Except for the potential for spills (discussed below under BIO-2), impacts to all of the biological resources in the Project area are expected to be primarily temporary in nature. There are no sensitive plant or wildlife species known or expected to be present in the project disturbance zone (within the existing facility yard and along the proposed Pipeline alignment), and therefore, the construction phase of the Project is not expected to have adverse effects, either directly or through habitat modifications, on any species identified as being a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS.

Sensitive Habitats including Federal Wetlands: There are no sensitive wetland habitat, coastal scrub habitat, federally protected wetlands, or any other sensitive habitat in the general Project area, nor immediately downstream of the Project Site and therefore, the construction and operation phase of the Project is not expected to have adverse effects on any sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFW or USFWS;

Wildlife Migratory Corridors: Construction activities would be temporary, and would be followed by some increased traffic along an already heavily used thoroughfare. Disturbances to any wildlife species attempting to move through the area would either be temporary in nature or similar to existing conditions and therefore, the construction and operation phase of the Project is not expected to have a substantial effect on the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or interference with the use of native wildlife nursery sites.

Plan Consistency: The Project would not conflict with the provisions of any Conservation Planning program, Natural Community Conservation Planning program, or other approved local, regional, or state Habitat Conservation Planning program.

Except for the potential for spills (discussed below under BIO-2), the Project is not expected to (1) substantially reduce or eliminate species diversity or abundance, (2) substantially reduce or eliminate quantity or quality of nesting areas; (3) substantially limit reproductive capacity through losses of individuals or habitat; (4) substantially fragment, eliminate, or otherwise disrupt foraging areas and/or access to food sources; (5) substantially limit or fragment range and movement (geographic distribution or animals and/or seed dispersal routes); or (6) substantially interfere with natural processes, such as fire or flooding, upon which the habitat depends.

The following analyzes potentially significant impacts to biological resources due to installation of the Pipeline. These impacts would be temporary, during construction only, and would occur in previously disturbed areas.

Impact Number	Impact Description	Project Phase	Impact Class
BIO.1	Pipeline installation near potential avian breeding habitat has the potential to impact non-listed sensitive species including avian species protected by the Migratory Bird Treaty Act.	Phase 3	Class II Less Than Significant with Mitigation

In general, drilling operations at the facility yard and the Pipeline installation would not result in a substantial loss of habitat, would not result in a substantial population decline of any native fish, wildlife or plant species, nor result in an overall reduction in biological diversity in the Project area.

All of the wildlife species inhabiting the habitat in the Project vicinity are already exposed to high levels of human activities. Most of the wildlife species utilizing the urban setting and Greenbelt vegetation are currently exposed to high numbers of people walking through the area, traffic, traffic noise, pets, vegetation trimming, and regular maintenance. Site preparation at the City Maintenance Yard and Pipeline installation activities would result in minimal vegetation clearing and tree removal. It is expected that any Project related impacts to any plant or wildlife species in the area would be similar to existing conditions. No nests were visible in trees planned to be removed and/or trimmed near the facility yard during the non-nesting season site reconnaissance survey. However, vegetation trimming and tree removal could result in nests being impacted if vegetation removal was to occur during the avian nesting season which typically occurs between February 15 and August 15. Raptor species typically start breeding as early as January 15.

Raptor species including American kestrel and red-tailed hawk likely forage within the project areas. Foraging for all these species would be temporarily affected by the noise and increased human presence during construction activities. The CDFW recommends a buffer area of 500 feet from active or occupied raptor nests during the breeding season.

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The loss of any active nest would represent a violation of the Migratory Bird Treaty Act. This would be a significant impact. Mitigation Measure BIO-1, set forth below, would reduce this impact to a less than significant level. Impacts to other non-listed sensitive species would not represent a substantial loss of a population nor result in the decline of any native wildlife species.

Mitigation Measure

BIO-1: To minimize potential impacts to nesting native bird species, and in compliance with the federal Migratory Bird Treaty Act and Sections 3503, 3503.5, or 3513 of the California Fish and Wildlife Code, initial vegetation removal/trimming shall be done outside the breeding season (breeding season is defined herein as January 15 through August 31 for raptors and February 15 through August 31 for all non-raptor species). If vegetation removal/trimming must be completed during this period, then surveys for nesting birds must be conducted within 3 days prior to vegetation removal or other construction-related disturbances. If nesting birds are observed within the project area, then a minimum 100-foot buffer from any non-raptor species and 500 foot buffer from any raptor nest would be established and maintained for the duration of vegetation removal/trimming activities or until nestlings fledge from the nest.

Residual Impact

Impacts to all common wildlife and plant species potentially affected by the project would be temporary, would not result in any substantial effects, and would therefore not require any additional mitigation. Foraging raptor species are likely to be disturbed for only a short duration of time; significant impacts to breeding birds would be avoided by scheduling construction during the non-breeding season (MM BIO-1) and are therefore **less than significant with mitigation (Class II)**.

The only other impact that could occur based on the Biology thresholds is related to a potential oil spill that could reach the ocean, resulting in adverse effects on native species and habitats. Those impacts are discussed below.

Impact Number	Impact Description	Project Phase	Impact Class
BIO.2	A rupture or leak from oil Pipelines has the potential to result in a substantial adverse effect on native species and habitats, sensitive species, and biologically important habitats associated with the Pacific Ocean.	Phase 4	Class I Significant and Unavoidable

Spills and ruptures from the installed Pipelines could result due to geologic hazards, mechanical failure, structural failure, corrosion, or human error during operations. Spills and cleanup activities would potentially result in impacts to biological resources, with the only sensitive resources being associated with coastal habitats. Small leaks or spills, which are most likely, contained and remediated quickly, would result in minor or negligible impacts to biological resources. In contrast, large Pipeline spills occurring during rain events which could allow oil to enter stormdrains and subsequently spread out into coastal habitats would substantially degrade their value, and would represent a potential long-term impact to biological resources.

The volume, location, and seasonal timing of any potential spill would dictate the severity of impacts to biological resources. The drilling and well location and the main Pipeline alignment are all located within an urban area or along a paved road and are therefore, easier to contain and clean up than any spill near native habitats or aquatic habitat where crude oil could be transported downstream.

A spill outside of the well location would drain into the storm drains. All storm drains in the area eventually flow to the ocean. Figure 4.8-3 (Section 4.8) shows a map of the storm drain systems in the area. Storm drains located in the curbs at the corner of Cypress Avenue and 6th Street flow through storm drain piping and connect to the main storm drain system that runs down Valley Drive, which connects to the storm drain system that then runs down Herondo Street and out to the beach area. The storm drain system that runs down Valley Drive has intermittent street drains for collecting storm water, with drains located near the corner of Valley Drive and 2nd Street.

A spill at the drilling facility would need to travel through approximately 0.75 miles of storm drains to reach the ocean.

Impacts on resident biota could be short- to long-term, depending on the amount of oil spilled, environmental conditions at the time, containment and cleanup measures taken, and length of time for habitat recovery. Direct impacts on wildlife from oil spills include physical contact with the oil, ingestion of oil, and loss of food, critical nesting and foraging habitats. Organisms can be affected physically through smothering, interference with movements, coating of external surfaces with black coloration (leading to increased solar heat gain), and fouling of insulating body coverings (birds and mammals). Toxicity can occur via absorption through the body surface (skin, gills, etc.) or ingestion. Biological oxidation (through metabolism) can produce products more toxic than the original compounds. Sub-lethal effects include reduced reproductive success, narcosis, interference with movement, and disruption of chemosensory functions.

Spills or disturbances resulting from cleanup efforts within the marine, sandy beach, and foredune habitats have the potential to substantially affect a wide variety of wildlife discussed below:

Benthos. Oil represents a physical as well as a chemical hazard to benthic organisms, with impacts occurring through both physical smothering and hydrocarbon toxicity. Sessile species, such as barnacles, may be smothered while mobile animals, such as amphipods, may be immobilized and glued to the substrate or trapped in surface slicks. The potential severity of oil spill impacts to benthic organisms varies according to the degree of weathering of the oil. Fresh, unweathered oil contains higher amounts of the more-toxic aromatic hydrocarbons that may be readily accumulated by benthic organisms. The potential impacts of spilled oil to benthic communities are considered to be significant.

When spilled oil reaches the shoreline or intertidal zone, it becomes concentrated in a narrow zone. Because of the shallower water depth, hydrocarbon concentrations can reach toxic levels. Thus, intertidal biota are exposed to higher concentrations of oil for a longer period of time than most other marine organisms. Similarly, spilled oil that does not evaporate or wash ashore, is eventually

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incorporated into bottom sediments where it can be ingested by benthic organisms, or incorporated by contact with their gill membranes.

Plankton. Laboratory studies, field enclosure studies, and field studies conducted during oil spills have shown that oil spills have measurable effects upon marine phytoplankton and zooplankton. Impacts to phytoplankton include mortality, reduced growth, and reduced photosynthesis. Additionally, early life stages, such as eggs, embryos, and larvae of zooplankton, are considered to be more susceptible than adults to oil spill impacts because of their higher sensitivity to toxicants and higher likelihood of exposure to oil at the surface of the ocean. The severity of effects on phytoplankton will vary with respect to species present in the water column, the time of the year, and the chemical composition of the oil spilled. Both lethal and sublethal effects of oil on plankton depend on the persistence of sufficiently high concentrations of petroleum hydrocarbons in the water column.

Fish. Adult fish, due to their mobility, may be able to avoid or minimize exposure to spilled oil. However, there is no conclusive evidence that fish will avoid spilled oil (NRC 1985). Egg and larval stages would not be able to avoid exposure to spilled oil. The destruction of prey by a potential oil spill can also have significant impacts to fish productivity. Within the Project area, particularly vulnerable fish populations would be species that use estuaries or coastal wetlands, such as Ballona Lagoon, for part of their early life histories. These species, including game fishes, would be especially vulnerable because estuarine circulation tends to trap and recirculate pollutants at the sea water-fresh water interface. Because fish species can be economically important and because long-term loss can result from an oil spill, impacts to fish are considered to be significant.

Marine Birds. Oil spills pose a significant threat to marine birds. Due to the migratory nature of many bird species, the severity of oil spill impacts on marine birds would depend on the time of the year, the species present, and their numbers. Oil on a marine bird clogs and damages the fine structure of the feathers that is responsible for maintaining water repellency and heat insulation. In addition to coating by oil, marine birds are also subject to chronic, long-term effects from oil that remains in the environment. For example, small amounts of oil on a bird's plumage may be transferred to eggs during incubation. Birds can also consume oil through their diet or through preening, which results in physiological stress. Effects of ingested oil include acute irritation, difficulties in water absorption, and general pathological changes in some organs. Ingestion of oil can also affect reproductive success by degrading yolk structure, reducing clutch size, and decreasing egg viability.

Shorebirds. Santa Monica Bay is a critical feeding area along the Pacific flyway used by up to one million shorebirds, including sandpipers, plovers, killdeer, oystercatchers, stilts, avocets and willets (Baird 1993). Shorebirds are most abundant in winter and generally feed in shallow waters and flats of bays and estuaries, while some prefer to feed along sandy beaches and rocky shores. Although shorebirds are able to avoid oiling to some extent by retreating from exposed habitat, both bay and open coast feeding habitats will potentially be impacted by any Project-related oil spill if that oil was able to flow from the spill site, down through storm drains, and out into the ocean.

Marine Mammals. Marine mammals that could be impacted by an oil spill include cetaceans (whales and dolphins), pinnipeds (seals), and fissipeds (sea otters). Animals that are unable to avoid contact with oil could be impacted by fouling, inhalation, or ingestion that could result in sublethal or lethal

effects. The marine mammal species that occur in the Project area exhibit varying degrees of vulnerability to oil spills. Impacts can be caused either by oil contact or by ingestion. There is evidence that some cetacean species may avoid contact with oil at sea; however, pinniped species and sea otters could potentially suffer lethal and long term sublethal effects resulting in significant impacts. Onshore cleanup activities, depending on location, could disrupt pinniped haul-out and rookery areas and could also result in significant impacts. As a result, impacts to marine mammals are considered to be significant.

Probability of Spill. As described in Section 4.8, Safety Risk of Upset and Hazards, the probability that there would be any sized spill at any point of the Pipeline over the 35 year life of the Project would be 34%. The probability of any sized spill in the Herondo area, which is closer to the ocean and sensitive biological resources, is estimated to be 14%. In order for flows to reach the marine habitats a spill would have to occur during a substantial rain event. The probability of a spill occurring during a 0.50 inch storm event in the Herondo area would be 0.4%. Therefore, the chance of any spill actually getting to the ocean and/or any sensitive receptor in the coastal area is exceptionally low.

However, although there is a low likelihood of flows from a spill reaching the Pacific Ocean, any spill occurring during a substantial rain event does have some potential to affect nearshore and shoreline habitat. A spill occurring under these circumstances would therefore, have the potential to change the functionality of these areas. These sensitive areas and resources described above that are known to occur throughout the nearby marine habitat are protected by Federal, State and/or local regulations and include specialized communities and habitats that supports the presence of marine mammals, birds, and endangered species. A spill that contacts the shoreline would also contaminate or increase mortality of invertebrates that are forage material for some sensitive species in the general area. Impacts to sensitive habitats and protected species resulting from spills related to from the proposed project would be considered significant.

Subsurface Release. Any subsurface drilling releases into the Pacific Ocean could result in potentially significant adverse effects on native species, sensitive species, sensitive marine mammal, important coastal habitats. Impacts on resident marine biota could be short- to long-term, depending on the amount of oil released, environmental conditions at the time, containment and cleanup measures taken, and length of time for containment. However, drilling is proposed to occur over 2,000 feet below the sea floor. Any fluids would then have to travel through 2,000 feet of substrate to reach the marine resources, the potential for any rupture or leak from subsurface drilling is considered to be very low frequency and probability.

Impacts from Cleanup. Impacts of cleanup could be potentially more substantial than the effect of the spilled oil itself. Spill response and cleanup actions, including, but not limited to, the application of dispersants, pressure washing of intertidal areas, manual removal of oil from beaches and estuaries, could directly result in toxicity or fouling to biota, crushing of individual organisms, vegetation removal, and habitat degradation. The level of impact would depend on the size of the spill, the amount of habitat affected, and the number of individuals and types of species affected. Most of the habitat in the most likely of access points for spilled material did not support any native or non-native vegetation.

Mitigation Measure

The potential for oil spills and the associated spill volumes is discussed in Section 4.8: Safety, Risk of Upset and Hazards and Section 4.9, Hydrology and Water Quality. Mitigation measures identified in Sections 4.8 and 4.9 require procedures and plans that include an Oil Spill Prevention, Control and Countermeasure Plan; Pipeline Management Plan; and the requirement of an Emergency Response Plan; all of which act to limit the potential for onsite spills and associated significant impacts. If a spill and cleanup were to occur that affected the coastline, implementing the following measures would reduce impacts on biological resources.

BIO-2: The Applicant shall submit for City approval and shall implement an Emergency Response Plan that would address protection of biological resources and possible revegetation of any areas disturbed during an oil spill or cleanup activities. The Emergency Response Plan shall, at a minimum, include specific measures to avoid impacts to native vegetation and wildlife habitats, plant and animal species, and environmentally sensitive habitat areas during response and cleanup operations. The Emergency Response Plan shall include provisions for containment and cleanup within 1,000 feet downstream of the Pipeline. The plan shall contain:

- Definition of the authorities, responsibilities, and duties of all entities involved in oil removal operations;
- Procedures for regular monitoring and inspections of pipelines and facilities;
- Procedures for early detection and timely notification of an oil discharge;
- A description of the necessary onsite equipment and details on the placement of the material required to quickly control, contain, and remove any discharged oil;
- Assurance that full resource capability is known and can be committed following a discharge;
- Actions for after discovery and notification of a discharge;
- Procedures to facilitate recovery of damages and enforcement measures.

The Emergency Response Plan shall be approved by the California Department of Fish and Game (CDFG) Office of Spill Prevention and Response (OSPR).

When habitat disturbance cannot be avoided, the Emergency Response Action Plan shall provide stipulations for development and implementation of site-specific habitat restoration plans and other site-specific and species-specific measures appropriate for mitigating impacts to local populations of special-status wildlife species and to restore native plant and animal communities to pre-spill conditions. Access and egress points, staging areas, and material stockpile areas that avoid specific habitat areas shall be identified. The Emergency Response Action Plan shall include species- and site-specific procedures for collection, transportation and treatment of oiled wildlife.

The Emergency Response Plan shall be approved by the City prior to commencing any construction activities.

Residual Impact

Implementing the proposed mitigation measures, as well as infrastructure preventative maintenance, structural integrity tests, and routine inspections, would reduce the likelihood and severity of potential spill and exposure impacts to sensitive biological resources. Small leaks or spills, which are contained and remediated quickly, are likely to have only minor or negligible impacts to biological resources. In contrast, large spills, such as those that could be produced from a Pipeline rupture, could spread to the beach and potentially to the numerous sensitive habitats and species present in the Pacific Ocean, resulting in an impact considered to be **significant and unavoidable (Class I)**.

4.3.6. Other Issue Area Mitigation Measure Impacts

Mitigation measures proposed for other issues areas in this EIR would not increase impacts to biological resources if they are implemented. Most of the mitigation measures are designed to reduce the likelihood of spills and releases which would decrease potential impacts to biological resources. Therefore, additional analysis or mitigation is not required.

4.3.7. Cumulative Impacts and Mitigation Measures

None of the cumulative residential or commercial projects would be constructed near the Proposed Project area, so there would be no operational localized impacts associated with cumulative projects. Although additional projects in the Project area could increase the potential for impacts to biological resources, all of the plant and wildlife species are already exposed to a high level of human-related pressures and impacts. Operational regional impacts could be produced, however, as multiple projects would emit pollutants into the same air basin at the same time. As the Proposed Project would produce significant impacts, cumulative impacts could also be significant.

The cumulative geographic context for the evaluation of impacts on biological resources is regional coastal development, particularly within the Santa Monica Bay. Consequently, other projects considered in the Cumulative Project Impact Analysis could potentially result in degradations to water quality and biological resources, either through small-scale releases of contaminants or large-scale spills.

Thus, cumulative impacts to biology are not considered to be significant.

4.3 Biological Resources

4.3.8. Mitigation Monitoring Plan

Mitigation Measure	Requirements	Compliance Verification		
		Method	Timing	Responsible Party
BIO-1	To minimize potential impacts to nesting native bird species, and in compliance with the federal Migratory Bird Treaty Act and Sections 3503, 3503.5, or 3513 of the California Fish and Wildlife Code, initial vegetation removal/trimming shall be done outside the breeding season (breeding season is defined herein as January 15 through August 31 for raptors and February 15 through August 31 for all non-raptor species). If vegetation removal/trimming must be completed during this period, then surveys for nesting birds must be conducted within 3 days prior to vegetation removal or other construction-related disturbances. If nesting birds are observed within the project area, then a minimum 100-foot buffer from any non-raptor species and 500 foot buffer from any raptor nest would be established and maintained for the duration of vegetation removal/trimming activities or until nestlings fledge from the nest.	Plan review, site inspections	Before and during construction	City of Hermosa Beach
BIO-2	The Applicant shall submit for City approval and shall implement an Emergency Response Plan that would address protection of biological resources and possible revegetation of any areas disturbed during an oil spill or cleanup activities. The Emergency Response Plan shall, at a minimum, include specific measures to avoid impacts to native vegetation and wildlife habitats, plant and animal species, and environmentally sensitive habitat areas during response and cleanup operations. The Emergency Response Plan shall include provisions for containment and cleanup within 1,000 feet downstream of the Pipeline. The plan shall contain: <ul style="list-style-type: none"> • Definition of the authorities, responsibilities, and duties of all entities involved in oil removal operations; • Procedures for regular monitoring and inspections of pipelines and facilities; • Procedures for early detection and timely notification of an oil discharge; • A description of the necessary 	Plan review	Before construction	City of Hermosa Beach

Mitigation Measure	Requirements	Compliance Verification		
		Method	Timing	Responsible Party
	<p>onsite equipment and details on the placement of the material required to quickly control, contain, and remove any discharged oil;</p> <ul style="list-style-type: none"> • Assurance that full resource capability is known and can be committed following a discharge; • Actions for after discovery and notification of a discharge; • Procedures to facilitate recovery of damages and enforcement measures. <p>The Emergency Response Plan shall be approved by the California Department of Fish and Game (CDFG) Office of Spill Prevention and Response (OSPR).</p> <p>When habitat disturbance cannot be avoided, the Emergency Response Action Plan shall provide stipulations for development and implementation of site-specific habitat restoration plans and other site-specific and species-specific measures appropriate for mitigating impacts to local populations of special-status wildlife species and to restore native plant and animal communities to pre-spill conditions. Access and egress points, staging areas, and material stockpile areas that avoid specific habitat areas shall be identified. The Emergency Response Action Plan shall include species- and site-specific procedures for collection, transportation and treatment of oiled wildlife.</p> <p>The Emergency Response Plan shall be approved by the City prior to commencing any construction activities.</p>			

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