4.6 BIOLOGICAL RESOURCES

4.6.1 INTRODUCTION

This EIR section describes existing biological resources on the Project site; identifies associated potential biological resource impacts related to development in accordance with the proposed Newport Banning Ranch Project; and sets forth measures designed to mitigate identified significant adverse impacts. This analysis is based on and summarizes the *Biological Technical Report, Newport Banning Ranch* (Biological Technical Report), prepared by BonTerra Consulting (2011). The approximate 401.1-acre Project site is located in the City of Newport Beach (40 acres) and unincorporated Orange County, California (361 acres). The Biological Technical Report is included in its entirety in Appendix E of this EIR.

4.6.2 REGULATORY SETTING

This section contains a discussion of the applicable laws, ordinances, regulations, and standards that govern biological resources and that must be adhered to prior to and during construction of the proposed Project.

Federal

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

The Federal Endangered Species Act of 1973 (FESA) provides for (1) the conservation of plant and animal species that are listed by the federal government as "Endangered" or "Threatened" with extinction throughout all or a significant portion of their range and (2) the conservation of the ecosystems on which they depend. The FESA is implemented by enforcing Sections 7 and 9 of the FESA. A federally listed species is protected from unauthorized "take" pursuant to Section 9 of the FESA. "Take", as defined by the FESA, means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or to attempt to engage in any such conduct". All persons are prohibited from taking a federally listed species unless and until (1) the appropriate Section 10(a) permit has been issued by the U.S Fish and Wildlife Service (USFWS) or (2) an Incidental Take Statement is obtained as a result of formal consultation between a federal agency and the USFWS pursuant to Section 7 of the FESA and the implementing regulations that pertain to it (50 *Code of Federal* Regulations [CFR] 402). "Person" is defined in the FESA as "an individual, corporation, partnership, trust, association, or any private entity; any officer, employee, agent, department or instrumental of the federal government; any State, Municipality, or political subdivision of the State; or any other entity subject to the jurisdiction of the U.S.". The Project Applicant is a "person" for purposes of the FESA.

Sections 404 and 401 of the Clean Water Act of 1972 (33 USC 1251 et seq.)

Section 404 of the Clean Water Act (CWA) regulates the discharge of dredged or fill material into "Waters of the U.S.", including wetlands. The U.S. Army Corps of Engineers (USACE) is the designated regulatory agency responsible for administering the 404 permit program and for making jurisdictional determinations. This permitting authority applies to all "Waters of the U.S." where the material has the effect of (1) replacing any portion of "Waters of the U.S." with dry land or (2) changing the bottom elevation of any portion of "Waters of the U.S.". These fill materials would include sand, rock, clay, construction debris, wood chips, and materials used to create any structure or infrastructure in "Waters of the U.S.". Dredge and fill activities are typically associated with development projects; water-resource related projects; infrastructure development and wetland conversion to farming; forestry; and urban development.

Under CWA Section 401, an activity requiring a USACE Section 404 permit must obtain a State Water Quality Certification (or waiver thereof) to ensure that the activity will not violate established State water quality standards. The State Water Resources Control Board (SWRCB), in conjunction with the nine California Regional Water Quality Control Boards (RWQCBs), is responsible for administering the Section 401 water quality certification program.

Under Section 401 of the federal CWA, an activity involving discharge into a water body must obtain a federal permit and a State Water Quality Certification to ensure that the activity will not violate established water quality standards. The U.S. Environmental Protection Agency is the federal regulatory agency responsible for implementing the Section 401 CWA program. However, pursuant to the CWA, the SWRCB, in conjunction with the nine RWQCBs, has been delegated the responsibility to administer the water quality certification (401) program.

Migratory Bird Treaty Act of 1918 (16 USC 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).

In 1972, the MBTA was amended to include protection for migratory birds of prey (e.g., raptors). Six families of raptors occurring in North America were included in the amendment: Accipitridae (kites, hawks, and eagles); Cathartidae (New World vultures); Falconidae (falcons and caracaras); Pandionidae (ospreys); Strigidae (typical owls); and Tytonidae (barn owls). The provisions of the 1972 amendment to the MBTA protect all species and subspecies of these families.

Bald and Golden Eagle Protection Act of 1940 (16 USC 668)

The Bald and Golden Eagle Act provides for the protection of the bald eagle and the golden eagle by prohibiting, except under certain specified conditions, the taking, possession, and commerce of such birds. The 1972 amendments increased penalties for violating provisions of the Act and strengthened other enforcement measures. A 1978 amendment authorizes the Secretary of the Interior to permit the taking of golden eagle nests that interfere with resource development or recovery operations. A 1994 Memorandum (59 Federal Register 22953) on April 29, 1994, from President William J. Clinton to the heads of Executive Agencies and Departments sets out the policy concerning collection and distribution of eagle feathers for Native American religious purposes.

State

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

Pursuant to the California Endangered Species Act (CESA) and Section 2081 of the *California Fish and Game Code,* an Incidental Take Permit from the California Department of Fish and Game (CDFG) is required for projects that could result in the take of a State-listed Threatened or Endangered species. Under the CESA, "take" is defined as an activity that would directly or indirectly kill an individual of a species, but the definition does not include "harm" or "harass", as the federal act does. As a result, the threshold for a take under the CESA is higher than that

under the FESA. An incidental take permit authorized by the CDFG under Section 2081(b) of the *California Fish and Game Code* would be required where a project could result in the take of a State-listed Threatened or Endangered Species. The application for an Incidental Take Permit under Section 2081(b) has a number of requirements, including the preparation of a conservation plan, generally referred to as a Habitat Conservation Plan.

California Environmental Quality Act (14 California Code of Regulations §15386; California Fish and Game Code §1802)

The CDFG may play various roles during the CEQA process. As a trustee agency, the CDFG has jurisdiction over certain resources held in trust for the people of California. Trustee agencies are generally required to be notified of CEQA documents relevant to their jurisdiction, whether or not these agencies have actual permitting authority or approval power over aspects of the underlying project (14 *California Code of Regulations* [CCR] 15386). The CDFG, as a trustee agency, must be notified of CEQA documents regarding projects involving fish and wildlife of the State, as well as Rare and Endangered native plants, wildlife areas, and ecological reserves. Although as a trustee agency the CDFG cannot approve or disapprove a project, lead and responsible agencies are required to consult with the CDFG. The CDFG, as the trustee agency for fish and wildlife resources, shall provide the requisite biological expertise to review and comment upon environmental documents and impacts arising from project activities and shall make recommendations regarding those resources held in trust for the people of California (*California Fish and Game Code* §1802).

California Coastal Act (§30240)

The California Coastal Act was enacted to protect the California coastline by managing the conservation and development of coastal resources through land use planning and regulation. An environmentally sensitive habitat areas (ESHA) is defined in Section 30107.5 of the California Coastal Act as “any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could easily be disturbed or degraded by human activities and development”. The entire Project site is within the Coastal Zone as defined by the Coastal Act.

The California Coastal Act regulates all development activities in areas of special concern, such as wetlands and other ESHAs. Under the Coastal Act, wetlands are defined in Section 30121 of the *California Public Resources Code* (PRC) as “lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens”.

Section 30240 of the California Coastal Act requires that

> (a) 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 and
>
> (b) 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.

Streambed Alteration (California Fish and Game Code §§1600–1616)

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources and/or riparian vegetation are subject to CDFG regulations, pursuant to Section 1600 through Section 1603 of the *California Fish and Game Code.* Under Section 1602, it is unlawful for any person to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the CDFG as waters within their jurisdiction, nor can a person use any material from the streambeds without first notifying the CDFG of such activity. For a project that may affect stream channels and/or riparian vegetation regulated under Sections 1600 through 1603, CDFG authorization is required in the form of a Streambed Alteration Agreement.

Native Plant Protection (California Fish and Game Code §§1900 –1913)

This section lists Threatened, Endangered, and Rare plants so designated by the California Fish and Game Commission.

Natural Communities Conservation Plan (California Fish and Game Code §§2800–2835)

On August 30, 1991, the California Fish and Game Commission considered a petition in support of listing the coastal California gnatcatcher (*Polioptila californica californica*) as a State Endangered species. The Commission decided not to list the coastal California gnatcatcher in favor of pursuing preparation of a Natural Communities Conservation Plan (NCCP) program, as proposed by Assembly Bill (AB) 2172 (*California Fish and Game Code* §§2800 et seq.). AB 2172 authorizes the CDFG to enter into agreements with any person for the purpose of preparing and implementing NCCPs and for preparing guidelines for developing and implementing NCCPs. AB 2172 also permits NCCPs to be prepared by local, State, or federal agencies independently or in cooperation with other persons, and requires the CDFG to be compensated for costs incurred in the preparation and implementation of NCCPs.

The purpose of the NCCP program is to provide regional or areawide protection and to promote perpetuation of natural wildlife diversity while allowing compatible and appropriate development and growth. AB 2172 was designed in response to the fact that individual species protection under the CESA and the FESA is costly and historically ineffective as a mechanism for protection from or the prevention of plant and wildlife species extinction, and that a habitat-based, multi-species, or ecosystem-driven preservation approach has a greater potential for long-term success. The focus of the NCCP program represents a dramatic shift from "individual species" to "habitat" preservation.

On March 25, 1993, the U.S. Department of the Interior listed the coastal California gnatcatcher as a Threatened species and adopted a special rule in accordance with Section 4(d) of the FESA that authorizes landowners and local jurisdictions to voluntarily participate in the State of California NCCP Act of 1992.

Since that time, the County of Orange—in conjunction with State and federal resource agencies, local jurisdictions, utility companies, the Transportation Corridor Agencies, and major private landowners—prepared the NCCP/HCP for the Central/Coastal Subregion (approved on July 10, 1996). These plans are intended to ensure the long-term survival of the coastal California gnatcatcher and other special status, coastal sage scrub-dependent plant and wildlife species in accordance with State-sanctioned NCCP program guidelines. The Project site occurs within the Central/Coastal Subregion.

NCCP/HCP implementation began when the Central/Coastal Subregional NCCP/HCP program was completed and approved in 1996. The USFWS monitors the plan to ensure it is successfully implemented. The design of the Central/Coastal NCCP/HCP Subregion was intended to preserve the most biologically rich areas within the subregion while identifying areas suitable for development.

Existing Use Areas are portions of the Central/Coastal Subregion owned by non-participating landowners and public agencies and are subject to the provisions of Chapter 4.4.1 of the NCCP/HCP. Existing Use Areas contain important populations of Identified Species that are geographically removed from the Reserve System such that they do not provide primary connectivity functions (i.e., these areas exist as "islands" of Identified Species populations). These areas include existing open space maintained by community and homeowners associations, other privately owned lands, and some public parklands. The provisions governing Existing Use Areas apply only to existing natural habitat areas within the designated Existing Use Areas. The NCCP/HCP does not authorize Incidental Take within the Existing Use Areas; such activities must be submitted to the USFWS for review and approval, consistent with existing federal law and the provisions of Section 7.3 of the NCCP/HCP and the NCCP/HCP Implementation Agreement. The Project site occurs within the Santa Ana River Mouth Existing Use Area. This area has been designated as an Existing Use Area because "it provides existing gnatcatcher habitat; it is located adjacent to Talbert Nature Preserve and has significant potential to contribute to the long-term biological function of the Reserve System; and it would be inappropriate to authorize Incidental Take of what could be a significant population of coastal California gnatcatcher without being able to review available biological data" (County of Orange 1996a).

California Fully Protected Species (California Fish and Game Code §§3511, 4700, 5050, and 5515)

These sections provide a provision for the protection of bird, mammal, reptile, amphibian, and fish species that are "fully protected". Fully protected animals may not be harmed, taken, or possessed.

Nesting Bird Protection (California Fish and Game Code §§3503, 3503.5, and 3513)

These sections state that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by 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 MBTA.

California Code of Regulations Title 14 (§§670.2 and 670.5)

These sections list animals designated as Threatened or Endangered in California. The CDFG designates species considered to be indicators of regional habitat changes, or candidate species for future State listing, such as California Species of Special Concern.

California Porter-Cologne Water Quality Control Act

Pursuant to the California Porter-Cologne Water Quality Control Act, the SWRCB and the nine RWQCBs may require permits ("Waste Discharge Requirements" [WDRs]) 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 §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 and the RWQCBs have interpreted their authority to require WDRs to extend to any proposal to fill or alter "Waters of the State", even if those same waters are not under USACE jurisdiction. Pursuant to this authority, the SWRCB and the RWQCBs may require the submission of a "report of waste discharge" under Section 13260 of the *California Water Code*, which is treated as an application for a WDR.

4.6.3 METHODOLOGY

General and focused biological surveys were conducted on the Project site by BonTerra Consulting from 2008 through 2011 for the City of Newport Beach for the Newport Banning Ranch Project and by Glenn Lukos Associates (GLA) from 1998 to 2002 and from 2006 to 2011 for the Applicant. Vegetation mapping for the proposed Project was prepared by BonTerra Consulting.

Vegetation Mapping and Plant Surveys

Prior to conducting field surveys on site, BonTerra Consulting conducted a literature search to identify special status plants, wildlife, and habitats known to occur in the vicinity of the Project site. The literature search was updated during preparation of this Section. Sources reviewed include the California Native Plant Society's (CNPS's) Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS 2011); the CDFG's California Natural Diversity Database (CNDDB) (CDFG 2011a); and a compendium of special status species published by the USFWS and the CDFG (CDFG 2011a, 2011c). Database searches included the U.S. Geological Survey's (USGS') Seal Beach, Newport Beach, Tustin, and Laguna Beach 7.5-minute quadrangles. In addition, previous survey reports prepared by GLA were also reviewed (GLA 2009b).

Vegetation mapping and general plant surveys were conducted on September 10 and 14–17, 2009. In addition, a few locations were revisited on January 11, 2010 and October 7, 2010, to update the vegetation map, but the entire site was not visited at that time. The purpose of the mapping was to describe vegetation conditions present on the Project site and to evaluate the potential of the habitats to support special status species. All plant species observed were recorded in field notes and are listed in Table A-1 of the Biological Technical Report (Appendix E of this EIR). BonTerra Consulting conducted special status plant surveys on the Project site on March 29 and 31; April 7, 9, 27, and 28; May 21 and 22; June 30; July 9 and 21; and August 4 and 13, 2009. Prior to the surveys, known reference populations of the focal species were visited to ensure survey times were appropriate. All areas of the Project site with potentially suitable habitat for special status plant species were surveyed using meandering transects. Results of the special status plant surveys are included in the Biological Technical Report (Appendix E).

GLA conducted focused plant surveys for the applicant in fall 2006 with a focus on southern tarplant (*Centromadia parryi* ssp. *australis*), which flowers in late summer and early fall. Focused surveys were also performed in spring 2007; however, because of the drought conditions, surveys were repeated in 2008, beginning in March and extending through May (GLA 2009b).

Wildlife Surveys

Vegetation mapping and general wildlife surveys were conducted concurrently. General observations of wildlife were also noted during all focused surveys in 2009, 2010, and 2011. All wildlife species observed were recorded in field notes and are listed in Table A-2 of the Biological Technical Report (Appendix E).

During the surveys, each vegetation type was evaluated for its potential to support special status species that are known or expected to occur in the region. Active searches for reptiles and amphibians included lifting, overturning, and carefully replacing rocks and debris. Birds were identified by visual and auditory recognition. Surveys for mammals were conducted during the day and involved searching for and identifying diagnostic signs including scat, footprints, scratch-outs, dust bowls, burrows, and trails. All wildlife species observed during all survey efforts were recorded in field notes and are listed in Table A-2 of the Biological Technical Report (Appendix E).

In addition to the general wildlife surveys, focused surveys were conducted on the Project site for fairy shrimp (multiple species), burrowing owl (*Athene cunicularia*), coastal California gnatcatcher, southwestern willow flycatcher (*Empidonax traillii extimus*), and least Bell's vireo (*Vireo bellii pusillus*); see Appendix E.

Dry-season focused surveys for fairy shrimp were conducted by GLA/PCR in fall 1998, during which time fairy shrimp cysts were identified in two vernal pools on the Project site. Additional wet-season surveys by GLA in 2000 identified San Diego fairy shrimp (*Branchinecta sandiegonensis*) on the site. Subsequent wet season monitoring by GLA and BonTerra Consulting and wet season surveys were conducted by GLA during the 2007–2008, 2008–2009, and 2009–2010 rainfall seasons to identify any additional areas that ponded for sufficient duration and whether any additional areas contained San Diego fairy shrimp. Surveys for the 2010–2011 were completed in mid-April 2011.

GLA conducted updated wintering and breeding season burrowing owl surveys in 2010 and also conducted previous focused burrowing owl surveys in winter 2008, spring–summer 2008, and winter 2009. BonTerra conducted winter and breeding surveys in 2009. These surveys also followed California Burrowing Owl Consortium guidelines.

GLA previously conducted focused surveys for coastal California gnatcatcher in April and May 2006 and March and April 2007. BonTerra conducted gnatcatcher surveys during March and April of 2009. These surveys followed USFWS presence/absence survey protocol.

GLA previously conducted focused surveys for the least Bell's vireo and southwestern willow flycatcher between April and July 2006 and between April and July 2007. BonTerra conducted vireo/flycatcher surveys from April to July 2009. These surveys also followed USFWS presence/absence survey protocol for these species.

Jurisdictional Delineation

A jurisdictional delineation was conducted to determine whether jurisdictional "Waters of the U.S.", including wetlands (if present), and/or "Waters of the State" are present on the Project site. The delineation was conducted by BonTerra Consulting on June 25 and July 14, 15, 16, and 22, 2009. In addition, BonTerra Consulting conducted a review of portions of the Project site with GLA on September 30, 2009. Results of the survey are included in the Biological Technical Report (Appendix E).

USACE jurisdictional waters are typically defined by the ordinary high water mark (OHWM) and other specific criteria. Wetlands, a subset of jurisdictional waters, are defined as those that possess the following three parameters: (1) hydrology that provides permanent or periodic inundation by groundwater or surface water; (2) hydric soils; and (3) hydrophytic vegetation, as indicated in the 1987 *U.S Army Corps of Engineers Wetlands Delineation Manual* ("Wetlands Manual") (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* ("Arid West Supplement"), the latter issued by the USACE in September 2008. Both the 1987 Wetlands Manual and the Arid West Supplement to the manual provide technical methods and guidelines for determining the presence of "Waters of the U.S." and wetland resources.

The RWQCB shares jurisdiction with the USACE unless isolated conditions are present. If isolated waters conditions are present, the RWQCB takes jurisdiction using the USACE's definition of the OHWM and/or the three-parameter wetlands methodology pursuant to the 1987 Wetlands Manual.

CDFG jurisdictional limits are similar to those of USACE jurisdiction, but include riparian habitat supported by a river, stream, or lake regardless of the presence or absence of hydric soils and saturated soil conditions. The results of the jurisdictional delineation are included in the Biological Technical Report (Appendix E).

The California Coastal Commission regulates the use of land and water in the coastal zone. The Coastal Commission, with the assistance of the CDFG, generally identifies the presence of wetlands based on the USFWS wetland definition and classification system (Cowardin et al. 1979). However, the Coastal Commission generally requires the presence of only one of the three parameters (e.g., hydrology, hydric soils, or hydrophytic vegetation) for an area to qualify as a wetland, unless it can be demonstrated that there is strong evidence of upland conditions (Dixon 2003).[1]

4.6.4 EXISTING CONDITIONS

Vegetation Types

The following 45 five vegetation types and land cover types occur on the Project site: southern coastal bluff scrub, California sagebrush scrub, Encelia scrub, coyote brush scrub, coyote brush scrub/mule fat scrub, goldenbush scrub, southern cactus scrub, southern cactus scrub/Encelia scrub, saltbush scrub, disturbed southern coastal bluff scrub, disturbed sage scrub, disturbed Encelia scrub/mule fat scrub, disturbed Encelia scrub, disturbed goldenbush scrub, disturbed goldenbush scrub/mule fat scrub/salt marsh, disturbed southern cactus scrub, disturbed southern cactus scrub/Encelia scrub, ruderal/disturbed Encelia scrub, ruderal/disturbed Encelia scrub/disturbed mule fat scrub, ornamental/disturbed southern coastal bluff scrub, non-native grassland, non-native grassland/ruderal, ruderal, vernal pool, ephemeral pool, freshwater marsh, alkali meadow, disturbed alkali meadow, salt marsh, disturbed salt marsh, mudflat, open

[1] In applying this definition, Coastal Commission staff typically use a "one-parameter" approach, meaning it is a site that (1) exhibits a positive test for a predominance of plants with an indicator status of Facultative (FAC) (equally likely to occur in wetlands or non-wetlands) or wetter or (2) a positive test for hydric soils or (3) a positive test for wetland hydrology, is presumed to be a wetland unless the presumption can be "rebutted by strong, independent evidence of upland condition" (source: Dr. John Dixon, Staff Ecologist, Coastal Commission hearing on November 5, 2003). Dr. Dixon also wrote in an opinion referenced in a staff report prior to the 2003 hearing that "In recognition of the fact that a proportion of wetland indicator plants occur in uplands, the wetland presumption may be falsified where there is strong, positive evidence of upland conditions". Therefore, once the Coastal Commission establishes the presumption, the burden shifts to the applicant who must then prove that one or both of the other indicators do not exist".

water, mule fat scrub, willow scrub, willow riparian forest, disturbed mule fat scrub, disturbed mule fat scrub/ruderal, disturbed mule fat scrub/goldenbush scrub, disturbed willow scrub, disturbed willow riparian forest, giant reed, cliff, ornamental, disturbed, and disturbed/developed.

A general description of each of the vegetation types and other areas is included below, and a plant compendium is included in the Biological Technical Report (Appendix E). Exhibits 4.6-1a and 4.6-1b, Vegetation Types and Other Areas, present the vegetation map of the Project site. The total acreage of each vegetation type is summarized in Table 4.6-1.

TABLE 4.6-1
VEGETATION TYPES ON THE PROJECT SITE

Vegetation Type	Existing (Acres)
Coastal Sage Scrub	**37.63**
Southern Coastal Bluff Scrub	9.21
California Sagebrush Scrub	0.29
Encelia Scrub	15.73
Coyote Brush Scrub	0.33
Coyote Brush Scrub/Mule Fat Scrub	0.06
Goldenbush Scrub	0.87
Southern Cactus Scrub	8.91
Southern Cactus Scrub/Encelia Scrub	2.17
Saltbush Scrub	0.06
Disturbed Coastal Sage Scrub	**20.64**
Disturbed Southern Coastal Bluff Scrub	5.66
Disturbed Sage Scrub	0.30
Disturbed Encelia Scrub/Mule Fat Scrub	0.49
Disturbed Encelia Scrub	4.33
Disturbed Goldenbush Scrub	1.19
Disturbed Goldenbush Scrub/Mule Fat Scrub/Salt Marsh	1.06
Disturbed Southern Cactus Scrub	1.04
Disturbed Southern Cactus Scrub/Encelia Scrub	0.78
Ruderal/Disturbed Encelia Scrub	0.80
Ruderal/Disturbed Encelia Scrub/Disturbed Mule Fat Scrub	2.74
Ornamental/Disturbed Southern Coastal Bluff Scrub	2.25
Grassland and Ruderal	**120.40**
Non-Native Grassland	85.76
Non-Native Grassland/Ruderal	6.51
Ruderal	28.13
Grassland Depression Features	**0.40**
Vernal Pool	0.33
Ephemeral Pool	0.07
Marshes and Mudflats	**31.45**
Freshwater Marsh	0.50
Alkali Meadow	20.39
Disturbed Alkali Meadow	2.42
Salt Marsh	6.01
Disturbed Salt Marsh	0.26

TABLE 4.6-1 (Cont.)
VEGETATION TYPES ON THE PROJECT SITE

Vegetation Type	Existing (Acres)
Mudflat	0.43
Open Water	1.44
Riparian Scrub/Forest	**21.71**
Mule Fat Scrub	3.32
Willow Scrub	1.14
Willow Riparian Forest	17.25
Disturbed Riparian Scrub/Forest	**38.87**
Disturbed Mule Fat Scrub	28.87
Disturbed Mule Fat Scrub/Ruderal	0.88
Disturbed Mule Fat Scrub/Goldenbush Scrub	2.03
Disturbed Willow Scrub	1.03
Disturbed Willow Riparian Forest	6.06
Other Areas	**133.15**
Giant Reed	0.39
Cliff	0.10
Ornamental	23.05
Disturbed	85.59
Disturbed/Developed	24.02
Total	***404.25***

Note: These acreages are based on GIS mapping. The difference between the approximate 401-acre Project site and the approximate 404-acre existing area is the approximately 3 acres outside of the property line is associated with off-site impact areas (e.g., Newport-Mesa Unified School District property and Costa Mesa and Newport city properties).

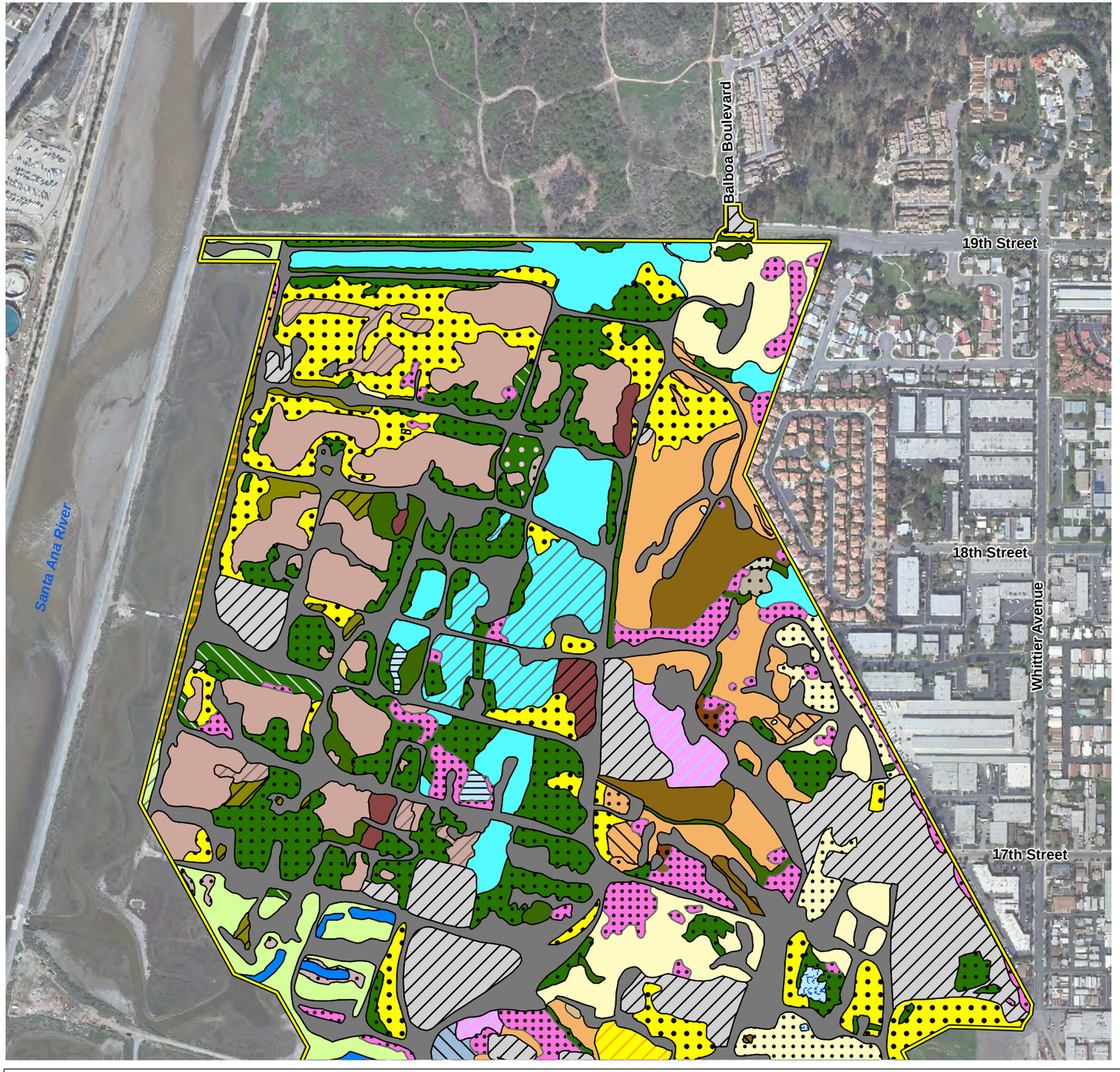
Source: BonTerra Consulting 2011

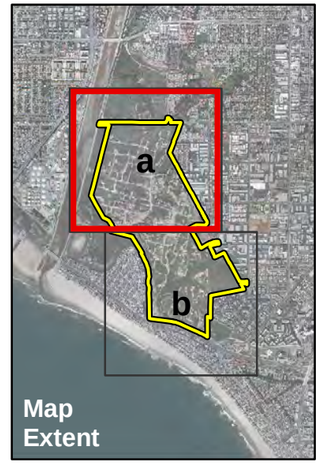
Southern Coastal Bluff Scrub

Southern coastal bluff scrub occurs along the exposed bluffs and cliffs at the southern edge of the Project site overlooking West Coast Highway. These exposed areas contain low-growing native and non-native species and some elements of maritime succulent scrub, which can also be used to describe components of this vegetation type. Southern coastal bluff scrub is dominated by bush sunflower (*Encelia californica*), bladderpod (*Isomeris arborea*), California buckwheat (*Eriogonum fasciculatum*), coastal cholla (*Cylindropuntia prolifera*), coastal prickly pear (*Opuntia littoralis*), and at some locations, locally dense areas of California box-thorn (*Lycium californicum*). The most common non-native species in this area are hottentot fig (*Carpobrotus edulis*) and Myoporum (*Myoporum laetum*).

California Sagebrush Scrub

California sagebrush scrub occurs on a cut slope in the eastern edge of the Project site, where it was planted adjacent to the City Utilities Yard. This area contains an overhead sprinkler system and species that are typically planted in a hydroseed mix (i.e., brittlebush [*Encelia farinosa*]). This vegetation type is dominated by California sagebrush (*Artemisia californica*) with scattered brittlebush and California buckwheat. The understory is minimal in this area.





Project Boundary

Vegetation Types and Other Areas

Coastal Sage Scrub
- Southern Coastal Bluff Scrub
- California Sagebrush Scrub
- Encelia Scrub
- Coyote Brush Scrub
- Coyote Brush Scrub/Mule Fat Scrub
- Goldenbush Scrub
- Southern Cactus Scrub
- Southern Cactus Scrub/Encelia Scrub
- Saltbush Scrub

Disturbed Coastal Sage Scrub
- Disturbed Southern Coastal Bluff Scrub
- Disturbed Sage Scrub
- Disturbed Encelia Scrub/Mule Fat Scrub
- Disturbed Encelia Scrub
- Disturbed Goldenbush Scrub
- Disturbed Goldenbush Scrub/ Mule Fat Scrub/Salt Marsh
- Disturbed Southern Cactus Scrub
- Disturbed Southern Cactus Scrub/ Encelia Scrub
- Ruderal/Disturbed Encelia Scrub
- Ruderal/Disturbed Encelia Scrub/ Disturbed Mule Fat Scrub
- Ornamental/ Disturbed Southern Coastal Bluff Scrub

Grassland and Ruderal
- Non-Native Grassland
- Non-Native Grassland/Ruderal
- Ruderal

Grassland Depression Features
- Vernal Pool
- Ephemeral Pool

Marshes and Mudflats
- Freshwater Marsh
- Freshwater Marsh
- Disturbed Alkali Marsh
- Salt Marsh
- Disturbed Salt Marsh
- Mudflat
- Open Water

Riparian Scrub/Forest
- Mule Fat Scrub
- Willow Scrub
- Willow Riparian Forest

Disturbed Riparian Scrub/Forest
- Disturbed Mule Fat Scrub
- Disturbed Mule Fat Scrub/ Ruderal
- Disturbed Mule Fat Scrub/ Goldenbush Scrub
- Disturbed Willow Scrub
- Disturbed Willow Riparian Forest

Other Areas
- Giant Reed
- Cliff
- Ornamental
- Disturbed
- Disturbed/Developed

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Vegetation Types and Other Areas

Exhibit 4.6-1a

Newport Banning Ranch EIR

N W E S

500 250 0 500

Feet

Bonterra CONSULTING

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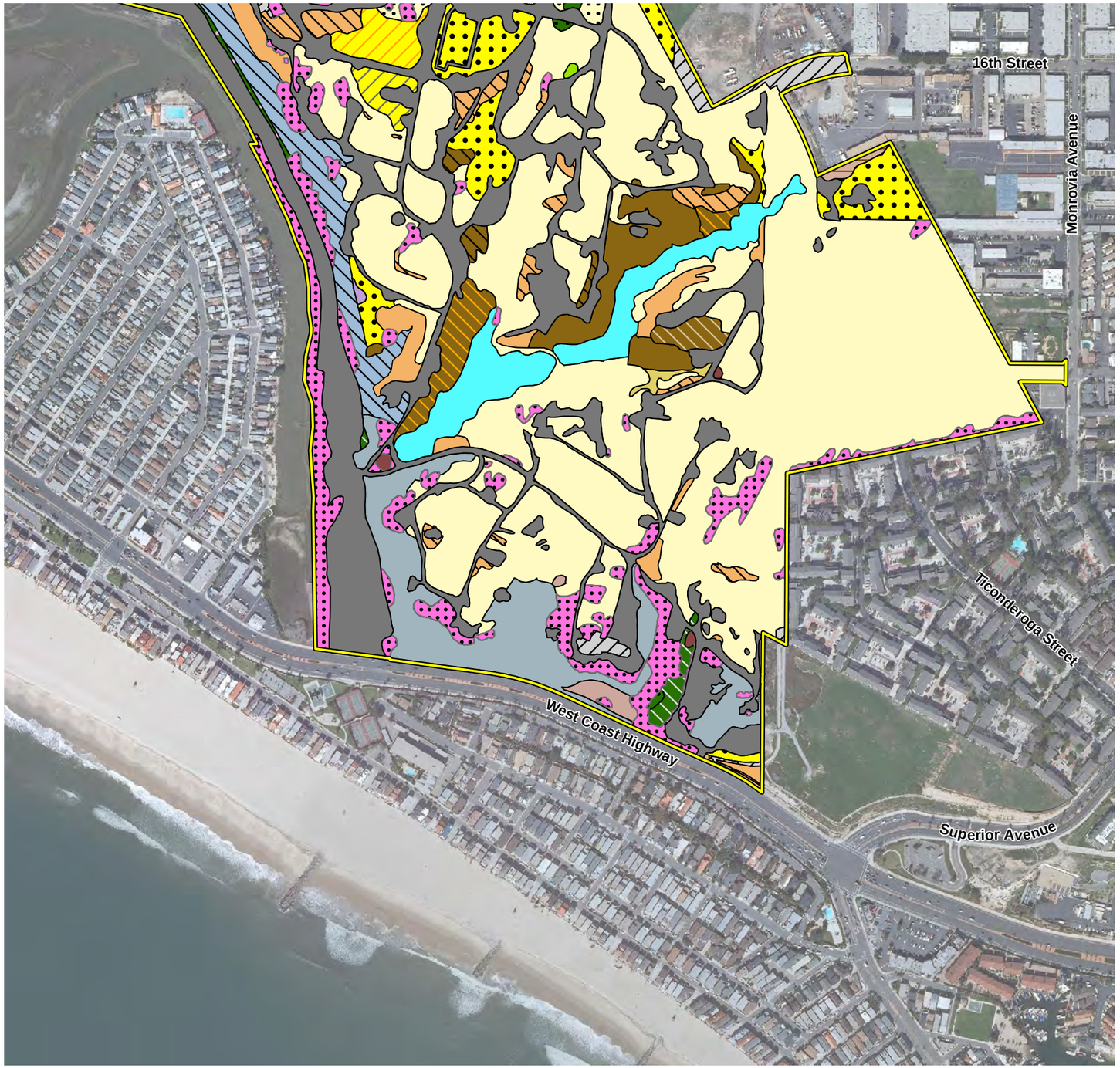

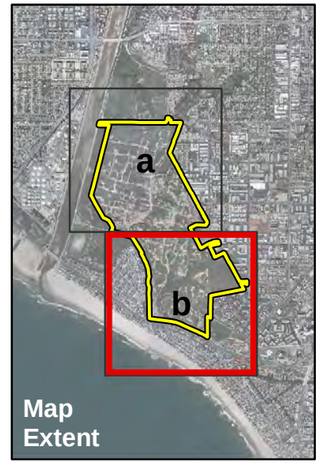

Project Boundary

Vegetation Types and Other Areas

Coastal Sage Scrub
- Southern Coastal Bluff Scrub
- California Sagebrush Scrub
- Encelia Scrub
- Coyote Brush Scrub
- Coyote Brush Scrub/Mule Fat Scrub
- Goldenbush Scrub
- Southern Cactus Scrub
- Southern Cactus Scrub/Encelia Scrub
- Saltbush Scrub

Disturbed Coastal Sage Scrub
- Disturbed Southern Coastal Bluff Scrub
- Disturbed Sage Scrub
- Disturbed Encelia Scrub/Mule Fat Scrub
- Disturbed Encelia Scrub
- Disturbed Goldenbush Scrub
- Disturbed Goldenbush Scrub/ Mule Fat Scrub/Salt Marsh
- Disturbed Southern Cactus Scrub
- Disturbed Southern Cactus Scrub/ Encelia Scrub
- Ruderal/Disturbed Encelia Scrub
- Ruderal/Disturbed Encelia Scrub/ Disturbed Mule Fat Scrub
- Ornamental/ Disturbed Southern Coastal Bluff Scrub

Grassland and Ruderal
- Non-Native Grassland
- Non-Native Grassland/Ruderal
- Ruderal

Grassland Depression Features
- Vernal Pool
- Ephemeral Pool

Marshes and Mudflats
- Freshwater Marsh
- Freshwater Marsh
- Disturbed Alkali Marsh
- Salt Marsh
- Disturbed Salt Marsh
- Mudflat
- Open Water

Riparian Scrub/Forest
- Mule Fat Scrub
- Willow Scrub
- Willow Riparian Forest

Disturbed Riparian Scrub/Forest
- Disturbed Mule Fat Scrub
- Disturbed Mule Fat Scrub/ Ruderal
- Disturbed Mule Fat Scrub/ Goldenbush Scrub
- Disturbed Willow Scrub
- Disturbed Willow Riparian Forest

Other Areas
- Giant Reed
- Cliff
- Ornamental
- Disturbed
- Disturbed/Developed

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Vegetation Types and Other Areas

Exhibit 4.6-1b

Newport Banning Ranch EIR

N W E S

500 250 0 500

Feet

Bonterra CONSULTING

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Encelia Scrub

Encelia scrub occurs in large areas in the northeastern portion of the Project site and along the bluffs and southern portions of the mesa. This vegetation type is dominated by bush sunflower, and it occurs as a monoculture in many of the northern patches. Other species present in lower densities include bladderpod, wreath plant (*Stephanomeria virgata*), goldenbush (*Isocoma menziesii*), California buckwheat, coastal prickly pear, and coastal cholla.

Coyote Brush Scrub

Coyote brush scrub occurs in a small patch in an eroded area above the large drainage in the southern portion of the Project site. This vegetation type is dominated by coyote brush (*Baccharis pilularis*) with scattered mule fat (*Baccharis salicifolia*) present.

Coyote Brush Scrub/Mule Fat Scrub

Coyote brush scrub/mule fat scrub occurs on a slope in the center of the Project site in an eroded drainage. This vegetation type is co-dominated by coyote brush and mule fat. A small amount of bush sunflower is also present.

Goldenbush Scrub

Goldenbush scrub occurs in patches along the roads in the lowland area of the Project site. Most of these areas occur directly adjacent to the roads used for the oilfield activities. The vegetation also occurs as a monoculture of goldenbush on the edges of the alkali meadow and mule fat scrub vegetation types.

Southern Cactus Scrub

Southern cactus scrub occurs on the south-facing slopes along the canyons on the Project site. This vegetation type consists of 20 percent or more vegetative cover of cactus throughout the area, which was mapped according to the County of Orange Habitat Classification System (Gray and Bramlet 1992). The cactus cover is dominated by coastal prickly pear or coastal cholla. The sage scrub surrounding the cactus patches is comprised primarily of bush sunflower; California buckwheat and bladderpod are also present.

Southern Cactus Scrub/Encelia Scrub

Southern cactus scrub/Encelia scrub occurs on the southeast- and south-facing slopes near the large drainage in the southern portion of the Project site. These areas contain less than 20 percent cover by cactus overall, the standard for mapping southern cactus scrub as described in the County of Orange Habitat Classification System (Gray and Bramlet 1992). This vegetation is dominated by bush sunflower with coastal prickly pear and coastal cholla scattered throughout, but in higher densities than in the Encelia scrub vegetation type described above. Other species include California buckwheat and bladderpod.

Saltbush Scrub

Saltbush scrub is located in a small patch near the center of the Project site. It is surrounded by mowed[2], non-native grassland. It is dominated by big saltbush (*Atriplex lentiformis*).

Disturbed Southern Coastal Bluff Scrub

Disturbed southern coastal bluff scrub occurs along the exposed bluffs and cliffs at the southwestern edge of the Project site. These areas have been invaded by non-native species, such as hottentot fig and Myoporum, more heavily than the areas described above. In addition, landslides and invasion by non-native species have caused disturbance. This vegetation type is dominated by bush sunflower, hottentot fig, California buckwheat, bladderpod, coastal cholla, and coastal prickly pear.

Disturbed Sage Scrub

Disturbed sage scrub occurs in a small patch in the center of the mesa on the Project site. This area has been heavily disturbed by oilfield activities. The vegetation is recovering sage scrub that is dominated by deerweed (*Acmispon glaber* [*Lotus scoparius* var. *scoparius*]), which is an early successional sage scrub species to colonize following disturbance. Other species present include bush sunflower, goldenbush, wreath plant, California aster (*Corethrogyne filaginifolia* [*Lessingia filaginifolia*], tree tobacco (*Nicotiana glauca*), and telegraph weed (*Heterotheca grandiflora*).

Disturbed Encelia Scrub/Mule Fat Scrub

Disturbed Encelia scrub/mule fat scrub occurs in a small patch in the center of the mesa on the Project site adjacent to the large concrete debris piles from oilfield activities, and has been subject to maintenance along the edges. Opportunistic native and non-native plants are growing in and around the concrete debris. This vegetation type is co-dominated by bush sunflower and mule fat. Non-native species indicative of the disturbance are tree tobacco and castor bean (*Ricinus communis*). Coastal prickly pear is also present.

Disturbed Encelia Scrub

Disturbed Encelia scrub occurs in patches throughout the mesa on the Project site. These areas are disturbed by the low-level mowing on the Project site, and the bush sunflower plants were shorter than 12 inches at the time of the survey. This vegetation type is dominated by bush sunflower, with annual and perennial grass species. These grass species were not identifiable during the surveys because of mowing to shorter than six inches.

Disturbed Goldenbush Scrub

Disturbed goldenbush scrub occurs in patches along the roads in the lowland area of the Project site. This vegetation type occupies similar areas to that of the undisturbed goldenbush scrub, but differs because of the co-dominance of non-native and ornamental species. This vegetation type is comprised of goldenbush, pampas grass (*Cortaderia selloana*), and sweet fennel (*Foeniculum vulgare*).

[2] It should be noted that regular mowing activities have been conducted since the beginning of oilfield operations for purposes of oilfield maintenance and safety. These activities are permitted in accordance with California Coastal Commission South Coast Regional Coastal Zone Conservation Commission Claim for Exemption No. E-7-27-73-144.

Disturbed Goldenbush Scrub/Mule Fat Scrub/Salt Marsh

Disturbed goldenbush scrub/mule fat scrub/salt marsh occurs in a strip along the western edge of the lowland area directly between a dirt access road and the USACE saltmarsh restoration site. This vegetation type is dominated by goldenbush, mule fat, woolly seablite (*Suaeda taxifolia*), alkali heath (*Frankenia salina*), and common woody pickleweed (*Salicornia pacifica* [*Salicornia virginica*]). Non-native species present due to the proximity to the road include poison hemlock (*Conium maculatum*) and five-hook bassia (*Bassia hyssopifolia*).

Disturbed Southern Cactus Scrub

Disturbed southern cactus scrub occurs as small patches in open, eroded soils on the mesa of the Project site. These patches are adjacent to dirt oilfield roads and are surrounded by mowed non-native grassland. This vegetation type is dominated by coastal prickly pear and non-native species including tree tobacco and castor bean. Coastal cholla may also be present.

Disturbed Southern Cactus Scrub/Encelia Scrub

Disturbed southern cactus scrub/Encelia scrub occurs in open, eroded soils on a slope south of the large drainage in the southern portion of the Project site. This area is surrounded by dirt roads and mowed non-native grassland. This vegetation type is dominated by coastal prickly pear, coastal cholla, bush sunflower, tree tobacco, and castor bean.

Ruderal/Disturbed Encelia Scrub

Ruderal/disturbed Encelia scrub vegetation occurs in a patch near the center of the mesa on the Project site. This is another area of the Project site that contains debris piles from oilfield activities and is surrounded by a dirt road. The plants in this area are growing out from spaces in the concrete debris and along the debris pile edges. This vegetation type is dominated by tree tobacco, black mustard (*Brassica nigra*), and bush sunflower.

Ruderal/Disturbed Encelia Scrub/Disturbed Mule Fat Scrub

Ruderal/disturbed Encelia scrub/disturbed mule fat scrub occurs in patches near the center of the mesa on the Project site. As mentioned above under Disturbed Encelia Scrub/Mule Fat Scrub, this area contains debris piles from oilfield activities and is surrounded by dirt roads. The plants consist of opportunistic native and non-native species that have colonized soil piles and open areas within and along the edges of the debris piles. This vegetation type is dominated by tree tobacco, bush sunflower, and mule fat. Other species present include telegraph weed, black mustard, and castor bean.

Ornamental/Disturbed Southern Coastal Bluff Scrub

Ornamental/disturbed southern coastal bluff scrub occurs on the bluffs in the center of the Project site. This area is dominated by a mix of hottentot fig, bush sunflower, California buckwheat, and bladderpod.

Non-Native Grassland

Non-native grassland occurs throughout the mesa on the Project site. The species composition varies by patch. The non-native grassland in the southern portion of the bluffs contains native grasses intermixed with non-native grasses and forbs, with the non-native grasses constituting a larger percentage of vegetation cover than the native grasses. Species present in this

vegetation type include foxtail chess (*Bromus madritensis* ssp. *rubens*), slender oats (*Avena barbata*), soft chess (*Bromus hordeaceus*), hare barley (*Hordeum murinum* ssp. *leporiunum*), foxtail fescue (*Fustuca myuros*), and red-stemmed filaree (*Erodium cicutarium*). Within these non-native grasslands there are pockets of native species that were not mapped because they were mowed to a height of less than six inches and could not be delineated.

Non-Native Grassland/Ruderal

Non-native grassland/ruderal occurs in the central portion of the upland area adjacent to disturbed/developed areas. These areas contain a mixture of non-native grasses and ruderal species. These areas were also mowed to a height of less than six inches at the time of the surveys. Species present include foxtail chess, slender oat, red-stemmed filaree, black mustard, and tocalote (*Centaurea melitensis*).

Ruderal

Ruderal vegetation is scattered throughout the mesa and lowland on the Project site. These areas have heavily compacted soils and are mowed on a regular basis. The species composition of this vegetation is similar to non-native grassland, but with a higher component of non-native herbs and shrubs, and a smaller component of non-native grasses. A few scattered, weedy native species are also present in these areas. Species present in this vegetation type include black mustard, sweet fennel, tree tobacco, castor bean, western ragweed (*Ambrosia psilostachya*), fascicled tarweed (*Deinandra fasciculata*), salt grass (*Distichlis spicata*), and red-stemmed filaree.

Vernal/Ephemeral Pools

Two features previously described as vernal pools due to the presence of the San Diego fairy shrimp are present on the mesa near the eastern-central portion of the Project site. These areas were originally delineated by GLA. The larger feature (VP1) (0.30 acre) appears to have been artificially created as a result of its historical use for oil production and recreation activities. It is located in the middle of oil operation areas and includes numerous pipelines and oilfield infrastructure. Vegetation in VP1 now includes perennial spike rush (*Eleocharis macrostachya*), salt grass, and woolly marbles (*Psilocarphus brevissimus*). Mule fat also covers a large portion of this feature. The smaller feature (VP2) (0.02 acre) does not support hydrophytic vegetation characteristic of vernal pools, and is located on an existing oilfield pad that includes a well and pipelines (one of which crosses the “pool”). VP2 is best described as a shallow depression on an active oilfield production well pad. It was designated as a vernal pool based solely on the presence of adult San Diego fairy shrimp during wet season surveys in 2000 (GLA 2009b).

These areas were dry at the time of the 2009 vegetation surveys but were ponded during the 2009–2010 and 2010–2011 rainfall years, both of which reflected well-above average rainfall years. The 2009–2010 rainfall season was 158 percent of normal; the 2010–2011 season was 189 percent of normal for the entire season. Rainfall totals for December 2010 are estimated to be a 50-year event and were 647 percent of normal for the month.

In addition to the two pools described above, during the above-average rainfall of 2009–2010, a 0.007 acre artificial depression was identified immediately east of VP1, in which a single immature San Diego fairy shrimp was detected. However, the depression failed to hold water for a sufficient period of time to allow fairy shrimp to reach full maturity. This feature has been designated as AD3.

As a result of the record rainfalls experienced during the 2010–2011 rainy season, additional areas of temporary ponding were observed. Each of these ponded areas was surveyed and monitored. Many of these areas do not exhibit ponding for more than a few days after a normal rain event. Surveys have been conducted to determine if any fairy shrimp species (listed and non-listed) are present. The USFWS protocol for fairy shrimp surveys requires that ponded areas be tested as long as the region continues to experience rain events. Due to the extended rainy season this year, surveys were not completed until mid-April 2011.

Surveyed Depressions

The record rainfall in 2009–2010 and 2010–2011 created areas of ponding within artificial depressions. These depressions were created as a result of oilfield operations and—due to the presence of oil facilities and potential soil contamination—will be cleaned up and remediated as part of proposed Project's oilfield abandonment and remediation activities.[3] During the 2009–2010 and/or 2010–2011 rainy seasons, 23 depressions were identified. The ponding is characterized as temporary as the average depth of water in these areas was approximately 3–4 inches, which is present immediately after heavy rains. For many of the features, the water evaporates within days after a rain event. Many of the features do not pond water during normal rainfall years. Surveys were conducted during the rainy season to monitor the duration of ponding in each of the identified features. Some of these depressions were created as a result of routine removal of contaminated soils during oilfield clean-up activities, which will require further remediation. Other areas were created as artificial impoundments resulting from berms constructed to contain stockpiles of bioremediated oil-impacted soils or to prevent erosion of areas around oil wells and other oilfield facilities. Many of these depressions lack vegetation, but if present, the vegetation in these areas is generally composed of a mix of upland vegetation, non-native grassland, or disturbed ruderal habitat. As identified on Table 4.6-2, these temporary ponded areas range in size from 0.003 to 0.09 acre, with one feature covering 0.26 acre. The temporary ponded areas were identified based upon their potential to support fairy shrimp. There are other areas on site which have been observed to collect water after rain events; however, these features are not included in the table below because they are located on unsuitable substrate (e.g., asphalt roads and parking lots) and the water was determined to be too shallow (1–2 inches) and evaporated within a few days.

Freshwater Marsh

Freshwater marsh occurs near areas of willow riparian forest in the lowland of the Project site. This area is dominated by freshwater plant species, but is adjacent to alkaline plant species. It could also possibly be characterized as brackish marsh. This vegetation type is dominated by cattail (*Typha* sp.) and southern bulrush (*Schoenoplectus californicus*). This area was dry during the 2009 vegetation surveys.

[3] The Banning Ranch oilfield has been in active oil production operation since the 1940s, and oil production, abandonment, and remediation activities are undertaken pursuant to a Coastal Act exemption.

TABLE 4.6-2
POOLS/PONDED AREAS ON THE PROJECT SITE

Pool	Size (Acre)	Vegetation Type	Origin/Function	Survey Information
VP1	0.30	Disturbed Mulefat	Historic oil production and recreation area, currently crossed by numerous pipelines and infrastructure	San Diego Fairy Shrimp
VP2	0.02	Disturbed – Developed	Shallow depression on active oil production well pad.	San Diego Fairy Shrimp
AD3	0.007	Non-native, Upland grassland	Artificial depression in active pipeline corridor.	San Diego Fairy Shrimp
A	0.04	Non-native, Upland grassland	Depression with oilfield infrastructure at edge of pool.	Versatile Fairy Shrimp Only
B	0.03	Disturbed	Temporary stockpile of bio-remediated soils; depression from oilfield excavation activities.	Versatile Fairy Shrimp Only
C	0.04	Disturbed	Oilfield excavation and stockpile area.	Versatile Fairy Shrimp Only
D	0.02	Disturbed	Oilfield excavation area.	Versatile Fairy Shrimp Only
E	0.05	Disturbed Mulefat	Historic oil sump with contaminated soils – remediation necessary.	San Diego Fairy Shrimp
F	0.02	Non-native, Upland grassland	Bermed area to protect oilfield road.	None
G	0.003	Non-native grassland	Oilfield sump with multiple pipelines.	San Diego Fairy Shrimp
H	0.005	Non-native grassland	Shallow depression created by oilfield activities.	None
I	0.03	Non-native grassland	Bermed area to store construction debris and protect oilfield road	San Diego Fairy Shrimp
J	0.09	Non-native grassland	Bermed area to store construction debris and protect oilfield road.	San Diego Fairy Shrimp
K	0.03	Non-native grassland	Shallow artificial oilfield depression.	None
L	0.04	Non-native grassland	Shallow artificial oilfield depression.	None
M	0.02	Disturbed	Oilfield pipe and material storage yard; standpipes in ponded area.	Versatile Fairy Shrimp Only
N	0.06	Disturbed	Oilfield storage equipment area largely covered with gravel.	Versatile Fairy Shrimp Only
O	N/A	Disturbed	Oilfield storage equipment area largely covered with gravel failed to pond for sufficient duration for fairy shrimp to emerge.	None
P	0.009	Disturbed	Oilfield soil remediation area.	Versatile Fairy Shrimp Only
Q	N/A	Developed	Roadside feature.	None
R	N/A	Disturbed	Roadside feature.	Versatile Fairy Shrimp Only
S	N/A	Developed	Roadside feature.	None
T	N/A	Developed	Paved roadway.	Versatile Fairy Shrimp Only
U	N/A	Developed	Paved roadway.	None
V	N/A	Disturbed	Existing well pad.	Versatile Fairy Shrimp Only
W	0.26	Non-native grassland	Relict depression in non-native grassland from Caltrans grading.	None

N/A: Not available; Caltrans: California Department of Transportation
Source: BonTerra Consulting 2011

Alkali Meadow

Alkali meadow occurs in the closed depressions in the lowland of the Project site. These areas are not subject to tidal influence, but function as seasonal marshes in areas where surface water collects in the lowland areas of the Project site. These areas are near the USACE salt marsh restoration site. This vegetation type is dominated by pickleweed, alkali heath, alkali heliotrope (*Heliotropium curassavicum var. oculatum*), alkali mallow (*Malvella leprosa*), and alkali weed (*Cressa truxillensis*). This vegetation type does not contain a large component of non-native species, but does contain scattered instances of the non-natives five-hook bassia and poison hemlock.

Disturbed Alkali Meadow

Disturbed alkali meadow also occurs in the closed depressions in the lowland areas. These areas, as mentioned above, are also not subject to tidal influence. They are disturbed due to the proximity to the oilfield activities, and the conditions are drier than undisturbed areas of alkali meadow; this allows the proliferation of opportunistic weedy species. This vegetation type is dominated by pickleweed, alkali heath, poison hemlock, Italian thistle (*Carduus pycnocephalus var. pycnocephalus*), and five-hook bassia.

Salt Marsh

Salt marsh vegetation occurs in the southern portion of the lowland on the Project site and at the northwestern corner of the Project site. This vegetation type receives muted tidal influence and contained standing water during the surveys. This area is dominated by a mix of pickleweed, alkali heath, and saltwort (*Batis maritima*), with some scattered woolly seablite.

Disturbed Salt Marsh

Disturbed salt marsh vegetation occurs in the southern portion of the lowland on the Project site between the dirt road and the USACE salt marsh restoration site. This vegetation type is connected directly to the salt marsh that receives tidal influence; however, it is disturbed by its proximity to the road. This area is dominated by pickleweed, alkali heath, seablite, poison hemlock, and black mustard.

Mudflat

Mudflats are located at the southern end of the lowland on the Project site within the salt marsh areas. These unvegetated areas are subject to tidal influence, and are naturally occurring areas that are not the result of disturbance.

Open Water

Open water was observed in the southern portion of the lowland during the 2009 vegetation surveys. These areas appeared to be salt or brackish water. Algae is present in the water.

Mule Fat Scrub

Mule fat scrub occurs in patches in the western portion of the Project site, typically surrounding alkali meadow areas and adjacent to areas of disturbed mule fat scrub. Although many of these areas are adjacent to roads, they have minimal ornamental species or disturbance. This vegetation type is dominated by dense stands of mule fat with scattered goldenbush, alkali heath, and telegraph weed.

Willow Scrub

Willow scrub occurs in a patch in the northern portion of the lowland. This vegetation type is similar to willow riparian forest; however, the Gooding's black willow (*Salix gooddingii*) and arroyo willow (*Salix lasiolepis*) are smaller in size and there is a higher percentage of mule fat.

Willow Riparian Forest

Willow riparian forest occurs along the northern edge of the Project site in patches in the lowland and in three of the largest arroyos on the Project site. This vegetation type occurs along the main drainage that is fed by nuisance runoff and in the lowland where the ground water is high with lower salinities. This vegetation type is dominated by black and arroyo willows that are greater than 20 feet in height. Other species present in the understory include mule fat, poison hemlock, pampas grass, and California blackberry (*Rubus ursinus*).

Disturbed Mule Fat Scrub

Disturbed mule fat scrub occurs throughout the Project site, primarily around closed depressions in the lowland and in some drainages. This vegetation type is dominated by mule fat. It has a large component of pampas grass and five-hook bassia because of its proximity to oilfield activities. Goldenbush and alkali heath are also present.

Disturbed Mule Fat Scrub/Ruderal

Disturbed mule fat scrub/ruderal vegetation occurs in depressions in the northern lowland on the Project site and has been disturbed by oilfield activities. This vegetation type is co-dominated by mule fat and ruderal species such as poison hemlock and pampas grass. These areas also contain giant reed (*Arundo donax*), alkali heliotrope, five-hook bassia, alkali heath, and small individual Gooding's black willows.

Disturbed Mule Fat Scrub/Goldenbush Scrub

Disturbed mule fat scrub/goldenbush scrub occurs in the central-western portion of the lowland and at the southern edge of the Project site. This vegetation type is co-dominated by mule fat and goldenbush. At the southern edge of the Project site, this vegetation type occurs in an erosional feature and has an understory of hottentot fig. In the lowland, this vegetation type is disturbed by oilfield activities and contains large patches of pampas grass.

Disturbed Willow Scrub

Disturbed willow scrub occurs in a small patch north of the large drainage in the southern portion of the Project site and in the center of the lowland. This vegetation type is dominated by arroyo willow, is disturbed by oilfield activities, and contains pampas grass.

Disturbed Willow Riparian Forest

Disturbed willow riparian forest occurs in the center of the eastern portion of the lowland, in areas with high groundwater with lower salinities. These areas are similar to willow riparian forest; however, they contain a large non-native component. This vegetation type is dominated by black and arroyo willows that are greater than 20 feet in height, and include large patches of poison hemlock and pampas grass.

Giant Reed

Giant reed occurs along a drainage in the northeastern portion and in numerous small patches in the lowland of the Project site. These areas contain dense stands of the non-native giant reed. There is minimal understory and no other species are present in these areas.

Cliff

Exposed cliffs occur along the northeastern edge of the Project site. This area is almost exclusively unvegetated.

Ornamental

Ornamental vegetation occurs (1) directly adjacent to the off-site office, institutional, and industrial areas and residences adjacent to the Project site's eastern boundary and (2) scattered throughout the Project site. This vegetation type includes numerous ornamental species that have been planted for aesthetic purposes or that have invaded from adjacent off-site development. The species present include Myoporum, wattle (*Acacia* sp.), hottentot fig, crystalline ice plant (*Mesembryanthemum crystallinum*), gum tree (*Eucalyptus* sp.), and bougainvillea (*Bougainvillea* sp.).

Disturbed

Disturbed areas consist of the existing unpaved access roads and remnant paved access roads throughout the Project site. These areas are typically unvegetated bare ground, but may contain scattered native or non-native weedy species and some ornamental species such as hottentot fig, telegraph weed, and black mustard.

Disturbed/Developed

Disturbed/developed areas occur throughout the center of the Project site. These areas consist of existing office trailers, maintenance facilities, staging areas, oil rigs, a flood-control channel, and paved access roads. These areas are typically unvegetated bare ground, but may contain scattered native or non-native weedy species and some ornamental species such as hottentot fig, telegraph weed, and black mustard.

Wildlife

Wildlife species observed or expected to occur within the Project site are discussed below. Any special status species mentioned below is discussed in greater detail in the "Special Status Wildlife" section. Species observed during all general and focused surveys are listed in the Biological Technical Report (Appendix E).

Fish

Most creeks and waterways in Southern California are subject to periods of high water flow in winter and spring and little to no flow during late summer and fall. While irrigation runoff was observed in the northernmost large arroyo on the Project site, the majority of drainage features on the Project site appear to convey water only following storm events. Therefore, no fish species are expected to occur in freshwater areas of the Project site.

The salt marsh and open water vegetation types in the western portion of the Project site receive muted tidal flows through the 92-acre USACE salt marsh restoration site to the west and

may support estuarine fish species. Fish species with potential to occur within the salt marsh and open water areas include California killifish (*Fundulus parvipinnis*), longjaw mudsucker (*Gillichthys mirabilis*), Pacific staghorn sculpin (*Leptocottus armatus*), prickly sculpin (*Cottus asper*), and shiner perch (*Cymatogaster aggregata*). The Santa Ana River and the USACE salt marsh restoration site are estuarine channels west of the Project site that may also support these species.

Amphibians

Amphibians require moisture for at least a portion of their lifecycle and many require standing or flowing water for reproduction. Terrestrial species may or may not require standing water for reproduction; they survive in dry areas by aestivating (i.e., remaining beneath the soil in burrows or under logs and leaf litter, and emerging only when temperatures are low and humidity is high). Many of these species' habitats are associated with water and they emerge to breed once the rainy season begins. Soil moisture conditions can remain high throughout the year in some habitat types depending on factors such as amount of vegetation cover, elevation, and slope aspect. Baja California treefrog (*Pseudacris hypochondriaca*) tadpoles were observed in a ponded depression on the Project site. Other common amphibian species that were observed or are expected to occur on the Project site include garden slender salamander (*Batrachoseps major*) and western toad (*Bufo boreas*).

Reptiles

Reptilian diversity and abundance typically varies with vegetation type and character. Many species prefer only one or two vegetation types; however, most species will forage in a variety of habitats. Most reptile species that occur in open areas use rodent burrows for cover, protection from predators, and refuge during extreme weather conditions.

Reptile species observed or expected to occur on the Project site include western fence lizard (*Sceloporus occidentalis*), side-blotched lizard (*Uta stansburiana*), southern alligator lizard (*Elgaria multicarinata*), and gopher snake (*Pituophis catenifer*). Other reptile species that may occur on the Project site include western skink (*Eumeces skiltonianus*), ring-necked snake (*Diadophis punctatus*), red racer [coachwhip] (*Coluber* [*Masticophis*] *flagellum piceus*), California striped racer [whipsnake] (*Coluber* [*Masticophis*] *lateralis lateralis*), common kingsnake (*Lampropeltis getula*), and western rattlesnake (*Crotalus oreganus*).

Birds

A variety of bird species are expected to be residents on the Project site and to use the habitats throughout the year. Other species are present only during certain seasons. For example, the white-crowned sparrow (*Zonotrichia leucophrys*) is expected to occur on the Project site during the winter season and would then migrate north in the spring to breed during the summer.

Although the same individuals may not be present year-round on the Project site, the following bird species were observed during the surveys and can be considered resident: great blue heron (*Ardea herodias*), great egret (*Ardea alba*), black-crowned night-heron (*Nycticorax nycticorax*), killdeer (*Charadrius vociferus*), mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), Allen's hummingbird (*Selasphorus sasin*), Nuttall's woodpecker (*Picoides nuttallii*), downy woodpecker (*Picoides pubescens*), black phoebe (*Sayornis nigricans*), Hutton's vireo (*Vireo huttoni*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), bushtit (*Psaltriparus minimus*), house wren (*Troglodytes aedon*), northern mockingbird (*Mimus polyglottos*), European starling (*Sturnus vulgaris*), orange-crowned warbler

(*Oreothlypis celata*), common yellowthroat (*Geothlypis trichas*), spotted towhee (*Pipilo maculatus*), California towhee (*Melozone crissalis*), song sparrow (*Melospiza melodia*), house finch (*Carpodacus mexicanus*), lesser goldfinch (*Spinus psaltria*), and American goldfinch (*Spinus tristis*).

Summer-only residents in the region that nest or were suspected of nesting on the Project site during the surveys include black-chinned hummingbird (*Archilochus alexandri*), Pacific-slope flycatcher (*Empidonax difficilis*), ash-throated flycatcher (*Myiarchus cinerascens*), black-headed grosbeak (*Pheuticus melanocephalus*), blue grosbeak (*Passerina caerulea*), hooded oriole (*Icterus* cucullatus), and Bullock's oriole (*Icterus bullockii*).

Wintering species observed during the surveys include ruby-crowned kinglet (*Regulus calendula*), American pipit (Anthus rubescens), yellow-rumped warbler (*Dendroica coronata*), Townsend's warbler (*Dendroica townsendi*), savannah sparrow (*Passerculus sandwichensis*), Lincoln's sparrow (*Melospiza lincolnii*), white-crowned sparrow, and golden-crowned sparrow (*Zonotrichia atricapilla*).

The turkey vulture (*Cathartes aura*), a scavenger, was observed on the Project site. Other raptors (birds of prey) observed on the Project site include osprey (*Pandion haliaetus*), white-tailed kite (*Elanus leucurus*), northern harrier (*Circus cyaneus*), sharp-shinned hawk (*Accipiter striatus*), Cooper's hawk (*Accipiter cooperii*), red-shouldered hawk (*Buteo lineatus*), red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), and great horned owl (*Bubo virginianus*).

Mammals

Small, ground-dwelling mammals observed on the Project site include California ground squirrel (*Spermophilus beecheyi*), Botta's pocket gopher (*Thomomys bottae*), dusky-footed woodrat (*Neotoma fuscipes*), and black rat (*Rattus rattus*).

Bats occur throughout most of Southern California and may use any portion of the Project site as foraging habitat. Most of the bats that could potentially occur on the Project site are inactive during the winter and either hibernate or migrate, depending on the species. Several bat species may occur on the Project site, including pallid bat (*Antrozous pallidus*), big brown bat (*Eptesicus fuscus*), California myotis (*Myotis californicus*), and western pipistrelle (*Pipistrellus hesperus*).

Medium- to large-sized mammals observed on the Project site include Virginia opossum (*Didelphis virginiana*), desert cottontail (*Sylvilagus audubonii*), coyote (*Canis latrans*), common raccoon (*Procyon lotor*), and striped skunk (*Mephitis mephitis*).

Wildlife Movement

Wildlife corridors link together areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat. In the absence of habitat linkages that allow movement to adjoining open space areas, various studies have concluded that some wildlife species will not likely persist over time in fragmented or isolated habitat areas.

The Project site is located within an area that is largely constrained by urban development. Residential, office, light industrial, institutional, and limited retail development surround the Project site to the northeast, east, and south (separating it from the beach), and also west of the Santa Ana River. The Project site is adjacent to a USACE salt marsh restoration site, the mouth

of the Santa Ana River, and the Talbert Marsh restoration site (located northwest of the Santa Ana River mouth). Talbert Regional Park is located immediately adjacent to the northern boundary of the Project site, and Fairview Park is located north of Talbert Park. The Project site and these open space areas provide an important regional resource area for wildlife. In particular, a variety of birds, including Threatened and Endangered species, use this area to breed while others use it during migration as a stopover site to rest and refuel. These areas are the primary areas of open space in the vicinity of the Project site, and the Santa Ana River provides a riverine connection between these areas from the coast upstream to Fairview Park. The Santa Ana River becomes channelized (with concrete sides and bottom) 0.8 mile upstream of Fairview Park; however, it still functions as a regionally important wildlife movement corridor for mobile species to reach open space areas upstream that would otherwise be inaccessible. Overall, the Project site is expected to be used by wildlife moving along the Santa Ana River (especially between the coast and Fairview Park) and, most importantly, as a migration stopover site by bird species migrating along the coastline.

The Newport Bay Ecological Reserve is located approximately 2.5 miles southeast of the Project site, and the Bolsa Chica Ecological Reserve is located approximately 5.5 miles northwest of the Project site; however, dense urban development (including along the shoreline) separates the Project site from both these Reserves. Birds, bats, and urban-tolerant wildlife species (e.g., coyotes, opossums, and raccoons) would be able to move through the urban matrix from both Reserves to the Project site. Estuarine fish may also be able to travel from the ocean to the Reserves and the USACE salt marsh restoration site/Santa Ana River/Talbert Marsh. However, most terrestrial wildlife species would not be able to move from Newport Bay and the Bolsa Chica Ecological Reserve, through the urban matrix, and to the Project site.

Special Status Biological Resources

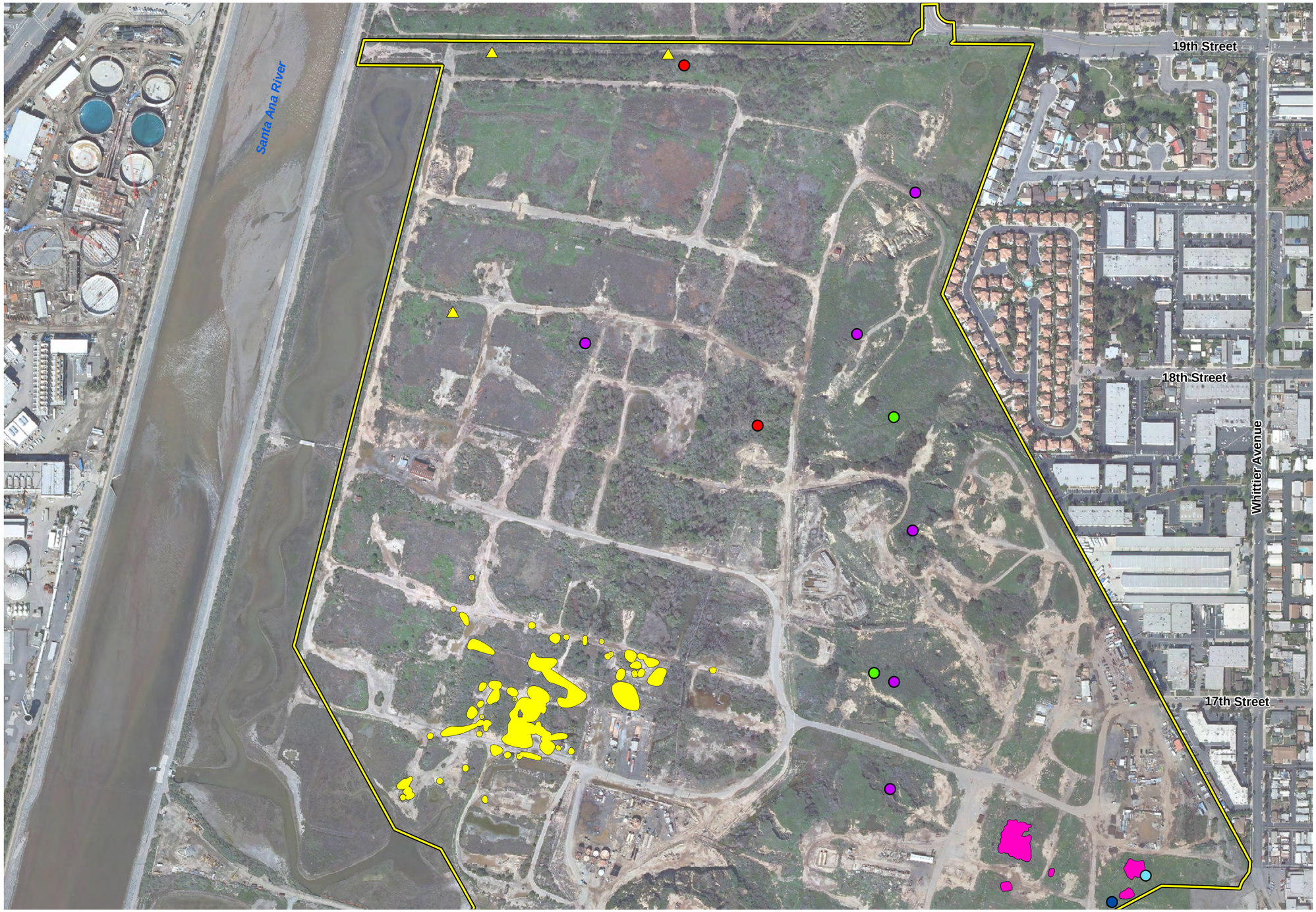
The following section addresses special status biological resources observed, reported, or that have the potential to occur on the Project site. These resources include plant and wildlife species that have been afforded special status and/or recognition by federal and State resource agencies, as well as private conservation organizations. Exhibits 4.6-2a and 4.6-2b, Special Status Species Locations, depict the special status biological resources on the Project site.

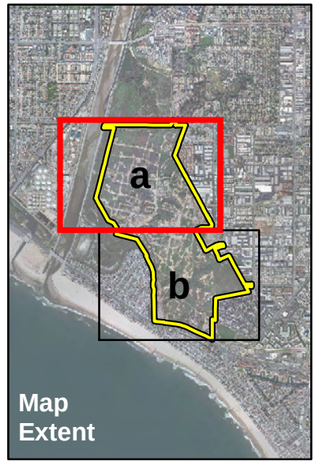
In general, the principal reason an individual taxon (i.e., species, subspecies, or variety) is given such recognition is the documented or perceived decline or limitations of its population size, geographic range, and/or distribution resulting in most cases from habitat loss. Special status biological resources include vegetation types and habitats that are either unique, of relatively limited distribution in the region, or of particularly high wildlife value. Special status resources have been defined by federal, State, and local government conservation programs, as defined below.

Definitions of Special Status Biological Resources

A **federally Endangered species** is one facing extinction throughout all or a significant portion of its geographic range. A **federally Threatened species** is one likely to become Endangered within the foreseeable future throughout all or a significant portion of its range. **Proposed Species** or **Candidate Species** are those officially proposed to be added to the federal Threatened and Endangered species list by the USFWS.

The State of California considers an **Endangered species** to be 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





- Project Boundary

2010 Surveys

- Burrowing Owl

2009 Surveys

- Coastal California Gnatcatcher
- Coastal Cactus Wren
- Least Bell's Vireo
- Burrowing Owl
- San Diego Fairy Shrimp

Southern Tarplant

- Tarplant Location (Area too small to be accurately represented by polygon)
- Tarplant Population

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Special Status Species Locations

Exhibit 4.6-2a

Newport Banning Ranch EIR

N W E S

400 200 0 400

Feet

BonTerra CONSULTING

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- Project Boundary

2010 Surveys

- Burrowing Owl

2009 Surveys

- Coastal California Gnatcatcher
- Coastal Cactus Wren
- Least Bell's Vireo
- Burrowing Owl
- San Diego Fairy Shrimp

Southern Tarplant

- Tarplant Location (Area too small to be accurately represented by polygon)
- Tarplant Population

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Special Status Species Locations

Exhibit 4.6-2b

Newport Banning Ranch EIR

N W E S

400 200 0 400 Feet

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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. **California Species of Special Concern** is an informal designation used by the CDFG for some declining wildlife species that are not State Candidates for listing. Recently, the CDFG downlisted several species from Species of Special Concern to the **Watch List**. Although not considered special status, Watch List species are tracked by the CNDDB.

Species that are **California Fully Protected** and **Protected** include those protected by special legislation and may not be taken or possessed at any time. A species that is considered a **Special Animal** is one that is monitored by the CNDDB. **Species of Local Concern** are those that have no official status with the resource agencies, but are being watched because either there is a unique population in the region[4] or the species is declining in the region.

CNPS lists California's special status plant in four lists: **List 1A** (plant species extinct in California); **List 1B** (Rare, Threatened, or Endangered throughout their range); **List 2** (considered Rare, Threatened, or Endangered in California but more common in other states); **List 3** (more information is needed); and **List 4** (plants that have limited distribution). The CNPS also assigns a threat code extension: **.1** ("seriously endangered" in California); **.2** ("fairly endangered" in California); and **.3** ("not very endangered" in California). The absence of a threat code extension indicates plants lacking any threat information.

Sources used to determine the special status of biological resources are listed below.

- ***Plants –*** Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS 2011); the CNDDB (CDFG 2011a); various USFWS *Federal Register* notices regarding listing status of plant species; and the CDFG's *Special Vascular Plants, Bryophytes, and Lichens List* (CDFG 2011b).
- ***Wildlife –*** California Wildlife Habitat Relationships Database System (CDFG BDB 2011); the CNDDB (CDFG 2011a); various USFWS *Federal Register* notices regarding listing status of wildlife species; and the CDFG's *Special Animals* List (CDFG 2011a).
- ***Habitats –*** the CNDDB (CDFG 2011a).

Special Status Plant Species

Table 4.6-3 provides a summary of each special status plant species known to occur in the Project region and includes information on the status, presence/absence of suitable habitat on site, survey results, and definitions for the various status designations.

[4] The proposed Project's regional setting includes the Central/Coastal Subregion NCCP/HCP. This subregion is bound by State Route (SR) 55 and SR-91 to the north; the Santa Ana River and Pacific Ocean to the west; El Toro Road and Interstate 5 to the east; and the Pacific Ocean to the south.

TABLE 4.6-3
SPECIAL STATUS PLANT SPECIES KNOWN TO OCCUR IN THE PROJECT VICINITY

Species	Status			Habitat/Results of Surveys
	USFWS	CDFG	CNPS	
Abronia villosa var. *aurita* chaparral sand-verbena	–	–	1B.1	Limited suitable habitat (sandy soils), but no dune habitat; not observed during focused surveys.
Aphanisma blitoides aphanisma	–	–	1B.2	Limited disturbed suitable habitat; not observed during focused surveys.
Astragalus pycnostachyus var. *lanosissimus* Ventura marsh milk-vetch	FE	SE	1B.1	Suitable coastal marsh habitat; not observed during focused surveys.
Atriplex coulteri Coulter's saltbush	–	–	1B.2	Suitable habitat; not observed during focused surveys.
Atriplex pacifica South Coast saltscale	–	–	1B.2	Suitable habitat; not observed during focused surveys.
Atriplex parishii Parish's brittlescale	–	–	1B.1	Suitable habitat; not observed during focused surveys.
Atriplex serenana var. *davidsonii* Davidson's saltscale	–	–	1B.2	Suitable habitat; not observed during focused surveys.
Calandrinia maritima seaside calandrinia	–	–	4.2	Suitable habitat; not observed during focused surveys.
Calochortus catalinae Catalina mariposa lily	–	–	4.2	Suitable habitat; not observed during focused surveys.
Calochortus weedii var. *intermedius* intermediate mariposa lily	–	–	1B.2	Suitable habitat; not observed during focused surveys.
Calystegia sepium ssp. *binghamiae* Santa Barbara morning-glory	–	–	1A	Suitable habitat; not observed during focused surveys.
Centromadia australis ssp. parryi southern tarplant	–	–	1B.1	**Observed during focused surveys.**
Chaenactis glabriuscula var. *orcuttiana* Orcutt's pincushion	–	–	1B.1	No suitable habitat; not observed during focused surveys.
Chorizanthe parryi var. *fernandina* San Fernando Valley spineflower	FC	SE	1B.1	No suitable habitat; not observed during focused surveys.
Comarostaphylis diversifolia ssp. *diversifolia* summer holly	–	–	1B.2	No suitable habitat; not observed during focused surveys.
Chloropyron maritimum ssp. *maritimum* salt marsh bird's-beak	FE	SE	1B.2	Limited suitable habitat; not observed during focused surveys.
Dichondra occidentalis western dichondra	–	–	4.2	Suitable habitat; not observed during focused surveys.
Dudleya blochmaniae ssp. *blochmaniae* Blochman's dudleya	–	–	1B.1	Limited suitable habitat; not observed during focused surveys.
Dudleya cymosa ssp. *ovatifolia* Santa Monica dudleya	FT	–	1B.2	No suitable habitat; not observed during focused surveys.
Dudleya multicaulis many-stemmed dudleya	–	–	1B.2	Suitable habitat; not observed during focused surveys.

TABLE 4.6-3 (Continued)
SPECIAL STATUS PLANT SPECIES KNOWN TO OCCUR IN THE PROJECT VICINITY

Species	Status			Habitat/Results of Surveys
	USFWS	CDFG	CNPS	
Dudleya stolonifera Laguna Beach dudleya	FT	ST	1B.1	No suitable habitat; not observed during focused surveys.
Eryngium aristulatum var. *parishii* San Diego button celery	–	–	1B.1	Suitable habitat; not observed during focused surveys.
Eryngium aristulatum var. *parishii* San Diego button celery	–	–	1B.1	Suitable habitat; not observed during focused surveys.
Euphorbia misera cliff spurge	–	–	2.2	Suitable habitat; not observed during focused surveys.
Harpagonella palmeri Palmer's grapplinghook	–	–	4.2	Suitable habitat; not observed during focused surveys.
Helianthus nuttallii ssp. *parishii* Los Angeles sunflower	–	–	1A	Limited suitable habitat; not observed during focused surveys.
Hordeum intercedens vernal barley	–	–	3.2	Suitable habitat, however this species may not have been identifiable since the grassland areas were mowed at the time of the 2009 focused plant surveys; not observed during focused surveys.
Horkelia cuneata ssp. *puberula* mesa horkelia	–	–	1B.1	No suitable habitat; not observed during focused surveys.
Isocoma menziesii var. *decumbens* decumbent goldenbush	–	–	1B.2	Suitable habitat; not observed during focused surveys.
Juncus acutus ssp. *leopoldii* southwestern spiny rush	–	–	4.2	**Observed during focused surveys.**
Lasthenia glabrata ssp. *coulteri* Coulter's goldfields	–	–	1B.1	Suitable habitat; not observed during focused surveys.
Lepidium virginicum var. *robinsonii* Robinson's pepper-grass	–	–	1B.2	Suitable habitat; not observed during focused surveys.
Lycium brevipes var. *hassei* Santa Catalina Island desert-thorn	–	–	1B.1	Outside known range; not observed during focused surveys.
Lycium californicum California box-thorn	–	–	4.2	**Observed during focused surveys.**
Nama stenocarpum mud nama	–	–	2.2	Suitable habitat; not observed during focused surveys.
Nasturtium gambelii Gambel's water cress	FE	ST	1B.1	Limited suitable habitat; not observed during focused surveys.
Navarretia prostrata prostrate vernal pool navarretia	–	–	1B.1	Suitable habitat; not observed during focused surveys.
Nemacaulis denudata var. *denudata* coast woolly-heads	–	–	1B.2	No suitable habitat; not observed during focused surveys.
Pentachaeta aurea ssp. *allenii* Allen's pentachaeta	–	–	1B.1	Suitable habitat; not observed during focused surveys.
Perideridia gairdneri ssp. *gairdneri* Gairdner's yampah	–	–	4.2	Suitable habitat; not observed during focused surveys.
Quercus dumosa Nuttall's scrub oak	–	–	1B.1	Limited suitable habitat; not observed during focused surveys.

TABLE 4.6-3 (Continued)
SPECIAL STATUS PLANT SPECIES KNOWN TO OCCUR
IN THE PROJECT VICINITY

Species	Status			Habitat/Results of Surveys
	USFWS	CDFG	CNPS	
Sagittaria sanfordii Sanford's arrowhead	–	–	1B.2	No suitable habitat; not observed during focused surveys.
Senecio aphanactis chaparral ragwort	–	–	2.2	Suitable habitat; not observed during focused surveys.
Sidalcea neomexicana Salt Spring checkerbloom	–	–	2.2	Suitable habitat; not observed during focused surveys.
Suaeda esteroa estuary seablite	–	–	1B.2	Suitable habitat; not observed during focused surveys.
Suaeda taxifolia woolly seablite	–	–	4.2	**Observed during focused surveys.**
Symphyotrichum defoliatum San Bernardino aster	–	–	1B.2	Suitable habitat; not observed during focused surveys.
Verbesina dissita big-leaved crownbeard	FT	ST	1B.1	No suitable habitat; not observed during focused surveys.

LEGEND:

Federal (USFWS)
FE Endangered
FT Threatened
FC Federal Candidate

State (CDFG)
SE Endangered
ST Threatened

California Native Plant Society (CNPS) List Categories
List 1A Plants Presumed Extinct in California
List 1B Plants Rare, Threatened, or Endangered in California and Elsewhere
List 2 Plants Rare, Threatened, or Endangered in California But More Common Elsewhere
List 3 Plants About Which We Need More Information – A Review List
List 4 Plants of Limited Distribution – A Watch List

California Native Plant Society (CNPS) Threat Code Extensions
None Plants lacking any threat information
.1 Seriously Endangered in California (over 80% of occurrences threatened; high degree and immediacy of threat)
.2 Fairly Endangered in California (20–80% of occurrences threatened)

Source: BonTerra Consulting 2011.

Details regarding the special status plant species observed[5] on site are included below. Additional discussion of special status plant species not observed or not expected to occur on the Project site is provided in Appendix E.

Southern Tarplant

Southern tarplant (*Centromadia australis ssp. parryi*) is a CNPS List 1B.1 species. It typically blooms between May and November (CNPS 2011) and occurs in saline, seasonally moist grasslands (Hickman 1993). This species has been previously recorded on the Project site (GLA 2009b). A total of 24,747 individuals were observed during the 2009 focused surveys: 52 percent vegetative, 46 percent flowering, and 2 percent fruiting (Exhibits 4.6-2a and 4.6-2b). Generally, southern tarplant occurs in alkali meadow or ruderal vegetation types, often along or within roads. Tarplant locations are typically in flat areas or within depressions. Commonly

[5] Vernal barley may not have been identifiable in mowed grassland/ruderal areas; therefore, further discussion of this species' potential presence has been included.

associated species included alkali heath, five-hook bassia, pickleweed, crystalline iceplant, mule fat, and goldenbush.

Vernal Barley

Vernal barley (*Hordeum intercedens*) is a CNPS List 3.2 species. It typically blooms between March and June and occurs in vernal pools; dry, saline streambeds; alkaline flats; and valley and foothill grasslands (CNPS 2011). This species is known from Fairview Park north of the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009; vernal barley was not observed on the Project site within the vernal pool and ephemeral pond area. In addition, it was not observed in the grassland and ruderal communities that are subject to mowing. However, this species may not have been identifiable in these grassland/ruderal areas since the Project site was mowed at the time of the 2009 special status plant survey. It should be noted that mowing activities have been conducted since the beginning of oilfield operations in order to reduce fuel proximate to pipelines, wells, and associated infrastructure, as well as fuel reduction for on-site and adjacent development.

Southwestern Spiny Rush

Southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*) is a CNPS List 4.2 species. It typically blooms between May and June (CNPS 2011) and occurs in moist saline places like salt marshes and alkaline seeps (Hickman 1993). In the vicinity of the Project site, this species has been reported from Upper Newport Bay (Jepson Flora Project 2010) and is known to occur on adjacent sites. Southwestern spiny rush was observed in the southeastern portion of the Project site during the 2009 special status plant surveys.

California box-thorn

California box-thorn (*Lycium californicum*) is a CNPS List 4.2 species. It typically blooms between March and August, though uncommonly as early as December (CNPS 2011). This perennial shrub occurs on coastal bluffs in coastal sage scrub (Hickman 1993). This species was observed on the cliffs in southern coastal bluff scrub and Encelia scrub located on the southern and western edge of the Project site during the 2009 special status plant surveys.

Woolly Seablite

Woolly seablite (*Suaeda taxifolia*) is a CNPS List 4.2 species. This evergreen shrub typically blooms between January and December (CNPS 2011) and occurs on coastal bluffs and margins of salt marshes (Jepson Flora Project 2010). It is known from Newport Back Bay (Roberts 2008). This species was observed in the salt marsh and disturbed salt marsh on the Project site during 2009 special status plant surveys.

Special Status Wildlife Species

Table 4.6-4 provides a summary of each special status wildlife species known to occur in the Project region, and includes information on the status, likelihood for occurrence, and definitions for the various status designations.

TABLE 4.6-4
SPECIAL STATUS WILDLIFE SPECIES KNOWN TO OCCUR IN THE PROJECT VICINITY

Species	Status		Likelihood of Occurrence
	USFWS	CDFG	
Invertebrates			
Branchinecta sandiegonensis San Diego fairy shrimp	FE	–	Suitable habitat; **observed during focused surveys conducted by GLA.**
Streptocephalus woottoni Riverside fairy shrimp	FE	–	Marginally suitable habitat; not observed during focused surveys conducted by GLA.
Fish			
Eucyclogobius newberryi tidewater goby	FE	SSC	No suitable habitat on the Project site; not expected to occur on the Project site; potentially suitable habitat adjacent to the Project site; limited potential to occur adjacent to the Project site.
Amphibians			
Spea [*Scaphiopus*] *hammondii* western spadefoot	–	SSC	Suitable habitat; low potential to occur based on survey results.
Anaxyrus [*Bufo*] *californicus* arroyo toad	FE	SSC	No suitable habitat; not expected to occur.
Rana draytonii California red-legged frog	FT	SSC	No suitable habitat; not expected to occur.
Reptiles			
Actinemys [Clemmys] *marmorata pallida* southwestern pond turtle	–	SSC	No suitable habitat; not expected to occur.
Phrynosoma coronatum [*blainvillii* population] coast [San Diego] horned lizard	–	SSC	Limited potentially suitable habitat; not expected to occur due to high levels of disturbance on site.
Aspidoscelis [*Cnemidophorus*] *hyperythra* [*beldingi*] [Belding's] orange-throated whiptail	–	SSC	Limited potentially suitable habitat; not expected to occur due to high levels of disturbance on site.
Anniella pulchra pulchra silvery legless lizard	–	SSC	Potentially suitable habitat; may occur.
Salvadora hexalepis virgultea coast patch-nosed snake	–	SSC	Limited potentially suitable habitat; not expected to occur due to high levels of disturbance on site.
Thamnophis hammondii two-striped garter snake	–	SSC	No suitable habitat; not expected to occur.
Crotalus ruber ruber northern red-diamond rattlesnake	–	SSC	Potentially suitable habitat, but outside current known range; not expected to occur.
Birds			
Pelecanus erythrorhynchos American white pelican (nesting colony)	–	SSC	No suitable foraging or roosting habitat on the Project site; suitable foraging habitat adjacent; not expected to occur on the Project site for foraging or roosting; nests outside Project region; not expected to occur for nesting.
Pelecanus occidentalis californicus California brown pelican (nesting colony, communal roosts)	FE	SE	No suitable foraging, roosting, or nesting habitat on the Project site; suitable foraging habitat adjacent; not expected to occur on the Project site for foraging, roosting, or nesting.

TABLE 4.6-4 (Continued)
SPECIAL STATUS WILDLIFE SPECIES KNOWN TO OCCUR IN THE PROJECT VICINITY

Species	Status		Likelihood of Occurrence
	USFWS	CDFG	
Phalacrocorax auritus double-crested cormorant (rookery sites)	–	WL	No suitable foraging or nesting habitat (rookery) on the Project site; suitable foraging habitat adjacent; not expected to occur on the Project site for foraging or nesting.
Ixobrychus exilis least bittern (nesting)	–	SSC	No suitable foraging or nesting habitat; during wetter years limited marginally suitable habitat may be present; generally not expected to occur for foraging or nesting; limited potential to occur in wetter years.
Plegadis chihi white-faced ibis (rookery sites)	–	WL	Limited potentially suitable foraging habitat; may occur for foraging; no suitable nesting habitat (rookery); not expected to occur for nesting; observed during 2009 surveys flying along the Santa Ana River channel adjacent to the Project site.
Dendrocygna bicolor fulvous whistling duck (nesting)	–	SSC	Limited potentially suitable habitat, but outside current range; not expected to occur.
Accipiter cooperii Cooper's hawk (nesting)	–	WL	Suitable foraging and nesting habitat; **observed foraging on the Project site;** may occur for nesting.
Accipiter striatus sharp-shinned hawk (nesting)	–	WL	Suitable foraging habitat, but outside breeding range; **observed foraging on the Project site;** not expected to occur for nesting.
Aquila chrysaetos golden eagle (nesting, non-breeding/wintering)	–	WL FP	Limited potentially suitable foraging habitat, but no suitable nesting habitat due to surrounding development; not expected to occur for foraging or nesting as this raptor is very rare in coastal lowlands of the region.
Buteo regalis ferruginous hawk (non-breeding wintering)	–	WL	Suitable foraging habitat, but outside breeding range; may occur for foraging during winter; not expected to occur for nesting.
Buteo swainsoni Swainson's hawk (nesting)	–	ST	Potentially suitable foraging habitat but outside breeding range; not expected to occur except as a very rare migrant.
Circus cyaneus northern harrier (nesting)	–	SSC	Suitable foraging and nesting habitat; **pair observed on the Project site, nest was suspected off site;** may occur for nesting on the Project site.
Elanus leucurus white-tailed kite (nesting)	–	FP	Suitable foraging and nesting habitat; **observed foraging on the Project site;** may occur for nesting on the Project site.
Haliaeetus leucocephalus bald eagle nesting, non-breeding/wintering)	–	SE FP	No suitable foraging or nesting habitat; not expected to occur for foraging or nesting.
Pandion haliaetus osprey (nesting)	–	WL	No suitable foraging habitat on the Project site, but suitable foraging habitat adjacent to Project site; **observed perching on the Project site following foraging off site;** limited potentially suitable nesting habitat but not expected to occur for nesting due to high level of disturbance on site.

TABLE 4.6-4 (Continued)
SPECIAL STATUS WILDLIFE SPECIES KNOWN TO OCCUR IN THE PROJECT VICINITY

Species	Status		Likelihood of Occurrence
	USFWS	CDFG	
Falco columbarius Merlin (non-breeding/wintering)	–	WL	Suitable foraging habitat, but outside breeding range; **observed foraging on the Project site during previous surveys by GLA;** not expected to occur for nesting.
Falco mexicanus prairie falcon (nesting)	–	WL	Suitable foraging habitat, but no suitable nesting habitat; may occur for foraging; not expected to occur for nesting.
Falco peregrinus anatum American peregrine falcon (nesting)	–	SCD FP	Suitable foraging habitat, but no suitable nesting habitat; may occur for foraging; not expected to occur for nesting.
Laterallus jamaicensis coturniculus California black rail	–	ST FP	Limited potentially suitable habitat for wintering; no suitable nesting habitat; not expected to occur as likely extirpated from the region.
Rallus longirostris levipes light-footed clapper rail	FE	SE FP	Suitable foraging habitat, but no suitable nesting habitat; may occur for foraging; not expected to occur for nesting; observed during 2009 surveys in suitable habitat next to Project site.
Charadrius alexandrinus nivosus western snowy plover (nesting)	FT[a]	SSC[b]	Limited potentially suitable foraging and nesting habitat; may occur for foraging, but not expected to occur for nesting due to disturbance from oilfield activities.
Numenius americanus long-billed curlew (nesting)	–	WL	Limited suitable foraging habitat, but outside breeding range; may occur for foraging; not expected to occur for nesting.
Larus californicus California gull (nesting colony)	–	WL	Potentially suitable roosting and foraging habitat, but outside breeding range; **observed on the Project site;** not expected to occur for nesting.
Geochelidon nilotica gull-billed tern (nesting colony)	–	SSC	Limited potentially suitable foraging and nesting habitat; may occur for foraging and nesting.
Rynchops niger black skimmer (nesting colony)	–	SSC	No suitable foraging habitat on the Project site, but suitable foraging habitat adjacent to the Project site; no suitable nesting habitat on the Project site; not expected to occur for foraging or nesting.
Sternula [*Sterna*] *antillarum browni* California least tern (nesting colony)	FE	SE FP	No suitable foraging on the Project site, but suitable foraging habitat adjacent to the Project site; limited potentially suitable nesting habitat; not expected to occur for foraging or nesting due to high level of disturbance on the Project site.
Coccyzus americanus occidentalis western yellow-billed cuckoo (nesting)	FC	SE	Potentially suitable habitat, but outside current known breeding range; not expected to occur for foraging or nesting; may occur on the Project site as a very rare migrant.
Asio flammeus short-eared owl (nesting)	–	SSC	Potentially suitable foraging and nesting habitat; may occur for foraging; not expected to occur for nesting due to high level of disturbance on the Project site.

TABLE 4.6-4 (Continued)
SPECIAL STATUS WILDLIFE SPECIES KNOWN TO OCCUR IN THE PROJECT VICINITY

Species	Status		Likelihood of Occurrence
	USFWS	CDFG	
Asio otus long-eared owl (nesting)	–	SSC	Potentially suitable foraging and nesting habitat, but outside current known range; not expected to occur.
Athene cunicularia burrowing owl (burrow sites, some wintering sites)	–	SSC	Suitable foraging and nesting habitat; **observed wintering in 2008, 2009, and 2010;** absent during breeding surveys in 2008, 2009 and 2010.
Chaetura vauxi Vaux's swift (nesting)	–	SSC	Potentially suitable foraging habitat, but outside breeding range; expected to occur during migration; not expected to occur for nesting.
Cypseloides niger black swift (nesting)	–	SSC	Potentially suitable foraging habitat, but outside known breeding range; may occur as very rare migrant; not expected to occur for nesting.
Empidonax traillii extimus southwestern willow flycatcher (nesting)	FE	SE	Potentially suitable foraging and nesting habitat; not expected to occur because not observed during focused surveys in 2006, 2007, or 2009.
Lanius ludovicianus loggerhead shrike (nesting)	–	SSC	Suitable foraging and nesting habitat; **observed during previous surveys by GLA.**
Vireo bellii pusillus least Bell's vireo (nesting)	FE	SE	Suitable foraging and nesting habitat; **observed on the Project site during 2006, 2007, and 2009 focused surveys.**
Eremophila alpestris actia California horned lark	–	WL	Suitable foraging and nesting habitat; **observed during previous surveys by GLA.**
Progne subis purple martin (nesting)	–	SSC	Potentially suitable foraging, but outside known breeding range; may occur as very rare migrant.
Riparia riparia bank swallow (nesting)	–	ST	Potentially suitable foraging habitat, but outside known breeding range; may occur as a rare migrant.
Campylorhynchus brunneicapillus sandiegensis coastal cactus wren	–	SSC[c]	Suitable habitat; **observed on the Project site.**
Cistothorus palustris clarkae Clark's marsh wren	–	SSC	No suitable foraging or nesting habitat; during wetter years limited potentially suitable habitat may be present; limited potential to occur in wetter years.
Polioptila californica californica coastal California gnatcatcher	FT	SSC	Suitable habitat; **observed during 2006 and 2007 focused surveys conducted by GLA and 2009 focused surveys conducted by BonTerra Consulting.**
Dendroica petechia brewsteri yellow warbler (nesting)	–	SSC	Suitable foraging and nesting habitat; **observed on the Project site;** may occur for nesting.
Icteria virens yellow-breasted chat (nesting)	–	SSC	Suitable foraging and nesting habitat; **observed on the Project site.**

TABLE 4.6-4 (Continued)
SPECIAL STATUS WILDLIFE SPECIES KNOWN TO OCCUR IN THE PROJECT VICINITY

Species	Status		Likelihood of Occurrence
	USFWS	CDFG	
Aimophila ruficeps canescens southern California rufous-crowned sparrow	–	WL	Potentially suitable habitat, but outside current known range; not expected to occur.
Ammodramus savannarum grasshopper sparrow (nesting)	–	SSC	Potentially suitable habitat; not expected to occur due to high level of disturbance on the Project site.
Amphispiza belli belli Bell's sage sparrow (nesting)	–	WL	Potentially suitable habitat, but outside current known range; not expected to occur.
Passerculus sandwichensis beldingi Belding's savannah sparrow	–	SE	Limited suitable habitat; **observed during previous surveys by GLA and during 2009 surveys.**
Passerculus sandwichensis rostratus large-billed savannah sparrow (non-breeding/wintering)	–	SSC	Potentially suitable foraging habitat, but outside breeding range; may occur for foraging; not expected to occur for nesting.
Agelaius tricolor tricolored blackbird (nesting colony)	–	SSC	Potentially suitable foraging and marginally suitable nesting habitat; may occur for foraging; not expected to occur for nesting.
Mammals			
Sorex ornatus salicornicus Southern California saltmarsh shrew	–	SSC	Limited potentially suitable habitat; may occur.
Choeronycteris mexicana Mexican long-tongued bat	–	SSC	Outside current known range; not expected to occur.
Antrozous pallidus pallid bat	–	SSC	Potentially suitable foraging habitat, but no suitable roosting habitat; may occur for foraging; not expected to occur for roosting.
Corynorhinus townsendii Townsend's big-eared bat	–	SSC	Potentially suitable foraging, but no suitable roosting habitat; not expected to occur due to general lack of potential roost sites in coastal lowlands of the region and the high level of disturbance on the Project site.
Lasiurus cinereus hoary bat	–	SA	Suitable foraging and roosting habitat; may occur for foraging and roosting.
Lasiurus xanthinus western yellow bat	–	SSC	Potentially suitable foraging habitat, but no suitable roosting habitat; may occur for foraging; not expected to occur for roosting.
Eumops perotis californicus western mastiff bat	–	SSC	Potentially suitable foraging, but no suitable roosting habitat; not expected to occur due to lack of potential roost sites in coastal lowlands of the region and the high level of disturbance on the Project site.
Nyctinomops fermorosaccus pocketed free-tailed bat	–	SSC	Potentially suitable foraging habitat and limited suitable roosting habitat; may occur for foraging and roosting.
Nyctinomops macrotis big free-tailed bat	–	SSC	Limited potentially suitable foraging habitat and limited suitable roosting habitat; may occur for foraging and roosting.
Perognathus longimembris pacificus Pacific pocket mouse	FE	SSC	Limited suitable habitat; not expected to occur because not detected during previous trapping effort.

TABLE 4.6-4 (Continued)
SPECIAL STATUS WILDLIFE SPECIES KNOWN TO OCCUR
IN THE PROJECT VICINITY

Species	Status		Likelihood of Occurrence
	USFWS	CDFG	
Microtus californicus stephensi south coast marsh vole	–	SSC	Limited potentially suitable habitat; may occur.
Neotoma lepida intermedia San Diego desert woodrat	–	SSC	Potentially suitable habitat; may occur.
Onychomys torridus ramona southern grasshopper mouse	–	SSC	Potentially suitable habitat; may occur.
Taxidea taxus American badger	–	SSC	Potentially suitable habitat; not expected to occur due to high level of disturbance on site and this specie's general absence from urban areas in the region.

LEGEND:

Federal (USFWS)		**State (CDFG)**	
FE	Endangered	SA	Special Animal
FT	Threatened	SE	Endangered
FC	Candidate	ST	Threatened
		SCD	State Candidate for Delisting
		SSC	Species of Special Concern
		WL	Watch List
		FP	Fully Protected

[a] Designation refers to Pacific coastal population only
[b] Designation refers to coastal and interior populations
[c] Designation refers to San Diego and Orange counties only

Source: BonTerra Consulting 2011.

Invertebrates

San Diego fairy shrimp is a federally listed Endangered species. This species is restricted to vernal pools in coastal Southern California from Santa Barbara County south to extreme northwestern Baja California, Mexico. In the Project vicinity, this species has been observed in Fairview Park in Costa Mesa (USFWS 1997c). Suitable ponding habitat for this species is present on the Project site, and this species was observed in two vernal pools (VP1 and VP2) and five temporary pool features (AD3, and pools E, G, I, and J) during focused surveys conducted by GLA. The vernal pools occur on the mesa near the eastern-central portion of the Project site and cover 0.32 acre (Exhibits 4.6-2a, 4.6-2b, and 4.6-2c). The larger of the vernal pools is an artificial feature that formed in an abandoned baseball field. The pool supports a mix of herbaceous perennial hydrophytes, including creeping spikerush and saltgrass along with annuals including woolly marbles and waterfern (*Marsilea vestita*) that are indicative of vernal pool habitats in Southern California. Mule fat has colonized the pool and now accounts for a substantial component of the vegetative cover. The smaller vernal pool is very shallow and does not support a predominance of hydrophytes, but was identified as a vernal pool based on the presence of San Diego fairy shrimp adults (GLA 2009). In addition, a single individual San Diego fairy shrimp was detected in feature AD3, which covers 0.007 acre; however, even during the above-average rainfall years of 2009/2010 and 2010/2011 this feature failed to pond water for 14 days and does not represent viable habitat for the San Diego fairy shrimp.

The 2010/2011 rainfall season resulted in some additional man-made depressions on site that are capable of supporting San Diego fairy shrimp. These temporary pool features primarily

occur within areas dominated by non-native grassland, ruderal, mulefat scrub, and disturbed areas. These pools are summarized below:

Feature E – Approximately 0.05 acre in size/old oilfield sump.

Feature G – Approximately 0.003 acre in size/oilfield excavation area.

Feature I – Approximately 0.03 acre in size/grassland formed by roadside berm.

Feature J – Approximately 0.09 acre in size/grassland formed by roadside berm.

Riverside fairy shrimp (*Streptocephalus woottoni*) is not expected to occur on the Project site due to negative results during focused surveys conducted on site. Additional information regarding this species can be found in the Biological Technical Report. In total 0.500 acre of vernal pool and ponded areas support San Diego fairy shrimp on the Project site (Table 4.6-5).

TABLE 4.6-5
POOLS/PONDED AREAS SUPPORTING SAN DIEGO FAIRY SHRIMP
ON THE PROJECT SITE

Pool	Vegetation Type/Indicator Warranting Mitigation	Size (Acre)
VP1	Disturbed Mulefat/San Diego Fairy Shrimp	0.30
VP2	Disturbed – Developed/San Diego Fairy Shrimp	0.02
AD3	Non-native, Upland grassland/San Diego Fairy Shrimp	0.007
E	Disturbed Mulefat/San Diego Fairy Shrimp	0.05
G	Non-native grassland/San Diego Fairy Shrimp	0.003
I	Non-native grassland/San Diego Fairy Shrimp	0.03
J	Non-native grassland/San Diego Fairy Shrimp	0.09
	Total	**0.500**

Fish

No special status fish are expected to occur within the Project site due to a lack of suitable habitat. The Project site is located outside designated critical habitat areas for any listed fish species. Additional information regarding fish species in the Project area can be found in the Biological Technical Report.

Amphibians

Suitable habitat for the western spadefoot (*Spea hammondii*), a California Species of Special Concern, occurs on the Project site; however, this species has not been observed during focused fairy shrimp surveys and during hydrological monitoring on site from 2000, and 2007 through 2011 (Bomkamp 2009). Therefore, the potential for western spadefoot to occur on the Project site is considered low.

Arroyo toad (*Anaxyrus californicus*) and California red-legged frog (*Rana draytonii*) are not expected to occur due to a lack of suitable habitat. The Project site is located outside designated critical habitat areas for these listed amphibian species. Additional information regarding amphibian species in the Project area can be found in the Biological Technical Report.

Reptiles

The silvery legless lizard (*Anniella pulchra pulchra*), a California Species of Special Concern, was identified with potential to occur on the Project site. Although this very secretive species was not observed during the surveys, it may occur on the Project site.

Southwestern pond turtle (*Actinemys* [*Clemmys*] *marmorata pallida*), coast (San Diego) horned lizard (*Phrynosoma coronatum* [*blainvillii* population]), orange-throated whiptail (*Aspidoscelis* [*Cnemidophorus*] *hyperythra* [*beldingi*]*),* coast patch-nosed snake (*Salvadora hexalepis virgultea*), two-striped garter snake (*Thamnophis hammondii*), and northern red-diamond rattlesnake (*Crotalus ruber ruber*) are not expected to occur on the Project site due to a lack of suitable habitat and/or high level of disturbance. Additional information regarding reptile species in the Project area can be found in the Biological Technical Report.

Birds

Of the Threatened and Endangered bird species known to occur in the Project region, three species were observed on the Project site: least Bell's vireo, coastal California gnatcatcher, and Belding's savannah sparrow (*Passerculus sandwichensis beldingi*). The Project site is within designated critical habitat for the coastal California gnatcatcher and is located outside of designated critical habitat for all other listed bird species.

- Least Bell's vireo is a federally and State-listed Endangered species. Two solitary male least Bell's vireos were observed in the willow riparian habitats of the lowland on the Project site during the 2009 focused surveys (Exhibits 4.6-2a and 4.6-2b). Two least Bell's vireo were also present in the same locations during previous focused surveys conducted by GLA in 2006 and 2007 (GLA 2009b).
- Coastal California gnatcatcher is a federally listed Threatened species and a California Species of Special Concern. Focused surveys for the coastal California gnatcatcher were conducted in spring–summer 2009; this species was observed nesting on the Project site. A total of 17 coastal California gnatcatcher territories, consisting of 16 breeding pairs and 1 solitary male, were present on the Project site (Exhibits 4.6-2a and 4.6-2b) during the 2009 surveys. During previous focused surveys, GLA observed 15 pairs and 6 "single" individual gnatcatchers in 2006, and 12 pairs and 6 "unpaired" male gnatcatchers in 2007 (GLA 2009b).
- Belding's savannah sparrow is a State-listed Endangered species. Although focused surveys were not conducted for Belding's savannah sparrow, this species was observed during the 2009 focused surveys for other species and during previous surveys conducted by GLA (2009b).

Other non-listed special status species observed on the Project site include Cooper's hawk, sharp shinned hawk, Northern harrier, white-tailed kite, osprey, merlin (*Falco columbarius*), California gull (*Larus californicus*), burrowing owl, loggerhead shrike (*Lanius ludovicianus*), California horned lark (*Eremophila alpestris actia*), coastal cactus wren, yellow warbler (*Dendroica petechia brewsteri*), and yellow-breasted chat (*Icteria virens*).

- Cooper's hawk is a CDFG Watch List species. Breeding populations of this former California Species of Special Concern have increased in recent years as they have expanded into urban areas (Shuford and Gardali 2008). Both resident and migratory populations exist in Orange County. Preferred nesting habitats are oak and riparian woodlands dominated by sycamores (*Platanus* sp.) and willows (*Salix* spp.). Suitable

foraging and nesting habitats for this species occur on site, and the species has been observed foraging during the surveys. Therefore, Cooper's hawk does forage and may also nest on the Project site.

- Sharp-shinned hawk is a CDFG Watch List species. This raptor prefers forests and woodland habitats and generally avoids open habitats. Although suitable foraging habitat for sharp-sinned hawk occurs on the Project site and the species was observed during the surveys, the Project site is outside the known breeding range of this species. Therefore, sharp-shinned hawk does forage, but is not expected to nest on the Project site.
- Northern harrier is a California Species of Special Concern. It is a regular winter migrant in marshes and fields throughout Southern California, but is very scarce as a local breeder (Garrett and Dunn 1981). Suitable foraging and nesting habitats for the Northern harrier occur on the Project site, and a potential breeding pair was observed during the surveys. However, the nest was suspected to have been off site in Talbert Regional Park.
- White-tailed kite is a California Fully Protected species. Kites nest primarily in oaks (*Quercus* sp.), willows, and sycamores and forage in grassland and scrub habitats. White-tailed kites show strong site fidelity to nest groves and trees. This species is an uncommon to locally fairly common resident in coastal Southern California, and a rare visitor and local nester on the western edge of the deserts (Garrett and Dunn 1981). Suitable foraging and nesting habitats for this species occur on the Project site, and *this sp*ecies was observed during the surveys. Therefore, white-tailed kite is expected to forage and may nest on the Project site.
- Osprey is a CDFG Watch List species. A former California Species of Special Concern, numbers of this raptor in California have increased in recent decades (Shuford and Gardali 2008). This species occurs near large bodies of water including rivers, lakes, reservoirs, bays, estuaries, and surf zones (Zeiner et al*.* 1990a). In 2006, ospreys nested successfully at Upper Newport Bay for the first time in recent years (CDFG 2010a). Although no suitable foraging habitat is present on the Project site, suitable foraging habitat is immediately adjacent to the Project site. This species was observed perched on power poles on the Project site during the surveys. Limited, potentially suitable nesting habitat for this species is present on the Project site; however, due to the ongoing disturbance from oilfield activities, this species is not expected to nest on the Project site.
- Merlin is a CDFG Watch List species and a former California Species of Special Concern whose numbers have increased in California in recent decades (Shuford and Gardali 2008). This species is generally a rare to uncommon migrant and winter visitor to California. It prefers vast open space areas such as estuaries, grasslands, and deserts where it hunts small flocking birds such as sandpipers, larks, sparrows, and pipits. Suitable foraging habitat for the merlin occurs on the Project site, and the species was observed during the previous surveys conducted by GLA (2009). The Project site is outside the breeding range of this species; therefore, merlin is not expected to nest on the Project site.
- California gull is a CDFG Watch List species and formerly a California Species of Special Concern. This species nests in alkali and freshwater lakes east of the Sierra Nevada and the Cascades, with the largest colony nesting at Mono Lake (Zeiner et al. 1990a). This species is an abundant visitor to coastal and interior lowlands in the non-breeding season (Grinnell and Miller 1944) where it prefers sandy beaches, mudflats, and rocky intertidal and pelagic areas of marine and estuarine habitats, as well

as freshwater and salt marsh habitats (Zeiner et al. 1990a). The Project site provides potentially suitable roosting and foraging habitats, and the California gull was observed during the surveys. This species does not nest in the Project region; therefore, it is not expected to nest on the Project site.

- Burrowing owl is a California Species of Special Concern. Although the burrowing owl was recently proposed as a State Candidate for listing, the CDFG determined that the species did not warrant listing in consideration of its population throughout the State. However, this species is considered a species of local concern because it is much less common in Southern California than in the Central Valley. GLA observed one wintering burrowing owl along a linear earthen berm located near the eastern Project site boundary during the winter 2010 focused surveys (Exhibits 4.6-2a and 4.6-2b). This location is proximate to where a burrowing owl was detected in winter 2009 by BonTerra Consulting (Exhibits 4.6-2a and 4.6-2b) (BonTerra Consulting 2009b). The owl was detected during three of four wintering season focused surveys conducted by GLA (January 14, 25, and 29, 2010) (GLA 2010a). GLA observed two wintering owls on the Project site during previous surveys in winter 2008 (GLA 2009b). No breeding owls were observed on the Project site during the spring–summer 2009 focused surveys or during previous breeding season surveys conducted by GLA (GLA 2009b). Breeding season surveys in 2010 by GLA also did not detect burrowing owls on the site (GLA 2010b).

- Loggerhead shrike is a California Species of Special Concern. Shrikes inhabit open habitats with short vegetation such as pastures, agricultural fields, riparian areas, and open woodlands (Yosef 1996). It was considered to be a fairly common year-round resident in Southern California (Garrett and Dunn 1981), but has recently shown declines in its California population (Small 1994; Hamilton and Willick 1996). Suitable foraging and nesting habitat for loggerhead shrike is present, and the species was observed on the Project site.

- Coastal cactus wren is a California Species of Special Concern. Some authorities consider the taxonomic status of cactus wrens in the southwestern U.S. to be uncertain (Proudfoot et al. 2000). Two cactus wren territories were observed during focused surveys for the coastal California gnatcatcher in spring 2009. A breeding pair had an active nest in a large patch of prickly pear (Exhibits 4.6-2a and 4.6-2b). The first nesting attempt failed, apparently due to an infestation of Argentine ants (*Linepithema humile*); however, a subsequent nesting attempt produced at least one fledgling. In addition, a solitary male was observed in the northeastern portion of the Project site.

- Yellow warbler is a California Species of Special Concern. This subspecies breeds in Southern California (Dunn and Garrett 1997); most yellow warblers that occur in the Project region are migrants. In Southern California, yellow warblers breed locally in riparian woodlands, but during migration they can forage in a variety of different habitat types. Suitable foraging and nesting habitat for this subspecies is present on the Project site. Yellow warbler was observed on the Project site and may occur for nesting.

- Yellow-breasted chat is a California Species of Special Concern. For nesting, this species requires dense, brushy tangles near water and riparian woodlands that support a thick understory. This species occurs as an uncommon and local summer resident in Southern California along the coast and in the deserts (Garrett and Dunn 1981). This large warbler was once a fairly common summer resident in riparian woodlands throughout California, but is now much reduced in numbers, especially in Southern California (Remsen 1978). Suitable foraging and nesting habitat for this species is present on the Project site, and the yellow-breasted chat was incidentally observed during the 2009 focused surveys for the least Bell's vireo. A total of 17 individuals were

observed with 10 to 12 territories in the lowland and 1 territory in the large drainage on the mesa of the Project site (Drainage C).

There are several Threatened and Endangered bird species that are known to occur in the Project region but that were not observed on site; those that fit this description and that have a potential to occur on the Project site include Swainson's hawk (*Buteo swainsoni*), light-footed clapper rail (*Rallus longirostris levipes*), western snowy plover (*Charadrius alexandrinus nivosus*), western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), southwestern willow flycatcher, and bank swallow (*Riparia riparia*).

- Swainson's hawk is a State-listed Threatened species. It is a very rare migrant along the coast of Southern California (Garrett and Dunn 1981). This raptor forages at only a few favored locations during migration (e.g., Borrego Valley of Anza Borrego State Park), or perhaps opportunistically, but generally appears to fast through much of migration. This species formerly bred along the Southern California coast, but breeding is now mostly limited to the Sacramento and San Joaquin Valleys, the extreme northeast of California, and Mono and Inyo Counties (England et al. 1997). The Project site is outside the known breeding range of this species and, although potentially suitable foraging habitat is present on the Project site, this species only occurs in the region as a rare migrant. Therefore, the Swainson's hawk may occur on the Project site as a very rare migrant, but it is not expected to forage or nest on the Project site.
- Light-footed clapper rail is a federally and State-listed Endangered species and a California Fully Protected species. This rail is a secretive resident of coastal salt marshes of pickleweed and Pacific cordgrass (*Spartinia foliosa*) (Eddleman and Conway 1998). This subspecies occurs along the Pacific Coast from Bahia de San Quintin in Baja California, Mexico, north to the Carpinteria Marsh in Santa Barbara County (Zembal and Massey 1981). This species could be heard calling from the USACE salt marsh restoration site adjacent to the Project site. Tidal marsh areas on the Project site are very limited in extent, with a chain-link fence separating the USACE salt marsh restoration site from the Project site. As a result, the Project site provides potentially suitable foraging habitat but not suitable nesting habitat for this subspecies. Therefore, the light-footed clapper rail may occur on the Project site for foraging, but not for nesting.
- Western snowy plover is a federally listed Threatened species and a California Species of Special Concern. The USFWS states that "The Pacific coast population of the western snowy plover is defined as those individuals that nest adjacent to or near tidal waters, and includes all nesting colonies on the mainland coast, peninsulas, offshore islands, adjacent bays, and estuaries" (USFWS 1993). In California, this subspecies nests primarily on dune-backed beaches, barrier beaches, and salt-evaporation ponds; on the coast, it forages on beaches, tide flats, salt flats, and salt ponds (Page et al. 1995). The Pacific coast populations of the western snowy plover breed from southern Washington south through Baja California, Mexico (USFWS 2005b). Historically this species nested along the beaches in Huntington Beach, but in Orange County, breeding is currently limited to the Bolsa Chica Ecological Reserve and the mouth of the Santa Ana River (Hamilton and Willick 1996). The Project site provides limited potentially suitable foraging and nesting habitat for this species; however, due to the ongoing disturbance from oilfield activities, it is not expected to occur for nesting but may occur for foraging.
- Western yellow-billed cuckoo is a State-listed Endangered species and a federal Candidate for listing by the USFWS. This subspecies requires broad areas of old-growth riparian habitats dominated by willows and cottonwoods (*Populus* sp.) with dense understory vegetation. California's population has declined to less than 30 pairs (Hughes

1999). The Santa Ana River, specifically Prado Basin, is the only area in the region with riparian woodlands extensive enough to support breeding western yellow-billed cuckoos, and a few birds have persisted there. Potentially suitable habitat for this species is present on the Project site; however, the Project site is outside the currently known breeding range for this species. Therefore, western yellow-billed cuckoo is not expected to occur on the Project site, though it may occur as a very rare migrant.

- Southwestern willow flycatcher is a federally and State-listed Endangered species. This subspecies was once considered a common breeder in coastal Southern California. However, this subspecies has declined drastically due to the loss of breeding habitat and nest parasitism by the brown-headed cowbird (*Molothrus ater*). This species occurs in riparian habitats along rivers, streams, or other wetlands where dense growths of willows, baccharis (*Baccharis* sp.), arrowweed (*Pluchea* sp.), tamarisk (*Tamarix* sp.), or other plants are present, often with a scattered overstory of cottonwood (USFWS 2005a). Potentially suitable willow riparian habitat for this subspecies is present on the Project site. However, southwestern willow flycatchers were not observed during the 2009 focused surveys or during previous focused surveys conducted by GLA (GLA 2009b). Therefore, southwestern willow flycatcher is not expected to occur on the Project site because it was not observed during focused surveys.
- Bank swallow is a State-listed Threatened species. This species breeds in riparian areas with vertical cliffs and banks with fine-textured sandy soil in which it digs nesting holes (Zeiner et al. 1990a). Formerly more common as a breeder, it is estimated that only 110–120 colonies of this species remain within the State, primarily along the Sacramento and Feather Rivers in the northern Central Valley (CDFG BDB 2010). Potentially suitable foraging habitat for this species is present on the Project site; however, the Project site is outside the known breeding range of the species. Therefore, the bank swallow may occur as a rare migrant, but is not expected to nest on the Project site.

Several non-listed special status bird and raptor species have potential to occur on the Project site due to the presence of suitable habitat (Table 4.6-4). These species include the white-faced ibis (*Plegadis chihi*), prairie falcon (*Falco mexicanus*), American peregrine falcon (*Falco peregrinus anatum*), long-billed curlew *(Numenius americanus),* Gull-billed tern *(Geochelidon nilotica),* short-eared owl *(Asio flammeus),* large-billed savannah sparrow (*Passerculus sandwichensis rostratus*), and tricolored blackbird *(Agelaius tricolor).*

- White-faced ibis is a CDFG Watch List species and a former California Species of Special Concern. This species has increased substantially in the region since the 1980s (Shuford and Gardali 2008) and now nests locally in the region (Unitt 2004). This species nests in extensive marshes with tall marsh plants (Garrett and Dunn 1981). This species is known to occur at the San Joaquin Marsh and along lower San Diego Creek to Upper Newport Bay; the species may also nest at San Joaquin Marsh. During the 2009 surveys of the Project site, this species was observed flying over the Santa Ana River channel adjacent to the Project site. Limited, potentially suitable foraging habitat, but no suitable nesting habitat, occurs on the Project site. Therefore, white-faced ibis may occur on the Project site for foraging but is not expected to nest on the Project site.
- Prairie falcon is a CDFG Watch List species. Preferred foraging habitats include grassland and scrub vegetation types. Prairie falcons nest almost exclusively on cliffs (Clark and Wheeler 2001). It is an uncommon, year-round resident in the interior of Southern California (Garrett and Dunn 1981). Suitable foraging habitat is present on the

Project site, but no suitable nesting habitat is present. Therefore, prairie falcon may forage on the Project site, but it is not expected to nest on the Project site.

- American peregrine falcon is a California Fully Protected species that, due to recent population gains, was delisted from the federal list of Endangered species by the USFWS (1999a), and the California Fish and Game Commission voted for its removal from the California list of Endangered species on December 12, 2008. As a delisted species, the peregrine falcon will continue to be periodically monitored until 2015 (USFWS 2006a). Peregrine falcons prey almost exclusively on birds and use a variety of habitats, particularly wetlands and coastal areas. This falcon is a rare summer resident in Southern California, although it is more common during migration and the winter season. For nesting, this falcon prefers inaccessible areas such as those provided by cliffs, high building ledges, bridges, or other such structures. Suitable foraging habitat is present on the Project site, but no suitable nesting habitat is present. Therefore, American peregrine falcon may forage on the Project site, but it is not expected to nest on the Project site.
- Long-billed curlew is a CDFG Watch List species. This species is an uncommon to locally common winter visitor along most of the California coast and in the Central and Imperial Valleys where the largest flocks occur (Garrett and Dunn 1981; Zeiner et al. 1990a). In California, this species breeds in interior grasslands and wet meadows at higher elevations, usually adjacent to lakes or marshes (Grinnell and Miller 1944). This shorebird is a fairly common winter visitor along the coast of Orange County. Limited potentially suitable foraging habitat for this species is present on the Project site, but the Project site is outside the known breeding range for this species. Therefore, long-billed curlew may forage on the Project site, but it is not expected to nest on the Project site.
- Gull-billed tern is a California Species of Special Concern. This species forages along inshore marine habitats such as the edges of shallow embayments; exposed or shallowly flooded mudflats; the surf line of sandy beaches; beach strands and dunes; tidal flats; freshwater drainages and canals; and over agricultural fields and scrub habitats (Shuford and Gardali 2008). Limited potentially suitable foraging and nesting habitat for this species occurs on the Project site. Therefore, gull-billed tern has the potential to occur on the Project site on rare occasions for foraging and nesting.
- Short-eared owl is a California Species of Special Concern. This owl is an uncommon and local winter resident of coastal habitats in Southern California (Garrett and Dunn 1981). This species is considered to be a rare fall transient and winter resident of areas with extensive grassland and marsh habitats; it is less common in agricultural habitats (Lehman 1994). This owl hunts during day or night in open habitats such as marshes, grasslands, and tundra (Holt and Leasure 1993). The Project site provides potentially suitable foraging and nesting habitat, and the short-eared owl may occur for foraging; however, the short-eared owl is not expected to occur for nesting due to the high level of disturbance from ongoing oilfield activities on the Project site.
- Large-billed savannah sparrow is a California Species of Special Concern. This subspecies is now a rare to uncommon winter visitor in the region (Garrett and Dunn 1981; Hamilton and Willick 1996). Small numbers have been regularly detected at the Seal Beach National Wildlife Refuge, with several records from the Bolsa Chica Ecological Reserve and Upper Newport Bay, and one record at the San Joaquin Marsh (Hamilton and Willick 1996). Potentially suitable foraging habitat for this subspecies is present on the Project site; however, it does not nest in the Project region. Therefore, the large-billed savannah sparrow may occur on the Project site for foraging, but is not expected to nest on the Project site.

- Tricolored blackbird is a California Species of Special Concern. These colonially nesting birds prefer to breed in marsh vegetation of bulrushes and cattails and have also been recorded nesting in willows, blackberries, and mustard (Beedy et al. 1991). During winter months, they are often found foraging in wet pastures, agricultural fields, and seasonal wetlands. Tricolored blackbirds are nomadic, wandering during the nonbreeding season and occupying colony sites intermittently (Unitt 1984). Potentially suitable foraging and marginally suitable nesting habitat for this species is present on the Project site. Therefore, the tricolored blackbird may occur on the Project site for foraging, but it is not expected to nest on the Project site.

Several special status bird species (listed and non-listed) are known to occur in the Project vicinity that (1) are not expected to occur due to the lack of suitable habitat, (2) occur as rare visitors, or (3) are not expected because the Project is outside the species range (Table 4.6-4). These species include American white pelican (*Pelecanus erythrorhynchos*), California brown pelican (*Pelecanus occidentalis californicus*),double-crested cormorant (*Phalacrocorax auritus*),least bittern (*Ixobrychus exilis*), fulvous whistling duck (*Dendrocygna bicolour*), golden eagle (*Aquila chrysaetos*), ferruginous hawk (*Buteo regalis*), bald eagle (*Haliaeetus leucocephalus*),California black rail (*Laterallus jamaicensis coturniculus*), black skimmer (*Rynchops niger*), California least tern (*Sternula* [*Sterna*] *antillarum browni*), long-eared owl (*Asio otus*), Vaux's swift (*Chaetura vauxi*), black swift (*Cypseloides niger*), purple martin (*Progne subis*), Clark's marsh wren (*Cistothorus palustris clarkae*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), grasshopper sparrow (*Ammodramus savannarum*), and Bell's sage sparrow (*Amphispiza belli belli*). Additional discussions of these species can be found in the Biological Technical Report.

Mammals

Several non-listed special status mammal species have the potential to occur on the Project site, including southern California saltmarsh shrew (*Sorex ornatus salicornicus*), pallid bat (*Antrozous pallidus*), hoary bat (*Lasiurus cinereus*), western yellow bat (*Lasiurus xanthinus*), pocketed free-tailed bat (*Nyctinomops fermorosaccus*), big free-tailed bat (*Nyctinomops macrotis*), south coast marsh vole (*Microtus californicus stephensi*), San Diego desert woodrat (*Neotoma lepida intermedia*), and southern grasshopper mouse (*Onychomys torridus ramona*).

- Southern California saltmarsh shrew is a California Species of Special Concern. The saltmarsh shrew occurs in fresh and saltwater marshes; in dense vegetation adjacent to rivers, lakes, and streams; and also in grassland, chaparral, and woodland vegetation types (Wilson and Ruff 1999). Potentially suitable habitat for this subspecies is associated with the saltmarsh areas of the lowland portion of the Project site.
- Pallid bat is a California Species of Special Concern. It occurs in a wide variety of habitats, including grasslands, shrublands, and woodlands; it roosts in caves, crevices, mines, and occasionally hollow trees and buildings. This species occurs throughout California except for in the high Sierra Nevadas (Zeiner et al. 1990b). The Project site provides potentially suitable foraging habitat, but no suitable roosting habitat for this species.
- Hoary bat is tracked by the CNDDB as a CDFG Special Animal. This species is considered the most widespread North American bat. Most occurrence records in Orange County are from the winter months with some recorded in the spring and fall; no occurrences have been recorded in the summer so there is no evidence that it breeds in Orange County (Remington 2000). It occurs in open habitats or habitat mosaics with access to trees for cover and roosts in dense foliage of medium to large trees (Zeiner et

al. 1990b). Suitable foraging and roosting habitat for this species is present on the Project site.

- Western yellow bat is a California Species of Special Concern. Little is known about its habitat, but it is known to roost in leafy vegetation (Best et al. 1998) and occur with dry thorny vegetation of the Mexican Plateau, coastal western Mexico, and the deserts of the southwestern U.S. (Best et al. 1998). The Project site provides potentially suitable foraging, but no suitable roosting habitat for this species.
- Pocketed free-tailed bat is a California Species of Special Concern. This species is known to occur in areas with ponds or streams or in arid deserts that provide suitable foraging habitats. It primarily roosts in crevices in rugged cliffs, slopes, and tall rocky outcrops (Best et al. 1998). The Project site provides potentially suitable foraging and limited suitable roosting habitat (coastal bluffs) for this species.
- Big free-tailed bat is a California Species of Special Concern. This species feeds primarily on moths caught while flying over water sources in suitable habitat in the southwestern U.S. This species prefers rugged, rocky terrain and roosts in crevices in high cliffs or rocky outcrops (Zeiner et al. 1990b). The Project site provides limited suitable foraging and limited suitable roosting habitat (coastal bluffs) for this species.
- South coast marsh vole is a California Species of Special Concern. This subspecies of the California vole has been reported from tidal marshes at Point Mugo in Ventura County and Playa del Rey and Sunset Beach in Los Angeles County (Williams 1986). The Project site provides limited potentially suitable habitat for this species.
- San Diego desert woodrat is a California Species of Special Concern. This subspecies occupies arid areas with sparse vegetation, especially those comprised of cactus and other thorny plants. The San Diego subspecies is restricted to the Pacific slope in a range that stretches from San Luis Obispo south to northwestern Baja California, Mexico (Hall and Kelson 1959). The Project site provides limited suitable habitat for this species.
- Southern grasshopper mouse is a California Species of Special Concern. It is a territorial, predatory rodent of grassland and sparse scrub vegetation types and prefers sandy soils. It occurs along the coast of Southern California from Los Angeles County south through San Diego County (Hall and Kelson 1959). The Project site provides potentially suitable habitat for this subspecies.

Mexican long-tongued bat (*Choeronycteris mexicana*), Townsend's big-eared bat (*Corynorhinus townsendii*), western mastiff bat (*Eumops perotis californicus*), Pacific pocket mouse (*Perognathus longimembris pacificus*), and American badger (*Taxidea taxus*) are not expected to occur on the Project site. Additional discussions of these species can be found in the Biological Technical Report.

Special Status Habitats

In addition to providing an inventory of special status plant and wildlife species, the CNDDB also provides an inventory of vegetation types that are considered special status by State and federal resource agencies, academic institutions, and various conservation groups. Determination of the sensitivity level is based on the Nature Conservancy Heritage Program Status Ranks, which ranks vegetation types on a global and statewide basis according to the number and size of remaining occurrences and recognized threats. Special status vegetation types that occur on the Project site are discussed below.

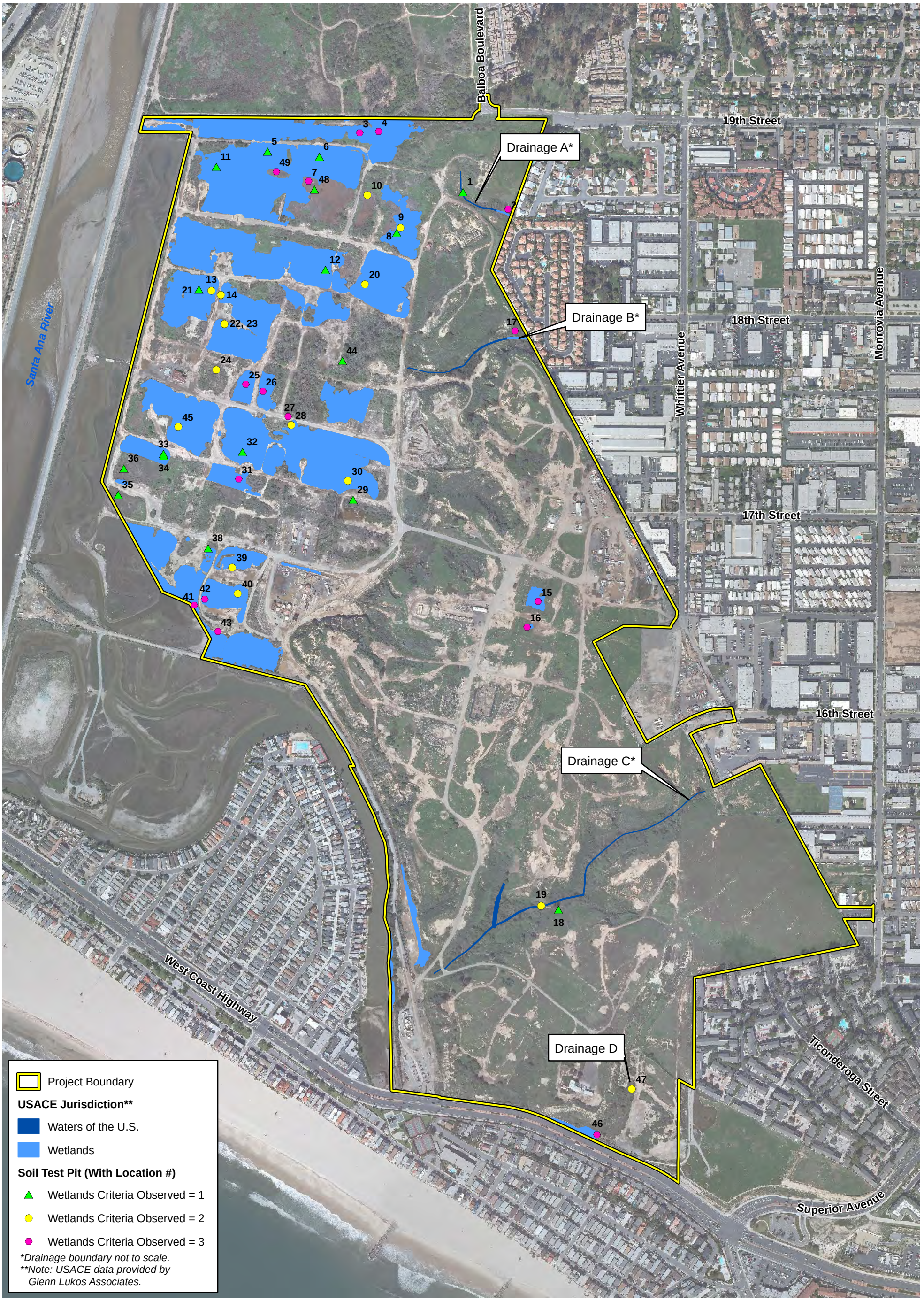
Coastal sage scrub, which includes several forms/alliance in the CNDDB, has undergone a historical loss from land use changes in Southern California basins and foothills. Loss in sage scrub habitat has led to the listing of several plant and wildlife species as Threatened and Endangered. The determination of whether the on-site habitats are considered special status is based on the CNDDB Global/State rankings and/or the potential of the habitat to provide high wildlife value (significantly disturbed types were generally not considered sensitive). Special status coastal sage scrub vegetation types on the Project site include southern coastal bluff scrub, California sagebrush scrub, Encelia scrub, coyote brush scrub, coyote brush scrub/mule fat scrub, goldenbush scrub, southern cactus scrub, southern cactus scrub/Encelia scrub, and disturbed southern coastal bluff scrub. These areas account for 43.23 acres of the Project site.

Several riparian vegetation types are ranked as special status by the CNDDB. Most natural riparian vegetation in Southern California has been lost to or degraded by land use conversions to agricultural, urban, and recreational uses; channelization for flood control; sand and gravel mining; groundwater pumping; water impoundments; and various other changes. Riparian vegetation is critical to the quality of in-stream habitat and aids significantly in maintaining aquatic life by providing shade, food, and nutrients that form the basis of the food chain. Riparian habitats are biologically productive as well as diverse, and are the exclusive habitat of several special status species. Riparian vegetation types on the Project site that are identified as special status by the CNDDB Global/State rankings and/or have the potential of the habitat to provide high wildlife value (significant disturbed types were generally not considered sensitive) include freshwater marsh, alkali meadow, disturbed alkali meadow, salt marsh, disturbed salt marsh, mule fat scrub, willow scrub, willow riparian forest, disturbed mule fat scrub, disturbed willow scrub, and disturbed willow riparian forest. There areas account for 87.25 acres of the Project site.

Although no Global or State ranking is provided by the CNDDB for vernal pools and ephemeral pools, these areas are considered special status due to the presence of fairy shrimp. Habitat loss and fragmentation is the largest threat to vernal pool species. It is estimated that 95 percent of vernal pool habitat in Southern California has been lost (USFWS 2005d). In addition to direct habitat loss, vernal pool hydrology can be altered by changes in hydrology, invasive species, contaminants, off-road vehicles, loss of pollinator species, inappropriate livestock grazing, and climate change (USFWS 2005d). The vernal pools and other ponded areas on the Project site cover approximately 00.50 acre.

Jurisdictional Waters

The extent of USACE, CDFG, and California Coastal Commission jurisdictional resources on the Project site was determined through jurisdictional delineations conducted by BonTerra Consulting in 2009 and GLA in 2007 and 2008 (GLA 2008 and 2009a). An approved jurisdictional determination was received from the USACE on June 3, 2009, based on information in GLA's March 5, 2009, submittal to the USACE (GLA 2009a). Approximately 53.76 acres of USACE jurisdictional areas occur on site, of which 53.15 acres consist of jurisdictional wetlands (see Exhibit 4.6-3a). The USACE has concurred with the findings of this delineation (USACE 2009). Approximately 12.08 acres of CDFG jurisdictional areas occur on the Project site (Exhibit 4.6-3b). In addition, approximately 84.48 acres of Coastal Commission jurisdictional resources are present on the Project site (Exhibit 4.6-3c).



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USACE Jurisdiction

Exhibit 4.6-3a

Newport Banning Ranch EIR

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CDFG Jurisdiction

Exhibit 4.6-3b

Newport Banning Ranch EIR

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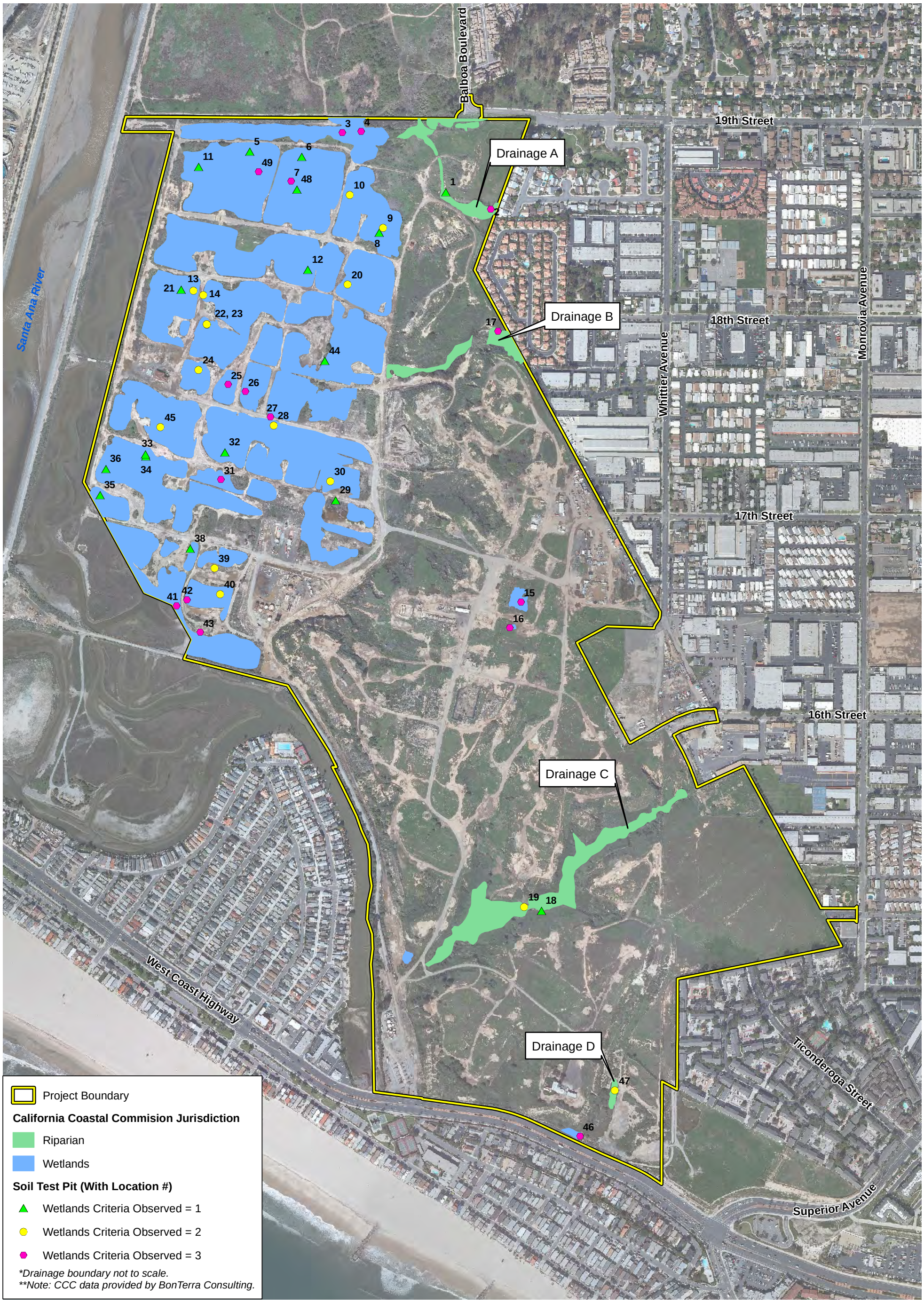

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CCC Jurisdiction

Exhibit 4.6-3c

Newport Banning Ranch EIR

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4.6.5 PROJECT DESIGN FEATURES AND STANDARD CONDITIONS

Project Design Features

PDF 4.6-1 The Master Development Plan designates a minimum of 220 gross acres of the Project site as wetland restoration/water quality areas, habitat conservation, and restoration mitigation areas.

PDF 4.6-2 The Master Development Plan includes a Habitat Restoration Plan (HRP) for the Habitat Areas. The HRP includes provisions for the preservation and long−term maintenance of existing sensitive habitat and habitat created and restored by the Project.

PDF 4.6-3 As identified in the Master Development Plan, the Habitat Areas to be restored as project design features will be subject to the same five-year Maintenance and Monitoring Program implemented for areas restored as mitigation. Standard Vegetation Monitoring Procedures are outlined in the Biological Technical Report prepared for the EIR and will be implemented consistent with applicable regulatory requirements.

PDF 4.6-4 The Master Development Plan requires that street lights be utilized only in key intersections and safety areas. The Planned Community Development Plan requires that a "dark sky" lighting concept be implemented within areas of the Project that adjoin habitat areas. Light fixtures within these areas will be designed for "dark sky" applications and adjusted to direct/reflect light downward and away from adjacent habitat areas. The Newport Banning Ranch Planned Community Development Plan will restrict exterior house lighting to minimize light spillage into adjacent habitat areas.

4.6.6 THRESHOLDS OF SIGNIFICANCE

The environmental impacts relative to biological resources are assessed using impact significance criteria that mirror the policy in CEQA Section 21001(c) of the *California Public Resources Code.* Accordingly, the State Legislature has established it to be the policy of the State to:

> Prevent the elimination of fish or wildlife species due to man's activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities.

Determining whether a project may have a significant effect or impact plays a critical role in the CEQA process. According to Section 15064.7 of the State CEQA Guidelines (Thresholds of Significance), each public agency is encouraged to develop and adopt, by ordinance, resolution, rule or regulation, their own significance thresholds to determine the impact of environmental effects. A significance threshold defines the quantitative, qualitative, or performance limits of a particular environmental effect. If these thresholds are exceeded, the agency would consider it to be significant.

In the development of significance thresholds for impacts to biological resources, the State CEQA Guidelines provide guidance primarily in Section 15065, Mandatory Findings of Significance, and Attachment G, Environmental Checklist Form. Section 15065(a) of the State CEQA Guidelines identifies that a project may have a significant effect if it:

> …has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or wildlife community, reduce the number or restrict the range of an endangered, rare, or threatened species.

Appendix G of the State CEQA Guidelines is more specific in addressing biological resources and encompasses a broader range of resources to be considered, including Candidate, Sensitive, or Special Status Species; riparian habitat or other special status natural communities; federally protected wetlands; fish and wildlife movement corridors; local policies or ordinances protecting biological resources; and adopted habitat conservation plans. These factors are typically considered through the checklist of questions answered to determine a project's appropriate environmental documentation (i.e., Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report [EIR]). Because these questions are derived from standards employed in other laws, regulations and commonly used thresholds, it is reasonable to use these standards as a basis for defining significance thresholds. For the purpose of this analysis, impacts to biological resources are considered significant (before calculating the offsetting impacts of mitigation measures) if the proposed Project would:

Threshold 4.6-1 Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS.

Threshold 4.6-2 Have a substantial adverse effect on any riparian habitat or other special status natural community identified in local or regional plans, policies, regulations, or by the CDFG or USFWS.

Threshold 4.6-3 Have a 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.

Threshold 4.6-4 Interfere substantially with the movement of any native or migratory fish or wildlife species; inhibits established native resident or migratory fish or wildlife corridors; or impedes the use of native wildlife nursery sites.

Threshold 4.6-5 Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Conflict with any applicable plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

In order to evaluate whether an impact on biological resources would result in a "substantial adverse effect", both the resource itself and how that resource fits into a regional context must be considered. The proposed Project's regional setting includes the Central/Coastal Subregion NCCP/HCP. This subregion is bound by State Route (SR) 55 and SR-91 to the north; the Santa

Ana River and Pacific Ocean to the west; El Toro Road and Interstate (I) 5 to the east; and the Pacific Ocean to the south.

For impact analysis purposes, a "substantial adverse effect" is defined as the loss or harm of a magnitude which, based on current scientific data and knowledge, would (1) substantially diminish population numbers of a species or distribution of a habitat type within the region or (2) eliminate the functions and values of a biological resource in the region.

For each impact found to be significant, mitigation measures for the proposed Project have been developed that avoid, minimize, or compensate for the significant impact. Following each finding of significance, the mitigation measures that address the impact have been provided. In this impact section, a brief determination that the measures have reduced the impacts to a less than significant level has been identified. The Mitigation Program is provided in Section 4.6.8.

4.6.7 ENVIRONMENTAL IMPACTS

The determination of impacts is based on a comparison of Project maps depicting permanent and temporary impact areas and maps of biological resources on the Project site. All construction activities, including staging and equipment areas, are assumed to be within the impact areas identified on Exhibit 4.6-4, Project Impacts. In order to evaluate the entire extent of potential impacts on biological resources located within the proposed Project, it is necessary to understand the various Project impact areas. The following is a summary of these areas:

- ***Rough and Precise Grading/Development:*** These areas include the limit of grading for housing, retail, resort inn, roads, parks, and other development areas. These are considered permanent impacts.

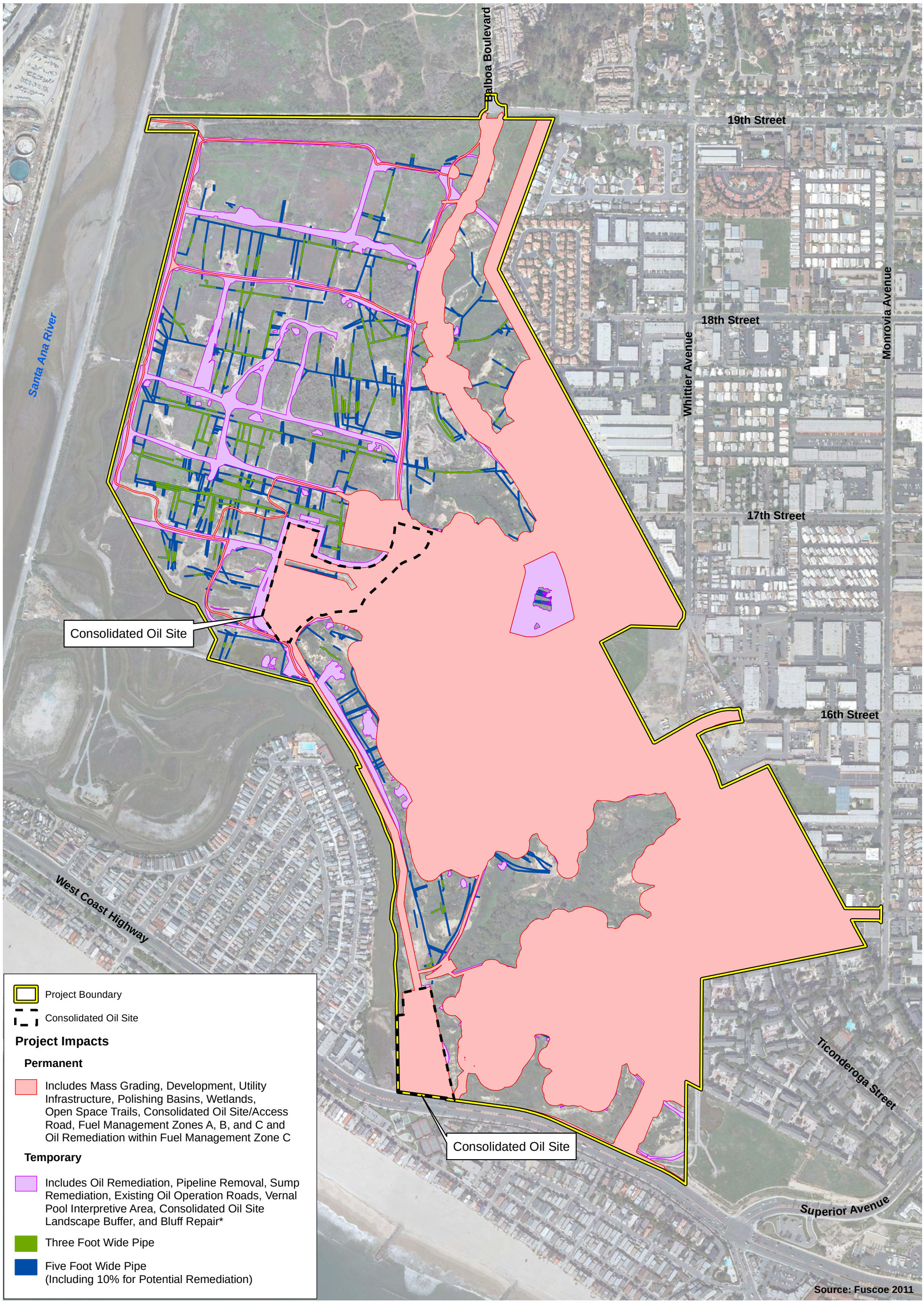
- ***Utility Infrastructure:*** These are select locations where utility easements cross open space areas and are considered a permanent impact. Utility easements allow for existing infrastructure lines to be maintained and future infrastructure lines to be installed underground. If utilities are required to be uncovered for maintenance within the Open Space Preserve, vegetation would be replanted over easements after the completion of maintenance.

- ***Water Quality Basins:*** These areas are considered permanent impact areas, although it should be noted they would be designed such that they would contribute to the overall function of the open space. This constructed basin(s) would use native wetland habitat for treatment function within the limits of the basin. These basins would also require long-term Safe Harbor maintenance agreements with the resource agencies within the physical limits of the basin to ensure maintenance activities are performed on a routine basis to maximize water quality treatment and energy dissipation functions.

- ***Open Space Trails:*** The public trails would be located within existing oilfield roads, avoiding biological resources. These trails would be permanent. The Project proposes that the roads would be scraped to remove oil and other substances and be periodically maintained.

- ***Bluff Repair:*** These areas are considered a temporary impact; the bluffs and slopes would be restored and revegetated.

- ***Vernal Pool Interpretive Area:*** These areas are considered a temporary impact; the terrain outside the protected vernal pools would be modified to hydrologically support the pool and to establish an interpretive staging area. The area would be restored and revegetated.



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Project Impacts

Newport Banning Ranch EIR

Exhibit 4.6-4

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- ***Consolidated Oil Sites:*** Two areas of existing oilfield operations within the proposed Open Space Preserve are designated for the continuation of oilfield operations. These areas would be deed restricted to open space and upon the cessation of oil operations would revert to an open space use. These areas are considered permanent impacts. The access road would be located on an existing oilfield road, thereby avoiding direct impacts to biological resources. A public trail (Bluff Toe Trail) is proposed adjacent to the existing oilfield road.
- ***Planting Buffers around the Consolidated Oil Sites:*** Planting buffers located around the consolidated oil well sites could include plantings and fencing as permitted in the Habitat Restoration Plan. These areas are considered to be temporary impacts.
- ***Oilfield Remediation (Pipeline Removal and Sump and Oil Contaminant Remediation Areas):*** The pipeline removal impacts assume a three-foot-wide and a five-foot-wide vegetation impact corridor. These areas are considered to be temporary impacts and would be restored and revegetated.
- ***Pipe Remediation:*** It is estimated that a maximum of ten percent of the soil would require remediation due to pipeline removal impacts associated with the five-foot-wide pipe removal areas. These activities are considered to be temporary impacts and would be restored and revegetated.
- ***Existing Oil Operation Roads:*** Portions of the oil roads would require the top several inches of soil to be removed and remediated. These areas are considered to be a temporary impact and would be restored and revegetated.
- ***Fuel Management Zones:*** Zones A, B, and C are considered permanent impacts. Zone C areas are part of the Open Space Preserve and are intended to provide additional habitat and, as noted in the Habitat Restoration Plan, shall contain non-irrigated low grasses, succulents, cactus, and other low height and low fuel volume native plants that require minimal, if any, maintenance; these areas would retain some habitat functions and would also provide buffer functions. Any native vegetation plantings within Fuel Management Zone C would not count towards the habitat mitigation requirements identified in Section 4.6.8 with the exception of raptor foraging habitat.

Oilfield activities occur throughout the Project site, especially in the lowland. In order to construct the proposed Project, all oilfield infrastructure (i.e., oil wells, pads, pipelines, utility poles, historic pumps, and related facilities) within the development footprint would be removed and/or decommissioned and the underlying soil would be remediated as needed. Therefore, this analysis assumes there would be no additional impacts resulting from oilfield remediation within the development footprint. Outside the development footprint within the open space areas, oilfield remediation would occur as well. Pipelines within the open space areas would be removed and could potentially impact an area either three feet wide or five feet wide. The width of the pipe removal area is based on the anticipated maximum acreage of temporary impacts. Pipeline impact areas would be minimized to the greatest extent practicable by selectively cutting pipelines and pulling the pipes straight out of the vegetation (GLA 2009b). After pipelines are removed, contaminated soil, if detected, would be remediated. Since the extent of required remediation is not known prior to pipeline removal, the biological resources analysis assumed that remediation would be required on approximately ten percent of the five-foot-wide pipe removal area (GLA 2009b). Impacts from oilfield remediation would result in temporary impacts to biological resources. Following oilfield remediation, the areas outside the proposed development area would be revegetated with native habitat and would remain as permanent open space.

The Project proposes a minimum of 220 gross acres of the Project site as wetland restoration/water quality areas, habitat restoration areas, and habitat preservation areas (PDF 4.6-1). The Project also includes a Habitat Restoration Plan for these areas that provides for the long-term preservation and maintenance of sensitive habitat areas (PDF 4.6-2). Finally, in order to ensure the long-term productivity of these habitat areas, the Project would be subject to a five-year Maintenance and Monitoring Program (PDF 4.6-3). The effect of PDFs 4.6-1, 4.6-2, and 4.6-3 is the preservation and long-term protection and maintenance of the habitat areas on the Project site which would contribute to the viability of the Project site for biological resources.

Both direct and indirect impacts on biological resources have been evaluated. Direct impacts are those that involve the initial loss of habitats associated with grading, construction, construction-related activities, and oilfield remediation. Indirect impacts are those that would be related to impacts on the adjacent open space areas due to construction activities (e.g., noise, dust) or Project operation (e.g., human activity related to the development of trails and oilfield operations).

Biological impacts associated with the proposed Project are evaluated with respect to the following special status biological issues:

- Federally or State-listed Endangered or Threatened plant or wildlife species;
- Non-listed species that meet the criteria in the definition of “Rare” or “Endangered” in the State CEQA Guidelines (14 CCR 15380);
- Species designated as California Species of Special Concern;
- Streambeds, wetlands, and their associated vegetation;
- Habitats suitable to support federally or State-listed Endangered or Threatened plant or wildlife species;
- Habitat, other than wetlands, considered special status by regulatory agencies (e.g., the USFWS, the CDFG) or resource conservation organizations;
- Other species or issues of concern to regulatory agencies or conservation organizations; and
- Criteria in the Central/Coastal NCCP/HCP.

The actual and potential occurrence of these resources on the Project site was correlated with the significance criteria to determine whether the proposed Project’s impacts on these resources would be considered significant.

Threshold 4.6-1 ***Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, or special status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS?***

Implementation of the proposed Project could potentially result in impacts on special status plant and wildlife species if they occur on the Project site. Potential impacts on these species were evaluated by determining the impacts on habitat that the species is known or expected to occupy and their known or expected occurrence based on the results of focused survey efforts.

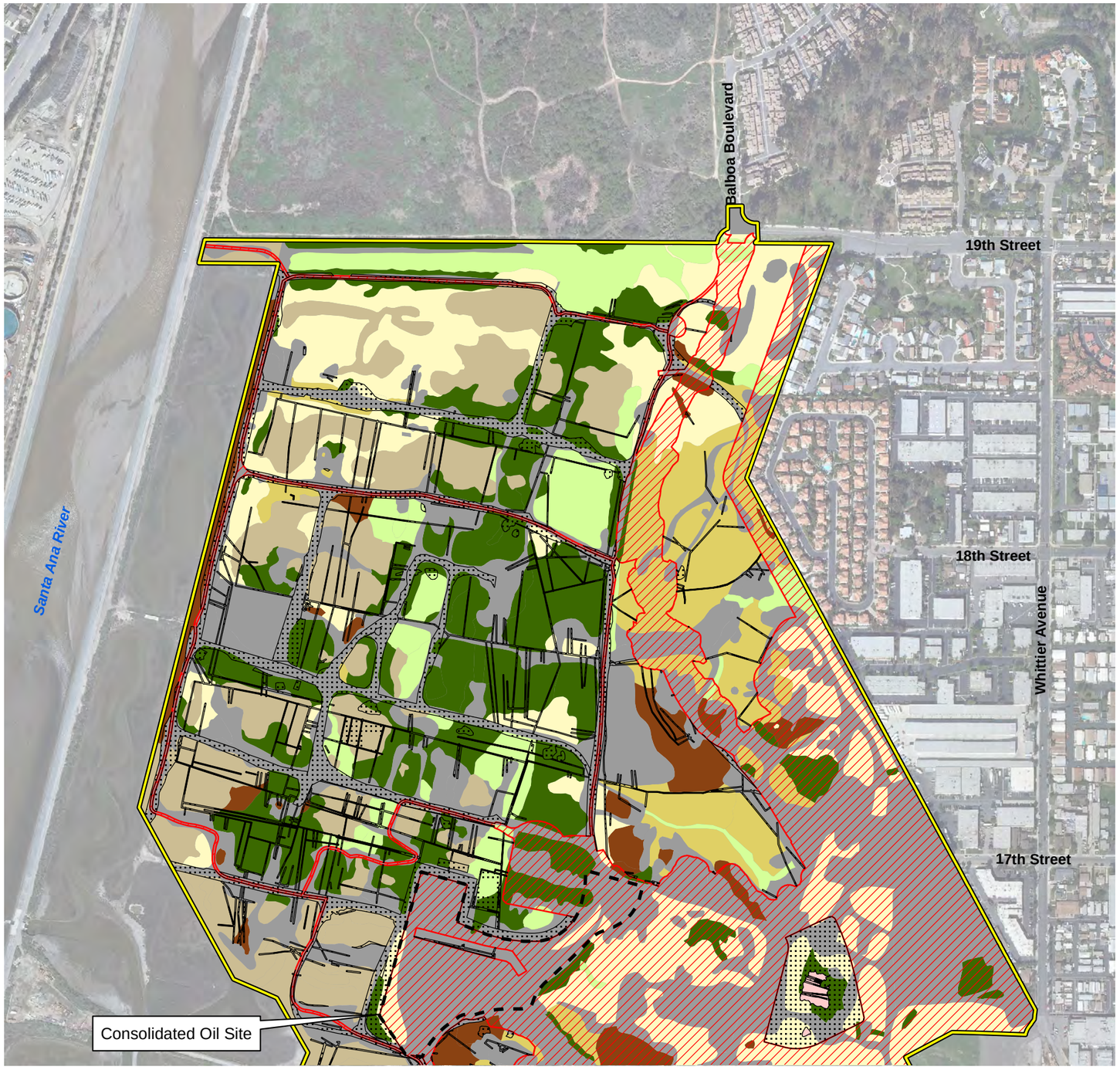
Plant and Vegetation Type Impacts

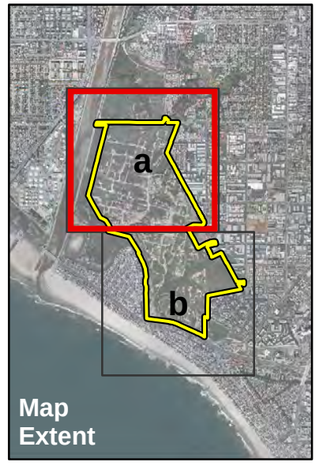
Approximately 236.32 acres of native and non-native vegetation types and other areas would be impacted by the proposed Project. These impacts are discussed below, summarized in Table 4.6-6, and depicted in Exhibits 4.6-5a and 4.6-5b, Project Impacts – Vegetation Types and Other Areas.

Permanent Project impacts (approximately 205.83 acres) would occur in areas of the conceptual land use plan (see Exhibit 3-2 of Section 3.0, Project Description) that are mapped as Public Parks/Recreation; Visitor-Serving Resort/Residential; Residential; Mixed-use/Residential; roadways; public trails; and utility infrastructure including the consolidated oil sites, access roads, landscape buffers, fuel modification areas, and water quality basins. Temporary Project impacts (approximately 30.49 acres) would occur in areas that are mapped as Open Space (i.e., existing oil operation roads, bluff repair, oilfield remediation, and the vernal pool interpretative areas). This includes approximately 22.17 acres from non-remediation activities and approximately 8.32 acres from remediation activities. These impacts are considered temporary because the areas would be restored as part of the Project.

Coastal Sage Scrub

The proposed Project would impact approximately 11.92 acres (10.89 acres permanent, 1.03 acres temporary) of coastal sage scrub vegetation, including areas mapped as southern coastal bluff scrub, California sagebrush scrub, Encelia scrub, coyote brush scrub, coyote brush/mule fat scrub, goldenbush scrub, southern cactus scrub, southern cactus scrub/Encelia scrub, and saltbush scrub. In addition, the proposed Project would impact approximately 11.19 acres (9.64 acres permanent, 1.55 acres temporary) of disturbed coastal sage scrub vegetation, including areas mapped as disturbed southern coastal bluff scrub, disturbed sage scrub, disturbed Encelia scrub/mule fat scrub, disturbed Encelia scrub, disturbed goldenbush scrub, disturbed goldenbush scrub/mule fat scrub/salt marsh, disturbed southern cactus scrub, disturbed southern cactus scrub/Encelia scrub, ruderal/disturbed Encelia scrub, ruderal/disturbed Encelia scrub/disturbed mule fat scrub, and ornamental/disturbed southern coastal bluff scrub.





Project Boundary

Consolidated Oil Site

Project Impacts

Permanent

Temporary

Vegetation Types and Other Areas

Coastal Sage Scrub

Southern Coastal Bluff Scrub, California Sagebrush Scrub, Encelia Scrub, Coyote Brush Scrub, Coyote Brush Scrub/Mule Fat Scrub, Goldenbush Scrub, Southern Cactus Scrub, Southern Cactus Scrub/Encelia Scrub, Saltbush Scrub

Disturbed Coastal Sage Scrub

Disturbed Southern Coastal Bluff Scrub, Disturbed Sage Scrub, Disturbed Encelia Scrub/Mule Fat Scrub, Disturbed Encelia Scrub, Disturbed Goldenbush Scrub, Disturbed Goldenbush Scrub/Mule Fat Scrub/Salt Marsh, Disturbed Southern Cactus Scrub, Disturbed Southern Cactus Scrub/Encelia Scrub, Ruderal/Disturbed Encelia Scrub, Ruderal/Disturbed Encelia Scrub/Disturbed Mule Fat Scrub, Ornamental/Disturbed Southern Coastal Bluff Scrub

Grassland and Ruderal

Non-Native Grassland, Non-Native Grassland/Ruderal, Ruderal

Grassland Depression Features

Vernal Pool, Ephemeral Pool

Marshes and Mudflats

Freshwater Marsh, Alkali Meadow, Disturbed Alkali Meadow, Salt Marsh, Disturbed Salt Marsh, Mudflat, Open Water

Riparian Scrub/Forest

Mule Fat Scrub, Willow Scrub, Willow Riparian Forest

Disturbed Riparian Scrub/Forest

Disturbed Mule Fat Scrub, Disturbed Mule Fat Scrub/Goldenbush Scrub, Disturbed Mule Fat Scrub/Ruderal, Disturbed Willow Scrub, Disturbed Willow Riparian Forest

Other Areas

Giant Reed, Cliff, Ornamental, Disturbed, Disturbed/Developed

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Project Impacts: Vegetation Types and Other Areas

Exhibit 4.6-5a

Newport Banning Ranch EIR

N W E S

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Feet

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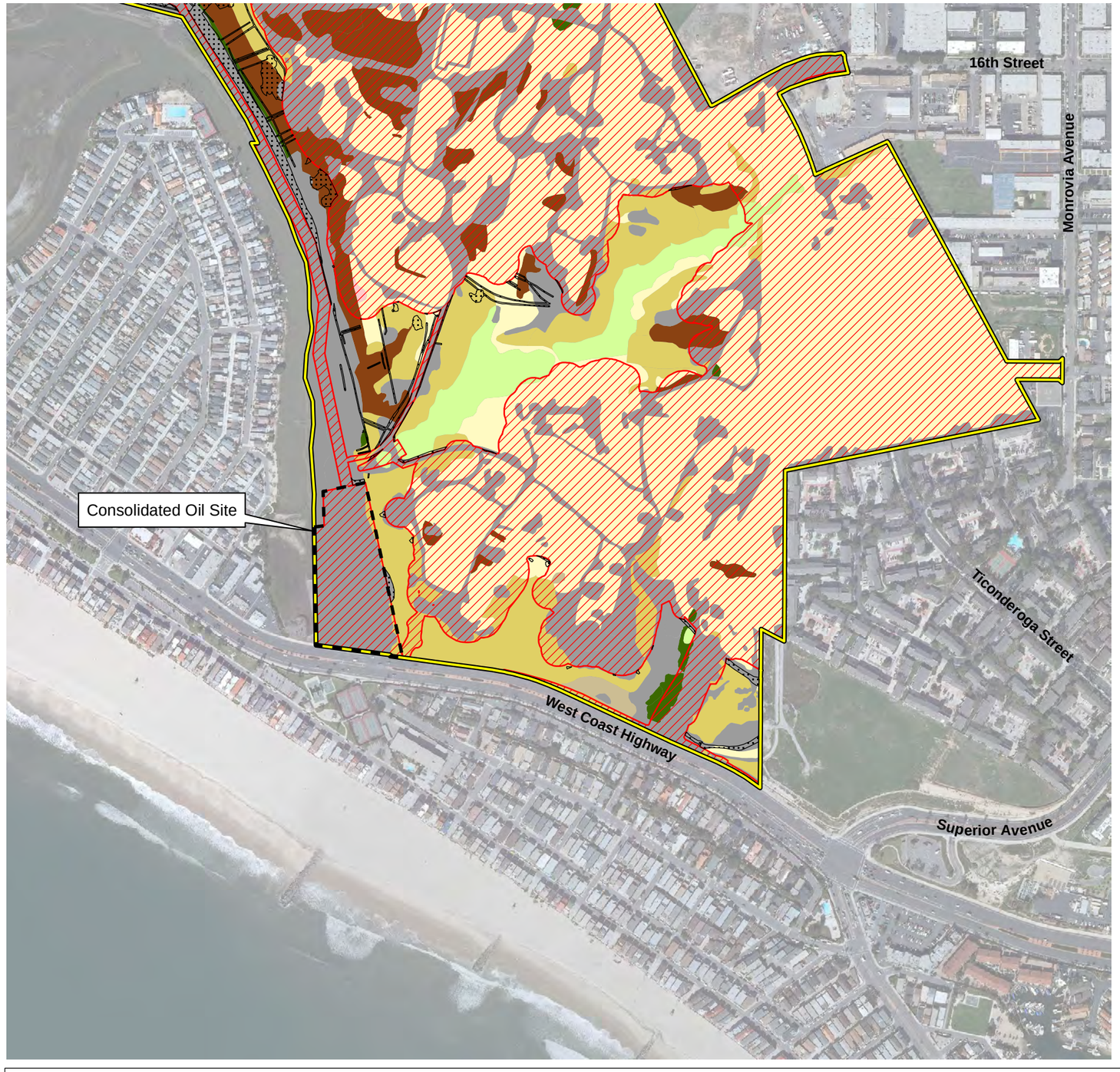

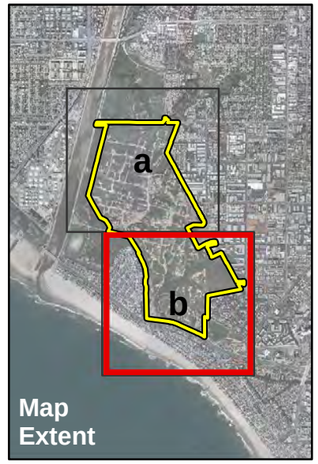

Project Boundary

Consolidated Oil Site

Project Impacts

Permanent

Temporary

Vegetation Types and Other Areas

Coastal Sage Scrub

Southern Coastal Bluff Scrub, California Sagebrush Scrub, Encelia Scrub, Coyote Brush Scrub, Coyote Brush Scrub/Mule Fat Scrub, Goldenbush Scrub, Southern Cactus Scrub, Southern Cactus Scrub/Encelia Scrub, Saltbush Scrub

Disturbed Coastal Sage Scrub

Disturbed Southern Coastal Bluff Scrub, Disturbed Sage Scrub, Disturbed Encelia Scrub/Mule Fat Scrub, Disturbed Encelia Scrub, Disturbed Goldenbush Scrub, Disturbed Goldenbush Scrub/Mule Fat Scrub/Salt Marsh, Disturbed Southern Cactus Scrub, Disturbed Southern Cactus Scrub/Encelia Scrub, Ruderal/Disturbed Encelia Scrub, Ruderal/Disturbed Encelia Scrub/Disturbed Mule Fat Scrub, Ornamental/Disturbed Southern Coastal Bluff Scrub

Grassland and Ruderal

Non-Native Grassland, Non-Native Grassland/Ruderal, Ruderal

Grassland Depression Features

Vernal Pool, Ephemeral Pool

Marshes and Mudflats

Freshwater Marsh, Alkali Meadow, Disturbed Alkali Meadow, Salt Marsh, Disturbed Salt Marsh, Mudflat, Open Water

Riparian Scrub/Forest

Mule Fat Scrub, Willow Scrub, Willow Riparian Forest

Disturbed Riparian Scrub/Forest

Disturbed Mule Fat Scrub, Disturbed Mule Fat Scrub/Goldenbush Scrub, Disturbed Mule Fat Scrub/Ruderal, Disturbed Willow Scrub, Disturbed Willow Riparian Forest

Other Areas

Giant Reed, Cliff, Ornamental, Disturbed, Disturbed/Developed

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Project Impacts: Vegetation Types and Other Areas

Exhibit 4.6-5b

Newport Banning Ranch EIR

N W E S

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TABLE 4.6-6
VEGETATION TYPES AND OTHER AREAS IMPACTED BY THE PROPOSED PROJECT

Vegetation Type	Existing (Acres)	Permanent Impacts (Acres)	Temporary Impacts: Non-Oilfield Remediation Operations (Acres)	Temporary Impacts: Pipe Removal (Acres)	Total Temporary Impacts (Acres)	Total Impacts (Acres)	Area Not Affected (Acreage)
Coastal Sage Scrub	***37.63***	***10.89***	***0.41***	***0.62***	***1.03***	***11.92***	***25.71***
Southern Coastal Bluff Scrub	9.21	3.02	0.02	0.04	0.06	***3.08***	*6.13*
California Sagebrush Scrub	0.29	0.29	0.00	0.00	0.00	***0.29***	*0.00*
Encelia Scrub	15.73	6.18	0.17	0.33	0.50	***6.68***	*9.05*
Coyote Brush Scrub	0.33	0.04	0.01	0.00	0.01	***0.05***	*0.28*
Coyote Brush Scrub/Mule Fat Scrub	0.06	0.06	0.00	0.00	0.00	***0.06***	*0.00*
Goldenbush Scrub	0.87	0.01	0.12	0.01	0.13	***0.14***	*0.73*
Southern Cactus Scrub	8.91	1.20	0.03	0.21	0.24	***1.44***	*7.47*
Southern Cactus Scrub/Encelia Scrub	2.17	0.03	0.06	0.03	0.09	***0.12***	*2.05*
Saltbush Scrub	0.06	0.06	0.00	0.00	0.00	***0.06***	*0.00*
Disturbed Coastal Sage Scrub	***20.64***	***9.64***	***1.08***	***0.47***	***1.55***	***11.19***	***9.45***
Disturbed Southern Coastal Bluff Scrub	5.66	1.43	0.68	0.21	0.89	***2.32***	*3.34*
Disturbed Sage Scrub	0.30	0.23	0.00	0.00	0.00	***0.23***	*0.07*
Disturbed Encelia Scrub/Mule Fat Scrub	0.49	0.04	0.03	0.01	0.04	***0.08***	*0.41*
Disturbed Encelia Scrub	4.33	2.97	0.04	0.02	0.06	***3.03***	*1.30*
Disturbed Goldenbush Scrub	1.19	0.00	0.07	0.12	0.19	***0.19***	*1.00*
Disturbed Goldenbush Scrub/Mule Fat Scrub/ Salt Marsh	1.06	0.01	0.21	0.00	0.21	***0.22***	*0.84*
Disturbed Southern Cactus Scrub	1.04	1.00	0.00	0.00	0.00	***1.00***	*0.04*
Disturbed Southern Cactus Scrub/Encelia Scrub	0.78	0.36	0.00	0.00	0.00	***0.36***	*0.42*
Ruderal/Disturbed Encelia Scrub	0.80	0.80	0.00	0.00	0.00	***0.80***	*0.00*
Ruderal/Disturbed Encelia Scrub/Disturbed Mule Fat Scrub	2.74	2.74	0.00	0.00	0.00	***2.74***	*0.00*
Ornamental/Disturbed Southern Coastal Bluff Scrub	2.25	0.06	0.05	0.11	0.16	***0.22***	*2.03*

TABLE 4.6-6 (Cont.)
VEGETATION TYPES AND OTHER AREAS IMPACTED BY THE PROPOSED PROJECT

Vegetation Type	Existing (Acres)	Permanent Impacts (Acres)	Temporary Impacts: Non-Oilfield Remediation Operations (Acres)	Temporary Impacts: Pipe Removal (Acres)	Total Temporary Impacts (Acres)	Total Impacts (Acres)	Area Not Affected (Acreage)
Grassland and Ruderal	***120.40***	***97.26***	***2.16***	***0.71***	***2.87***	***100.13***	***20.27***
Non-Native Grassland	85.76	79.60	0.36	0.13	0.49	***80.09***	*5.67*
Non-Native Grassland/Ruderal	6.51	6.07	0.44	0.00	0.44	***6.51***	*0.00*
Ruderal	28.13	11.59	1.36	0.58	1.94	***13.53***	*14.60*
Grassland Depression Features	***0.40***	***0.07***	***0.02***	***0.04***	***0.06***	***0.13***	***0.27***
Vernal Pool	0.33	0.00	0.02	0.04	0.06	***0.06***	*0.27*
Ephemeral Pool	0.07	0.07	0.00	0.00	0.00	***0.07***	*0.00*
Marshes and Mudflats	***31.45***	***0.10***	***0.82***	***1.53***	***2.35***	***2.45***	***29.00***
Freshwater Marsh	0.50	0.00	0.00	0.00	0.00	***0.00***	*0.50*
Alkali Meadow	20.39	0.07	0.36	1.07	1.43	***1.50***	*18.89*
Disturbed Alkali Meadow	2.42	0.00	0.06	0.13	0.19	***0.19***	*2.23*
Salt Marsh	6.01	0.03	0.29	0.32	0.61	***0.64***	*5.37*
Disturbed Salt Marsh	0.26	0.00	0.03	0.00	0.03	***0.03***	*0.23*
Mudflat	0.43	0.00	0.00	0.00	0.00	***0.00***	*0.43*
Open Water	1.44	0.00	0.08	0.01	0.09	***0.09***	*1.35*
Riparian Scrub/Forest	***21.71***	***1.89***	***0.25***	***0.54***	***0.79***	***2.68***	***19.03***
Mule Fat Scrub	3.32	0.47	0.10	0.10	0.20	***0.67***	*2.65*
Willow Scrub	1.14	0.08	0.01	0.10	0.11	***0.19***	*0.95*
Willow Riparian Forest	17.25	1.34	0.14	0.34	0.48	***1.82***	*15.43*
Disturbed Riparian Scrub/Forest	***38.87***	***4.98***	***2.94***	***2.33***	***5.27***	***10.25***	***28.62***
Disturbed Mule Fat Scrub	28.87	4.60	2.51	1.56	4.07	***8.67***	*20.20*
Disturbed Mule Fat Scrub/Ruderal	0.88	0.00	0.10	0.09	0.19	***0.19***	*0.69*
Disturbed Mule Fat Scrub/Goldenbush Scrub	2.03	0.35	0.21	0.10	0.31	***0.66***	*1.37*
Disturbed Willow Scrub	1.03	0.03	0.00	0.08	0.08	***0.11***	*0.92*
Disturbed Willow Riparian Forest	6.06	0.00	0.12	0.50	0.62	***0.62***	*5.44*

TABLE 4.6-6 (Cont.)
VEGETATION TYPES AND OTHER AREAS IMPACTED BY THE PROPOSED PROJECT

Vegetation Type	Existing (Acres)	Permanent Impacts (Acres)	Temporary Impacts: Non-Oilfield Remediation Operations (Acres)	Temporary Impacts: Pipe Removal (Acres)	Total Temporary Impacts (Acres)	Total Impacts (Acres)	Area Not Affected (Acreage)
Other Areas	***133.15***	***81.00***	***14.49***	***2.08***	***16.57***	***97.57***	***35.58***
Giant Reed	0.39	0.00	0.00	0.02	0.02	***0.02***	*0.37*
Cliff	0.10	0.03	0.00	0.05	0.05	***0.08***	*0.02*
Ornamental	23.05	15.08	0.30	0.40	0.70	***15.78***	*7.27*
Disturbed	85.59	48.10	13.65	1.26	14.91	***63.01***	*22.58*
Disturbed/Developed	24.02	17.79	0.54	0.35	0.89	***18.68***	*5.34*
TOTAL	***404.25***	***205.83***	***22.17***	***8.32***	***30.49***	***236.32***	***167.93***

Source: BonTerra Consulting 2011.

Much of the scrub habitat on the site occurs in small fragments and in many cases is highly degraded by invasive species. However, impacts on coastal sage scrub (disturbed and undisturbed) vegetation types are considered significant because (1) the loss of these vegetation types in the Project region would be considered a substantial adverse effect on the coastal sage scrub community[6] and (2) impacts to these areas would reduce the habitat for the coastal California gnatcatcher and other wildlife species. Implementation of Mitigation Measure (MM) 4.6-1 and PDFs 4.6-1 through 4.6-4 would reduce this impact to a less than significant level. MM 4.6-1 requires habitat restoration of permanent impacts to coastal sage scrub (including disturbed southern coastal bluff scrub) at a 3:1 ratio and disturbed coastal sage scrub (excluding disturbed southern coastal bluff scrub) at a 1:1 ratio either on site or off site. In addition, all temporarily impacted coastal sage scrub would be restored at a 1:1 ratio on site. The proposed Project would also preserve approximately 35.16 acres on site. The combined restoration and preservation of coastal sage scrub on site would total approximately 82.91 acres. MM 4.6-1 also requires the Applicant to follow the Construction Minimization Measures, which would provide conservation and avoidance actions to reduce the adverse impact to the habitat and associated wildlife species. PDFs 4.6-1 through 4.6-4 require the designation and methodology of habitat restoration/preservation and indirect effect minimization measures. These features also provide conservation and avoidance value to the habitat and associated wildlife species.

Grassland and Ruderal

The proposed Project would impact approximately 100.13 acres (97.26 permanent, 2.87 temporary) of grassland and ruderal vegetation, including areas mapped as non-native grassland, non-native grassland/ruderal, and ruderal. These areas generally have low biological value for most species because they are vegetated with non-native species. However, these areas may provide suitable foraging habitat for a variety of raptor species, including wintering burrowing owls. Additionally, the non-native grassland includes localized areas with low densities of native bunch grasses that could not be delineated separately due to a variety of factors including the scattered distribution, low densities, and mowing operations on the Project site. The loss of grassland function for foraging raptors in the region is considered significant because of its decline in the Project region. Therefore, the proposed Project would have a potentially substantial impact on raptor foraging habitat without mitigation. Implementation of MM 4.6-2, which requires the restoration of 50.07 acres of grassland (ratio of 0.5:1), either on site (including native grassland areas within Zone C of the fuel modification areas) or off site, and the preservation of an additional 20.27 acres, would reduce this impact to a less than significant level. In addition, PDFs 4.6-1 through 4.6-4 require the designation and methodology of habitat restoration/preservation and indirect effect minimization measures which would provide conservation and avoidance value to the grassland habitat and associated wildlife species.

Grassland Depression Features

The proposed Project is designed to avoid the two vernal pools (VP1 and VP2) that are occupied by San Diego fairy shrimp. In addition to avoidance of these areas, the vernal pool watershed that supports VP1 and VP2 would be enlarged and the entire pool complex would be restored (GLA 2010b). A 0.35-acre portion of the eastern edge of the watershed area would be impacted by the Project; however, the western edge of the existing watershed would be expanded by 1.03 acres for a net increase of 0.68 acre in the vernal pool watershed

[6] Impacts to individual subcommunities may not have been considered significant if evaluated separately; however, all subtypes of coastal sage scrub were considered cumulatively for this analysis.

(GLA 2010b). The proposed Project would also temporarily impact approximately 0.06 acre of vernal pool habitat occupied by San Diego fairy shrimp associated with topographic remediation and pipeline removal. Because the pipelines are located on top of the soil surface, their removal would be conducted with the minimum possible soil disturbance and would occur outside the rainy season to reduce direct impacts to this species. However, pipe removal activities would disrupt the soils within the vernal pool potentially containing the fairy shrimp cysts. Therefore, these pipe removal activities would be considered a potentially significant temporary impact because it would have a substantial adverse effect on the vernal pool and San Diego fairy shrimp. Implementation of MM 4.6-3, which requires the restoration and preservation of a 3.58-acre vernal pool complex, would reduce this impact to a less than significant level. In addition, PDFs 4.6-1 through 4.6-4 require the designation and methodology of habitat restoration/preservation and indirect effect minimization measures which would provide conservation and avoidance value to the grassland vernal pool areas and associated wildlife species.

The proposed Project would permanently impact the 0.07-acre ephemeral pond located on the Project site. This pond is also identified as Pool A (mapped as 0.04 acre in size during the 2010-2011 surveys). It supports a single vernal pool indicator species but lacks wetland hydrology[7] and is therefore considered of relatively low biological value. Therefore, the proposed Project's impact on the ephemeral pond would be considered less than significant, and no mitigation is required.

Marshes and Mudflats

The proposed Project would impact approximately 2.45 acres of marsh habitat and open water (0.10 acre permanent, 2.35 acres temporary), including areas mapped as alkali meadow, disturbed alkali meadow, salt marsh, disturbed salt marsh, and open water. Freshwater marsh and mudflats would not be directly impacted by the proposed Project. Although the permanent impact area is small, both permanent and temporary impacts would be considered potentially significant because these resources are regulated by the USACE and the California Coastal Commission; although it is important to note that all of the temporary impacts are associated with oilfield remediation activities, including pipeline removal and soil remediation (as necessary). None of the temporary impacts involve placement of fill material for purposes of converting areas to upland but in all cases would be the first stage of work leading to restoration to higher quality habitat. Implementation of MM 4.6-4 would reduce the impact on this resource to a less than significant level, as it requires the restoration of approximately 2.65 acres either on site or off site, and the preservation of approximately 7.25 acres of marsh habitat either on site or immediately off site. In addition, PDFs 4.6-1 through 4.6-4 require the designation and methodology of habitat restoration/preservation and indirect effect minimization measures which would provide conservation and avoidance value to the marsh areas and associated wildlife species.

Riparian Scrub/Forest

The proposed Project would impact approximately 2.68 acres of riparian scrub/forest vegetation (1.89 acres permanent, 0.79 acre temporary), including areas mapped as mule fat scrub,[8] willow

[7] This feature failed to pond for 14 days even during the higher than average rainfall (153% of normal) associated with the 2009–2010 rainfall season.

[8] Although mule fat scrub typically occurs in riparian areas (relating to or located on the banks of a river or stream), the majority (96%) of the mule fat scrub impacted on the Project site occurs in upland areas, outside of the riparian areas. Therefore, there would be differences between the acreage calculation for riparian scrub/forest

scrub, and willow riparian forest. In addition, the proposed Project would impact approximately 10.25 acres (4.98 acres permanent, 5.27 acres temporary) of disturbed riparian scrub/forest vegetation, including areas mapped as disturbed mule fat scrub, disturbed mule fat scrub/ruderal, disturbed mule fat scrub/goldenbush scrub, disturbed willow scrub, and disturbed willow riparian forest.

The loss of approximately 2.68 acres of riparian scrub/forest habitats and approximately 10.25 acres of disturbed riparian scrub/forest habitats would be considered significant because of these vegetation types' decline in the Project region[9] and also because these habitats potentially support special status wildlife species. Implementation of MM 4.6-5 and PDFs 4.6-1 through 4.6-4 would reduce impacts on these resources to less than significant levels. MM 4.6-5 requires habitat restoration of permanent impacts to willow scrub/willow riparian forest at a 3:1 ratio either on site or off site. In addition, all permanently impacted disturbed riparian habitats and mule fat scrub and all temporarily impacted riparian habitats would be restored at a 1:1 ratio, for a total of approximately 15.77 acres of restored riparian habitat. In addition, the proposed Project would preserve approximately 23.03 acres of riparian habitat on site. PDFs 4.6-1 through 4.6-4 require the designation and methodology of habitat restoration/preservation and indirect effect minimization measures. These features also provide conservation and avoidance value to the habitat and associated wildlife species.

Other Areas

The proposed Project would impact approximately 97.57 acres (81.00 acres permanent, 16.57 acres temporary) of giant reed, cliff, ornamental, disturbed, and disturbed/developed areas. These areas generally provide limited habitat for native plant and wildlife species; however, they may be used by native species, especially in ornamental areas that form habitat mosaics within native vegetation types. Compared to native habitat types, these areas are considered to have a relatively low biological value because they are either vegetated with non-native species or are composed of unvegetated areas. Therefore, impacts on these areas would not be considered significant, and no mitigation is required.

Wildlife Impacts

General Habitat Loss and Wildlife Loss

To assess impacts on wildlife, the total impacts on particular vegetation types that provide habitat for wildlife were assessed. The following discussion of wildlife impacts focuses on the common species occurring on the Project site.

Construction activities for oilfield remediation would result in the loss of approximately 38.70 acres of native habitat (coastal sage scrub, disturbed coastal sage scrub, grassland depression features, marshes and mudflats, riparian scrub/forest, disturbed riparian scrub/forest, and cliff) that provide valuable nesting, foraging, roosting, and denning opportunities for a wide variety of wildlife species. In addition, implementation of the proposed Project would result in the loss of approximately 197.62 acres of non-native habitat or non-habitat cover types (non-native grassland, non-native grassland/ruderal, ruderal, giant reed, ornamental, disturbed, and disturbed/developed) that provide lower-quality or no wildlife habitat. The Project would impact substantially more non-native/disturbed or non-habitat types

habitats and those resources identified as jurisdictional by the USACE, the CDFG, and/or the Coastal Commission.

[9] The proposed Project's regional setting includes the Central/Coastal Subregion NCCP/HCP.

(84 percent) compared to native habitat types (16 percent). However, some of these non-native habitats may provide nesting, foraging, roosting, and denning opportunities for some species.

Removing or altering habitats on the Project site would result in the loss of small mammals, reptiles, amphibians, and other slow-moving animals that live within the Project's direct impact area. More mobile wildlife species that are now using the Project site would be forced to move into the remaining areas of open space, which would consequently increase competition for available resources in those areas. This situation would result in the loss of individuals that cannot successfully compete.

The proposed Project would result in impacts to approximately 236.32 acres (205.83 acres permanent/30.49 acres temporary) of non-native and native habitats that provide low to high value habitat for a suite of both common and special status species. Of the 236.32 acres impacted, approximately 97.49 acres contain ornamental, disturbed, and disturbed/developed areas that provide low value wildlife habitat. These impacts are considered adverse but not significant in terms of habitat loss for general wildlife species on a regional basis. The loss of wildlife habitat would not be expected to reduce wildlife populations below self-sustaining levels in the region.

Prior to the consideration of mitigation, the Project would contribute to the historical loss of habitats in the coastal areas of the region and may contribute to local extirpation of some wildlife species from the Project site. Unmitigated impacts to habitats in the coastal area would be considered significant. However, with implementation of MM 4.6-1 (Coastal Sage Scrub Habitat Preservation and Restoration), MM 4.6-2 (Grassland Habitat Preservation and Restoration), MM 4.6-3 (Grassland Depression Feature and Fairy Shrimp Habitat Preservation and Restoration), MM 4.6-4 (Marsh Habitat Preservation and Restoration), and MM 4.6-5 (Jurisdictional Resources/Riparian Habitat Preservation and Restoration), this impact would be reduced to a less than significant level.

Impacts to Nesting Birds

Nesting birds are protected under the provisions of the Migratory Bird Treaty Act (MBTA) and are identified by the List of Migratory Birds (50 CFR 10.13). Suitable habitat for birds protected by the MBTA occurs throughout the Project site. The intentional loss of any active nest through Project implementation would be considered significant. Impact on active nests would be reduced to a less than significant level with the implementation of MM 4.6-6, which establishes protocols for vegetation removal during the migratory bird nesting season.

Special Status Plants

Focused surveys for special status plant species were conducted in spring–summer 2009. Additional surveys for southern tarplant were conducted in 2006, 2007, and 2008. Four special status plant species were observed during the surveys: southern tarplant (CNPS List 1B.1), southwestern spiny rush (CNPS List 4.2), California box-thorn (CNPS List 4.2), and woolly seablite (CNPS List 4.2).

The remaining 42 special status plant species listed in Table 4.6-3 were not observed during the focused special status plant surveys. Vernal barley may not have been observed during focused surveys due to mowing activities within the grasslands; however, this species is a CNPS List 3.2 species (plant species for which additional information is needed – a review list) and potential impacts are not expected to threaten regional populations of this species. Therefore, there would be no impact on the remaining 42 species, and no mitigation would be required.

A total of 24,747 southern tarplant individuals were observed during 2009 focused surveys. Approximately 500 of the tarplant individuals occur within the permanent impact area and approximately 4,590 occur within the temporary impact (oilfield remediation) area (Exhibits 4.6-6a and 4.6-6b, Newport Banning Ranch Project Impacts – Special Status Species Locations). Impacts to southern tarplant are considered temporary in nature because seed would be collected and the species would be replanted through broadcast seeding within the open space areas of the Project site. This temporary impact is considered significant because the loss of these individuals would represent a substantial adverse effect to the regional population of this species until the new population has been established. Implementation of MM 4.6-7, which requires implementation of a southern tarplant restoration program, would reduce this impact to a less than significant level.

California box-thorn was observed during 2009 focused surveys and this species may be permanently impacted by the Project. In addition, this species would be temporarily impacted during oilfield remediation activities. The southwestern spiny rush and woolly seablite are also located within the area proposed as open space that would be temporarily impacted during oilfield remediation activities, and therefore, could also be impacted. At this time, it is unknown whether all southwestern spiny rush and woolly seablite could be avoided during the remediation activities. All these species are CNPS List 4 species. CNPS List 4 species are "Plants of Limited Distribution – A Watch List", and impacts on these species are not typically considered significant by lead agencies. Project impacts are not expected to have a substantial adverse effect on these species, and no mitigation is required

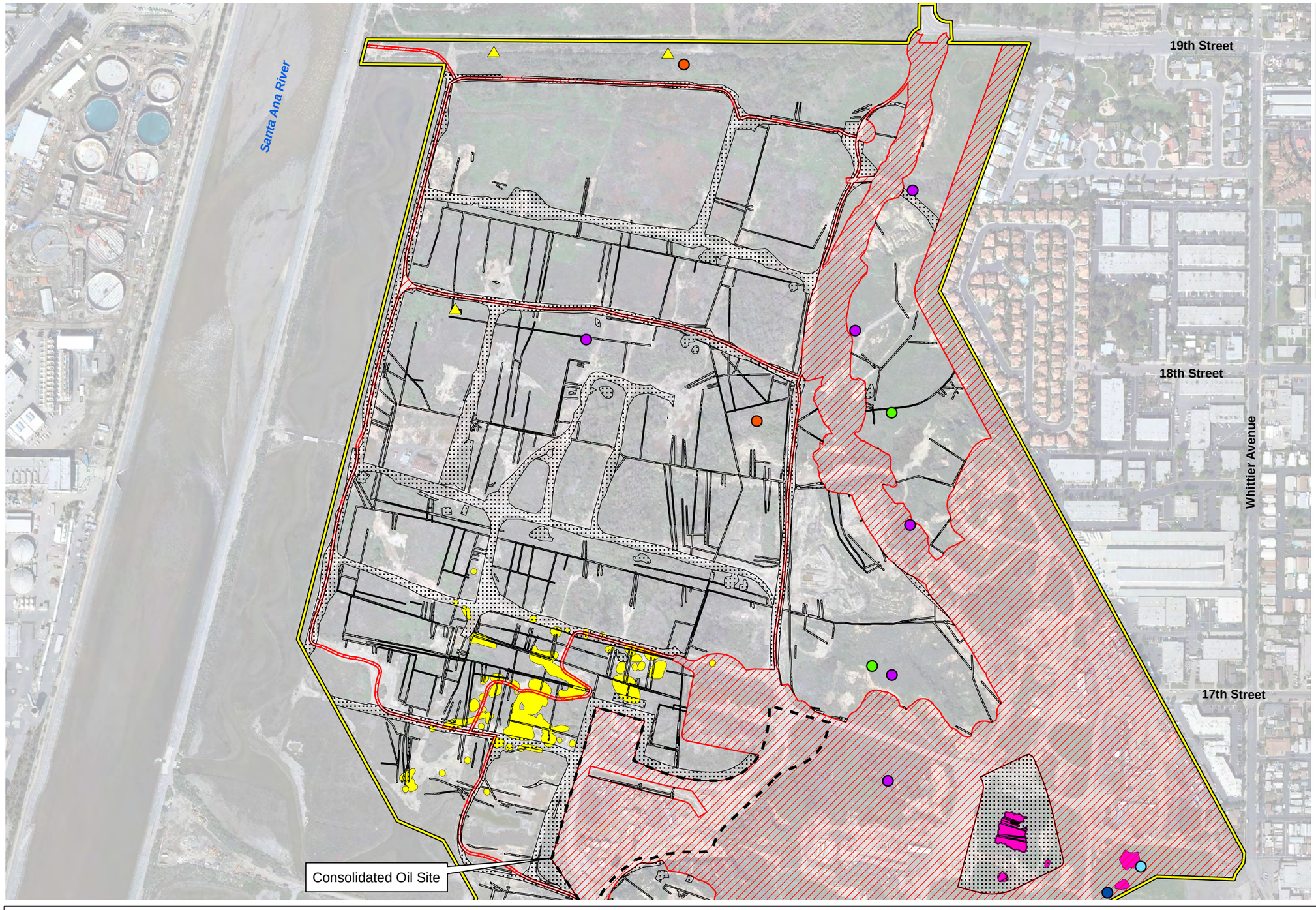
Special Status Wildlife

Invertebrates

Riverside fairy shrimp was not observed during focused surveys of the Project site. Therefore, there would be no impact on this species, and no mitigation would be required.

San Diego fairy shrimp was observed on the Project site during surveys conducted by GLA in areas described as VP1, VP2, AD3, and pools E, G, I, and J (GLA 2009b, GLA 2010, GLA 2011). The proposed Project would permanently protect VP1 and VP2. The proposed Project would permanently impact the 0.007-acre Feature AD3. Two oilfield sumps that support San Diego fairy shrimp would also be impacted (Features E and G, covering 0.05 and 0.003 acre, respectively). The final two areas, Features I and J, are artificial grassland features, covering 0.03 and 0.09 acre, respectively that support the San Diego fairy shrimp and would be impacted by Project construction. In total, the proposed Project would result in permanent impacts to 0.173 acre of habitat occupied by San Diego fairy shrimp. In addition, the proposed Project would temporarily impact 0.06 acre of vernal pool habitat through pipelines removal activities. The pipes are located on top of the soil surface, and their removal could disrupt the soils within the vernal pools potentially containing the cysts of the fairy shrimp. Therefore, these pipe removal activities could result in a "take" of a small number of San Diego fairy shrimp cysts, which would be considered a significant impact, even though the actual effects on the fairy shrimp population would be minimal. Combined permanent and temporary impacts to San Diego fairy shrimp habitat (0.24 acre) is considered significant because the loss of this resource would represent a substantial adverse effect to this species distribution in the region.

These impacts can be mitigated to a less than significant level through the development and implementation of a 3.58-acre vernal pool conservation/restoration area that supports the San Diego fairy shrimp (MM 4.6-3). The vernal pool conservation/restoration area would provide for the long-term preservation of VP1 and VP2 within a 1.85-acre vernal pool basin conservation



Project Boundary

Consolidated Oil Site

Project Impacts

Permanent

Temporary

2010 Surveys

Burrowing Owl

2009 Surveys

Coastal California Gnatcatcher

Coastal Cactus Wren

Least Bell's Vireo

Burrowing Owl

San Diego Fairy Shrimp

Southern Tarplant

Tarplant Location
(Area too small to be accurately represented by polygon)

Tarplant Population

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Project Impacts: Special Status Species Locations

Exhibit 4.6-6a

Newport Banning Ranch EIR

N W E S

400 200 0 400 Feet

BonTerra CONSULTING

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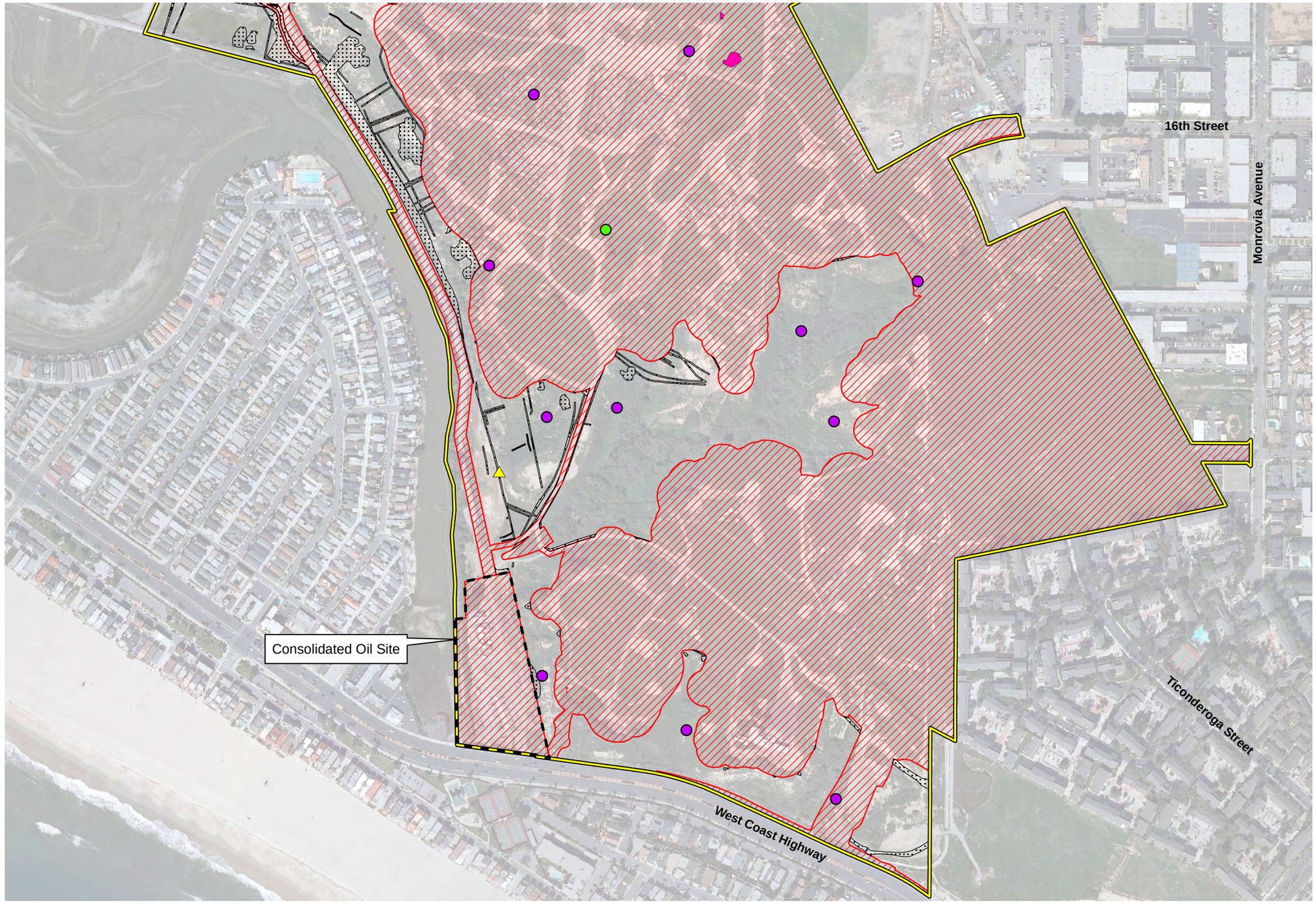

Project Boundary

Consolidated Oil Site

Project Impacts

Permanent

Temporary

2010 Surveys

Burrowing Owl

2009 Surveys

Coastal California Gnatcatcher

Coastal Cactus Wren

Least Bell's Vireo

Burrowing Owl

San Diego Fairy Shrimp

Southern Tarplant

Tarplant Location
(Area too small to be accurately represented by polygon)

Tarplant Population

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Project Impacts: Special Status Species Locations

Exhibit 4.6-6b

Newport Banning Ranch EIR

N W E S

400 200 0 400 Feet

Bonterra CONSULTING

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area. A 1.85-acre restoration area is proposed in the vernal pool watershed area that encompasses VP1 and VP2 and their upland watershed. The Project proposes to also set aside an additional 1.73-acre upland area north and west of the 1.85-acre vernal pool conservation area which would be used for future enhancement to expand the vernal pool conservation area to total 3.58 acres. Expansion of the watershed by 1.73 acres would increase hydrological input by creating hydrological conditions for additional pools, which would promote more and higher quality habitat created as mitigation for features E, G, I, and J that support the San Diego fairy shrimp. Establishment of the 3.85-acre vernal pool conservation area and remediation and restoration of the vernal pools and the upland watershed/drainage area (MM 4.6-3) would reduce any impacts to the San Diego fairy shrimp to less than significant.

Fish

Tidewater goby is not expected to occur on the Project site due to the lack of suitable habitat, although it may occur in the USACE salt marsh restoration site and the Santa Ana River adjacent to the Project site. There would be no direct impact on this species, and no mitigation would be required.

Amphibians

Arroyo toad and red-legged frog are not expected to occur on the Project site due to the lack of suitable habitat. Therefore, there would be no impact on these species, and no mitigation would be required.

Western spadefoot has a low potential to occur on the Project site. The proposed Project would have only minimal impacts to the vernal pools (associated with restoration activities and the large vernal pool); these pools are the only features that provide suitable breeding habitat (due to the length of ponding) and would be preserved and enhanced. Oilfield remediation activities within the lowland areas have the potential to impact this species, should it occur. However, given that the lowland areas would be preserved as open space, there would be potentially minimal and non-significant impacts. Therefore, no mitigation would be required.

Reptiles

Southwestern pond turtle, coast [San Diego] horned lizard, [Belding's] orange-throated whiptail, coast patch-nosed snake, two-striped garter snake, and northern red-diamond rattlesnake are not expected to occur on the Project site due to a lack of suitable habitat, the high levels of disturbance on the Project site, and/or because the Project site is outside the known range of these species. Therefore, there would be no impact on these species, and no mitigation would be required.

Silvery legless lizard has potential to occur within the soft bottom of the southern arroyo and other areas of the lowland on the Project site. The proposed Project would result in a minimal loss of suitable habitat for this species, since the majority of the southern arroyo and areas within the lowland would be preserved as open space following oilfield remediation activities. Therefore, the Project impact on this species would be considered adverse, but not significant, and no mitigation is required.

Birds

American white pelican, California brown pelican, double-crested cormorant, black skimmer, and California least tern are not expected to occur on the Project site for foraging due to a lack

of suitable foraging habitat. However, they may forage in the adjacent USACE salt marsh restoration site and the Santa Ana River. Additionally, they are not expected to occur on the Project site for nesting due to (1) a lack of suitable nesting habitat; (2) the Project site being outside the known breeding range; and/or (3) the high levels of disturbance on the Project site. The proposed Project would not impact these species, and no mitigation would be required.

Suitable or potentially suitable roosting and/or foraging habitat is present for the white-faced ibis, California gull, and gull-billed tern. Additionally, the gull-billed tern could nest on the Project site. Although the Project may temporarily impact habitat for these species, areas within the lowland would be preserved as open space following oilfield remediation activities. Project impacts on these species would be less than significant in consideration of other habitat available in the region, and no mitigation would be required.

Although limited suitable habitat is present for fulvous whistling duck, long-eared owl, and California black rail, these species are considered either extirpated from the region or the Project site is outside current range. Therefore, these species would not be expected to occur on the Project site; there would be no impact on these species and no mitigation would be required.

Potentially suitable foraging and/or nesting habitat for light-footed clapper rail, western snowy plover, Belding's savannah sparrow, and tricolored blackbird is present primarily in the salt and freshwater marsh areas on the Project site, and these species may occur. The Project site provides only potentially suitable foraging habitat for the long-billed curlew and large-billed savannah sparrow. The limited tidal marsh habitat on the Project site is separated by a chain-link fence from the adjacent restored USACE salt marsh habitat that supports the light-footed clapper rail. This fence generally precludes the light-footed clapper rail's use of the tidal marsh habitats on the Project site, especially for nesting, but not the Belding's savannah sparrow's use of these habitats on the Project site. The western snowy plover is not expected to nest on the Project site due to the high levels of existing disturbance. The least bittern and Clark's marsh wren may also forage and/or nest on the Project site in wet years when ponding and freshwater marsh vegetation is extensive. Of these species with potential to occur, only the Belding's savannah sparrow may nest on the Project site.

The permanent Project impacts on foraging and/or nesting habitat for all species listed above is expected to be limited, and the habitat for all these species, except the tricolored blackbird, would remain as open space following oilfield remediation activities. However, oilfield remediation activities could temporarily impact marsh habitats used by these species. The light-footed clapper rail, western snowy plover, and Belding's savannah sparrow are listed as federally and/or State-Endangered and/or Threatened species. These species have potential to nest on or immediately adjacent to the Project site and could be impacted by oilfield remediation activities. Any impact on these species would be considered significant. Implementation of MMs 4.6-4 and 4.6-8 would reduce the potential impact on these species to a less than significant level. These measures require the restoration and/or preservation of approximately 9.90 acres of marsh habitat either on site or immediately off site and avoidance measures during construction. In addition, PDFs 4.6-1 through 4.6-4 require the designation and methodology of habitat restoration/preservation and indirect effect minimization measures which would provide conservation and avoidance value to the marsh areas and associated wildlife species.

Suitable or potentially suitable foraging habitat is present on the Project site for western yellow-billed cuckoo, Vaux's swift, black swift, purple martin, and bank swallow. These species would only be expected to occur during migration because the Project site is outside their currently

known breeding range. Permanent Project impacts on foraging habitat for these species is expected to be limited, and most of the habitat for these species would remain as open space following oilfield remediation activities; however, these activities could temporarily impact habitats used by these species. Project impacts on these species would be considered less than significant in consideration of other habitat available in the region, and no mitigation would be required.

A total of 17 territories (16 pairs and 1 solitary male) of the federally listed Threatened coastal California gnatcatcher were observed during the 2009 focused surveys (impacts shown on Exhibits 4.6-6a and 4.6-6b, Newport Banning Ranch Project Impacts – Special Status Species Locations). The proposed Project would impact approximately 23.11 acres (20.53 acres permanent, 2.58 acres temporary) of coastal sage scrub and disturbed coastal sage scrub vegetation types that provide potential habitat for this species (Exhibits 4.5-5a and 4.5-5b, Newport Banning Ranch Project Impacts – Vegetation Types and Other Areas). Coastal sage scrub habitat on the Project site is primarily limited to slopes and areas surrounding the drainages that transverse the mesa, is fragmented, and is disturbed by oilfield operations and invaded by non-native species. Revegetation following oilfield remediation activities has the potential to result in higher long-term habitat quality (i.e., invasive species removed, human activity and disturbance related to oilfield operations removed, and larger blocks of contiguous native habitat) available for this species in the open space area. However, Project impacts on this species would be considered significant because of the location and size of the impacted population. Although this species is covered by the NCCP/HCP, the Project site is located within an Existing Use Area, and the NCCP/HCP does not authorize Incidental Take as a result of the conversion of coastal California gnatcatcher-occupied habitat in Existing Use Areas. Implementation of MMs 4.6-1 and 4.6-9 would be required to reduce this impact to a less than significant level. These measures require the on-site or off-site restoration of 47.75 acres of coastal sage scrub habitat at a ratio of 3:1 for coastal sage scrub (including disturbed southern coastal bluff scrub) and 1:1 for disturbed coastal sage scrub (excluding disturbed southern coastal bluff scrub). In addition, approximately 35.16 acres of coastal sage scrub or disturbed coastal sage scrub would be preserved on site. Mitigation also includes the required approval from the USFWS to impact the species, and construction avoidance measures to minimize the impacts to the greatest extent practicable. In addition, PDFs 4.6-1 through 4.6-4 require the designation and methodology of habitat restoration/preservation and indirect effect minimization measures, which would provide conservation and avoidance value to the coastal sage scrub and associated wildlife species, including, but not limited to the coastal California gnatcatcher.

Two coastal cactus wren territories were observed during the 2009 focused surveys for coastal California gnatcatcher (impacts shown on Exhibits 4.6-6a and 4.6-6b). The proposed Project would impact approximately 2.92 acres (2.59 acres permanent, 0.33 acre temporary) of southern cactus scrub, southern cactus scrub/Encelia scrub, disturbed southern cactus scrub, and disturbed southern cactus scrub/Encelia scrub (Exhibits 4.6-5a and 4.6-5b). This species has declined in Orange County following the loss of habitat because of two large wildfires in 2007 and 2008, and other areas of cactus scrub that burned in the mid-1990s still have not been re-occupied by cactus wren. Therefore, impacts on this species would be considered potentially significant. Implementation of MMs 4.6-1 and 4.6-10 would be required to reduce this impact to a less than significant level. These measures require the restoration of coastal sage scrub dominated by native cactus species habitat at a ratio of no less that 1:1 and construction avoidance measures to minimize the impacts to the greatest extent practicable. In addition, approximately 35.16 acres of coastal sage scrub, which includes approximately 10 acres of coastal sage scrub dominated by cactus, would be preserved on site as part of MM 4.6-1. In addition, PDFs 4.6-1 through 4.6-4 require the designation and methodology of habitat restoration/preservation and indirect effect minimization measures, which would provide

conservation and avoidance value to the cacti-dominated coastal sage scrub and associated wildlife species, including, but not limited to the cactus wren.

Suitable foraging and nesting habitat for the loggerhead shrike is present throughout the Project site. Project implementation would result in the loss of suitable foraging and breeding habitat for the loggerhead shrike, but would not be expected to affect this species' current status. Suitable foraging and nesting habitat for the California horned lark is found primarily in the upland habitats of the Project site. Project implementation would result in the loss of the majority of suitable habitat for the California horned lark on the Project site. Project impacts on these species would be considered less than significant because of the amount of habitat available elsewhere in the region, and no mitigation would be required.

Potentially suitable habitat for the Southern California rufous-crowned sparrow, grasshopper sparrow, and Bell's sage sparrow is present on the Project site. However, these species are not expected to occur on the Project site because the property is outside the species' known range and/or due to the high levels of disturbance present as a result of oilfield activities. Therefore, there would be no impact on these species, and no mitigation would be required.

Two least Bell's vireo territories (both solitary males) were observed during the 2009 focused surveys (impacts shown on Exhibits 4.6-6a and 4.6-6b). The proposed Project would impact approximately 2.74 acres (1.45 acres permanent, 1.29 acres temporary) of undisturbed and disturbed willow riparian scrub and willow riparian forest habitats (Exhibits 4.6-5a and 4.6-5b). The permanent Project impacts on this species' habitat is expected to be limited, and most of the habitat for this species would remain as open space following oilfield remediation activities; however, these activities could temporarily impact riparian habitats used by this species. Currently, much of the native riparian scrub and forest habitat on the Project site is fragmented by roads and is heavily invaded by non-native species. Revegetation following oilfield remediation activities would result in a higher long-term habitat quality due to invasive species removal; removal of human activity and disturbance related to oilfield operations; and availability of larger blocks of contiguous native habitat for this species in the open space area within the Project site. However, any impact on this species would be considered significant. Implementation of MMs 4.6-5 and 4.6-11 would reduce impacts on this species to less than significant levels. These measures require the on-site or off-site restoration of riparian habitat at a ratio from 3:1 to 1:1 depending on the habitat value impacted. A total of 15.77 acres of riparian habitat will be restored by the proposed Project. The Project also requires approval from the USFWS to impact the species and its habitat. In addition, the Project would preserve approximately 23.03 acres of riparian habitats. MM 4.6-1 includes construction avoidance measures to minimize the impact to the greatest extent practicable to the vireo and the riparian habitat. In addition, PDFs 4.6-1 through 4.6-4 require the designation and methodology of habitat restoration/preservation and indirect effect minimization measures, which would provide conservation and avoidance value to the riparian habitat and associated wildlife species including, but not limited to, the least Bell's vireo.

Suitable foraging and nesting habitat for the southwestern willow flycatcher is present in the riparian scrub and riparian forest vegetation types on the Project site. The southwestern willow flycatcher was not observed during the 2006, 2007, or 2009 focused surveys of the Project site, and is considered absent. Therefore, no impact to the species is anticipated; no mitigation would be required.

Suitable foraging and nesting habitat for the yellow warbler and yellow-breasted chat is present in the willow scrub and willow riparian forest vegetation types on the Project site. The permanent Project impacts on habitat for these species is expected to be limited, and most of

the habitat for these species would remain as open space following oilfield remediation activities. However, these activities could temporarily impact riparian habitats used by these species. Currently, much of the willow scrub and willow riparian forest habitat on the Project site is fragmented by roads and is heavily invaded by non-native species. Revegetation following oilfield remediation activities has the potential to result in a higher long-term habitat quality due to invasive species removal; removal of human activity and disturbance related to oilfield operations; and availability of larger blocks of contiguous native habitat for these species in the open space area within the Project site. Project impacts on these species would be less than significant in consideration of these species populations within the region and other habitat available for these species in the region; no mitigation would be required.

Although suitable foraging and nesting habitat is present on the Project site for the burrowing owl, it is only expected to winter on the Project site based on the results of focused surveys conducted in 2008, 2009, and 2010. Two owls were observed wintering in 2008, and one owl was observed wintering in 2009 and 2010 (GLA 2010a, 2009) (impacts shown on Exhibits 4.6-6a and 4.6-6b). The burrowing owl is a species of local concern because its occurrences are limited in the County. The proposed Project would impact approximately 100.13 acres (97.26 acres permanent, 2.87 acres temporary) of grasslands and ruderal habitat on the Project site. Impacts on occupied and potential habitat for this species would be considered significant. Implementation of MMs 4.6-2 and 4.6-12 would reduce the impact on this species to a less than significant level. These measures require the restoration of grassland habitat at a ratio of 0.5:1 (totaling approximately 50.07 acres). In addition, the Project would preserve approximately 20.27 acres of grassland areas and include construction avoidance measures to minimize grassland impacts to the greatest extent practicable. Moreover, PDFs 4.6-1 through 4.6-4 require the designation and methodology of habitat restoration/preservation and indirect effect minimization measures which would provide conservation and avoidance value to the grassland areas and associated wildlife species including, but not limited to, the burrowing owl.

Although potentially suitable foraging habitat is present on the Project site for golden eagle and Swainson's hawk, these species are not expected to occur on the Project site because (1) the site is outside the currently known range for these species and (2) of the extensive urbanization in the Project region. The bald eagle is not expected to occur on the Project site because of the lack of suitable foraging and breeding habitat. Therefore, there would be no impact on these species, and no mitigation would be required.

Suitable foraging habitat is present for a variety of raptor species including Cooper's hawk, sharp-shinned hawk, ferruginous hawk, northern harrier, white-tailed kite, merlin, prairie falcon, American peregrine falcon, and short-eared owl. While there is no suitable foraging habitat for the osprey on the Project site, there is foraging habitat adjacent to the Project site within the USACE salt marsh restoration site and the Santa Ana River; the osprey was observed perching on the Project site following foraging. The permanent loss of approximately 124.83 acres of foraging habitat for these raptor species would contribute to the ongoing regional and local loss of foraging habitat. This impact would be considered significant. However, revegetation following oilfield remediation activities would result in higher-quality habitat due to invasive species removal; removal of human activity and disturbance related to oilfield operations (oil activities would be consolidated into two on-site locations); and availability of larger blocks of contiguous native habitat for these species in the open space area. Therefore, with implementation of MMs 4.6-1, 4.6-2, 4.6-4, and 4.6-5, this impact would be reduced to a less than significant level. These measures require the restoration of coastal sage scrub, grassland habitat, marsh habitat, and riparian areas at a ratio from 0.5:1 to 3:1 for approximately 119.56 acres of restoration. In addition, the Project would preserve approximately 85.97 acres

of additional habitat on site. The Project also includes PDFs 4.6-1 through 4.6-4, which require the designation and methodology of habitat restoration/preservation and indirect effect minimization measures which would provide conservation and avoidance value to the raptor foraging areas.

Cooper's hawk, northern harrier, and white-tailed kite have the potential to nest on the Project site. The loss of an active nest of these species, or any common raptor species, would be considered a violation of Sections 3503, 3503.5, and 3513 of the *California Fish and Game Code*. Therefore, the loss of any active raptor nest would be considered significant. Impacts on active raptor nests would be reduced to less than significant levels with implementation of MM 4.6-13, which provides for construction avoidance measures to minimize the impact to the greatest extent practicable.

Mammals

Limited potentially suitable habitat for the Southern California saltmarsh shrew and south coast marsh vole is present in the marsh areas in the lowland. Permanent Project impacts on habitat for these species would be limited, and most of the habitat for these species would remain as open space following oilfield remediation activities. However, these activities could temporarily impact marsh habitats used by these species. Much of the marsh habitat on the Project site is currently fragmented by roads and is invaded to varying degrees by non-native species. Revegetation following oilfield remediation activities has the potential to result in a higher long-term habitat quality due to invasive species removal, removal of human activity and disturbance related to oilfield operations, and availability of larger blocks of contiguous native habitat for these species in the open space area. Project impacts on these species would be considered less than significant in consideration of other habitat available for these species in the region; no mitigation would be required.

Potentially suitable habitat for the Mexican long-tongued bat, Townsend's big-eared bat, and western mastiff bat occurs on the Project site. However, these species are not expected to occur on the Project site because they are outside their currently known range or because of the disturbance related to oilfield activities. Therefore, there would be no significant impact on these species, and no mitigation would be required.

Suitable or potentially suitable foraging habitat is present for the pallid bat, hoary bat, western yellow bat, pocketed free-tailed bat, and big free-tailed bat. Hoary bat, pocketed free-tailed bat, and big free-tailed bat also have potential to roost on the Project site. The permanent loss of approximately 124.86 acres of foraging and roosting habitat for these bat species would contribute to the ongoing regional and local loss of foraging and roosting habitat. This impact would be considered significant. However, revegetation following oilfield remediation activities would result in a higher-quality habitat associated with invasive species removal; removal of human activity and disturbance related to oilfield operations; and availability of larger blocks of contiguous native habitat for these species in the open space area. Therefore, with implementation of MMs 4.6-1, 4.6-2, 4.6-4, and 4.6-5, this impact would be reduced to a less than significant level. These measures require the restoration of coastal sage scrub, grassland habitat, marsh habitat, and riparian areas at a ratio from 0.5:1 to 3:1 (for approximately 119.56 acres of restoration). In addition, the Project would preserve approximately 85.97 acres of additional habitat on site. The Project also includes PDFs 4.6-1 through 4.6-4, which requires the designation and methodology of habitat restoration/preservation and indirect effect minimization measures. These PDFs would provide conservation and avoidance value to the potential bat foraging and roosting areas.

Limited suitable habitat for the Pacific pocket mouse is present on the Project site. However, this species is not expected to occur on the Project site because it was not detected during a previous trapping effort conducted for this species on the Project site. Therefore, there would be no impact on this species, and no mitigation would be required.

Suitable habitat for the San Diego desert woodrat and southern grasshopper mouse is present in the upland habitats. The proposed Project would impact habitat for these species. Currently, much of the native upland habitat is fragmented and scattered throughout the Project site and is invaded by non-native species. However, revegetation following oilfield remediation activities has the potential to result in a higher long-term habitat quality due to invasive species removal; removal of human activity and disturbance related to oilfield operations; and availability of larger blocks of contiguous native habitat for these species in the open space area. Project impacts on these species would be considered less than significant in consideration of other habitat available in the region, and no mitigation would be required.

Potentially suitable habitat for the American badger is present on the Project site. However, this species is not expected to occur on the Project site due to the disturbance related to oilfield activities. Therefore, there would be no impact on this species, and no mitigation would be required.

Indirect Impacts

Indirect impacts are impacts related to disturbance from construction (such as noise, dust, and urban pollutants), and long-term use of the Project site and its effect on the adjacent habitat areas. The indirect impact discussion below includes a general assessment of the potential indirect effects of the proposed Project's construction and operation.

Noise Impacts

The increase in human activity would also be expected to raise noise levels with Project implementation due to residential, retail, resort inn, and park development; the public use of trails in the open space areas; and ongoing oilfield operations in the two oil consolidation sites.[10] The noise associated with the development would occur primarily in the mesa, and would therefore be naturally separated by the topographic change from the open space in the lowland. The increase in noise associated with use of the public trails would occur in an area that is currently exposed to oilfield activities and therefore, wildlife may be somewhat habituated to human activity. Additionally, the trail system would keep the public limited to the boardwalks, and the noise would be localized to these areas and would not occur throughout the lowland, unlike existing conditions. The non-transportation noise impacts from human activity in the residential, retail, resort inn, park, and trail areas would dissipate rapidly with distance and would not cause significant noise impacts to wildlife on the Project site open space and lowland areas. There would be no significant impact related to non-transportation activity; therefore, no mitigation would be required.

Vehicular traffic on North Bluff Road (north of 17th Street) is expected to result in noise impacts within the lowland and upland open space areas. These areas contain coastal sage scrub and riparian scrub/forest vegetation types that provide suitable habitat for the coastal California gnatcatcher and the least Bell's vireo. Increased noise levels have been shown to affect some wildlife species when those species rely on sound to communicate, navigate, avoid danger, and

[10] The Project proposes the consolidation of surface oil production facilities into 2 sites on approximately 17 acres located along the westerly and southwesterly boundary of the Project site.

find food. Reijnen et al. (1995) notes that vehicular traffic has been correlated with a reduction in the density of breeding bird populations adjacent to roads (Spellerberg 1998).

The North Bluff Road future traffic noise contours identified a worst-case Community Noise Equivalent Level (CNEL) contour of 60 A-weighted decibels (dBA) that extends approximately 220 feet from the road centerline in each direction. This 440-foot-wide permanent noise impact area would include approximately 65 feet of roadway surface and road shoulder that is not expected to provide habitat for wildlife species. The habitats outside the roadway surface/shoulder but within the 60 dBA CNEL contour are expected to have a decreased biological value because of the long-term noise impacts from vehicular traffic on Bluff Road. While vireos/gnatcatchers can often continue to occupy areas subject to noise levels above 60 dBA, other studies have documented significantly reduced reproductive success. The Bluff Road future traffic noise impacts are considered significant. MMs 4.6-1, 4.6-2, 4.6-4 through 4.6-6, and 4.6-8 through 4.6-13 would reduce this impact to a less than significant level by increasing the biological value of the site for wildlife species. Short-term construction impacts to active least Bell's vireo nests are considered potentially significant. Implementation of MM 4.6-11 would reduce this impact to a less than significant level.

Invasive Exotic Plant Species

Oilfield remediation would include the removal of habitat within the lowland and the upland portions of the Project site. Currently, native habitat types in the lowland are heavily invaded by non-native species, especially pampas grass and mustard. Any activities in the native habitat areas that facilitate the expansion of invasive species in the area would be considered potentially significant.

In addition, landscaped areas are proposed within the development area, and residents of the development will also be expected to landscape their individual yards. The landscaping could include planting of ornamental species that are known to be particularly invasive (e.g., Japanese honeysuckle [*Lonicera japonica*] and fan palm [*Washingtonia* spp.]). Seeds from invasive species may escape to natural areas and degrade the native vegetation. Since the Project contains open space that includes high habitat value, this impact is considered potentially significant.

Implementation of MM 4.6-14, which requires monitoring in the oilfield remediation areas and prohibits invasive, exotic plant species to be planted within the areas adjacent to open space, would reduce these impacts to less than significant.

Water Quality

Impacts on biological resources in the area could occur as a result of changes in water quality. Runoff of silt from the Project site or improper disposal of petroleum and chemical products from temporary construction equipment could adversely affect water quality during construction. Urban runoff from Project infrastructure or landscaping could permanently impact water quality following construction. Adverse effects on water quality could affect populations of aquatic species, including species that occur just off site in the USACE salt marsh restoration site or the Santa Ana River. Runoff of silt from the construction site could reduce the amount of available habitat, smother the eggs of an aquatic species, and could result in direct mortality of plant and wildlife species. Adverse water quality effects during construction or operation of the Project could (1) affect populations of insects, tadpoles, and other aquatic prey, which would affect food web interactions related to species that forage in aquatic or riparian areas or (2) cause adverse effects through biomagnification (i.e., the buildup of pesticides to toxic levels in higher trophic

levels). Although indirect impacts associated with adverse water quality conditions can result in significant impacts to biological resources, the Project Design Features and Standard Conditions identified in Section 4.4, Hydrology and Water Quality would preclude significant water quality impacts.

Night Lighting

Lighting could inadvertently result in an indirect impact on the behavioral patterns of nocturnal and crepuscular (i.e., active at dawn and dusk) wildlife remaining in the lowland or adjacent areas such as in the USACE salt marsh restoration site or along the Santa Ana River. Wildlife present in these areas may already be somewhat acclimated to current lighting associated with traffic from the adjacent roadways (e.g., West Coast Highway and 19th Street). However, the uses that are proposed (i.e., residential, retail, parks and recreational areas, resort inn, and trails) would introduce new sources of ambient light on the Project site, which could affect small, ground-dwelling animals that use the darkness to hide from predators, owls, and other specialized night foragers and wildlife that primarily move at night. These impacts are potentially significant.

As a part of the Project, no permanent night lighting would be permitted within the Open Space Preserve with the exception of safety lighting in the two Oil Consolidation sites. Temporary lighting would be required associated with drilling operations on the Project site, which requires some periods of 24-hour activity. PDF 4.6-4 requires that street lights be used only in key intersections and safety areas. A “dark sky” lighting concept will be implemented within areas of the Project that adjoin habitat areas. This “dark sky” lighting concept would be implemented for homeowners’ association (HOA) properties and businesses (e.g., resort inn, retail center) within 100 feet of the Open Space Preserve and Bluff Parks. Light fixtures within these areas would be designed for “dark sky” applications and adjusted to direct/reflect light downward and away from adjacent habitat areas. As indicated in PDF 4.6-4, the Project would restrict exterior house lighting to minimize light spillage into adjacent habitat areas. Implementation of PDF 4.6-4 would reduce this impact to less than significant.

Human Activity

The upland area, where the residential and mixed use/residential uses are proposed, would result in an increase in human activity (i.e., vehicle and foot traffic) that may disrupt normal foraging and breeding behavior of wildlife in these natural/urban interface areas, thereby diminishing the habitat value. However, in the open space areas of the southern arroyo and the lowland, human activity is expected to decrease due to the consolidation of oilfield activities. Human activity in the lowland area would be limited to the trails; however, the overall increase in human activity across the entire Project site could be potentially significant. Implementation of MM 4.6-15, which requires a fencing and signage plan, would reduce this impact to a less than significant level.

Development and park uses built adjacent to natural open space, particularly near the lowland, may create urban-wildlands interface issues. Coyotes may attack cats and small dogs from residences. Outdoor cats may attack native birds, lizards, and small mammals, which is especially of concern in habitat potentially supporting Endangered, Threatened, or other special status wildlife species. These urban-wildlands interface impacts would be considered potentially significant. Implementation of MM 4.6-16, which requires development and implementation of an urban-wildlands interface brochure and public education program, would reduce this impact to a less than significant level.

Dust

During remediation and construction, the dust within the development footprint and adjacent areas is expected to increase. The accumulation of dust on the leaves of trees and shrubs could interfere with photosynthesis and could cause mortality of plant species covered with dust. This impact would be considered adverse but not significant. The habitats within the lowland on the Project site are currently covered in a fine layer of dust, which is a result of oilfield activities, especially vehicular traffic along dirt roads that fragment habitat throughout the lowland. The removal of the roads and vehicular traffic associated with oilfield activities and subsequent revegetation of the lowland with native habitat may result in an increased habitat value. This would be considered a potentially beneficial operational impact of the proposed Project.

Greenhouse Gas Emissions

The California Attorney General (AG) has filed numerous comment letters with agencies discussing their analysis of climate change in CEQA documents. As part of the AG's efforts to work with agencies to address climate change in their CEQA documents, the AG publishes and updates *The California Environmental Quality Act, Addressing Global Warming Impacts at the Local Agency Level,* which is a document with "information that may be helpful to local agencies in carrying out their duties under CEQA as they relate to global warming". The AG document includes a comprehensive list of suggested project-level measures for the reduction of GHG emissions. With respect to biological resources, one suggested measure is "Preserve and create open space and parks. Preserve existing trees and plant replacement trees at a set ratio".

The Project is consistent with this measure. As noted in PDF 4.6-1, the Project would preserve and enhance approximately 220 acres of native habitat. The Project would also provide approximately 51.4 gross (42.1 net) acres for active and passive park uses. Community landscaping improvements for streets, parks, common areas, open space areas, and habitat areas would be enhanced, restored, and improved with major supplemental plantings that would increase the biomass of Newport Banning Ranch, providing for on-site carbon sequestration. This would be a beneficial impact for GHG emissions.

The predicted long-term environmental effects of global climate change relative to biological resources include potential sea level rise, drought or excessive rainfall, and temperature increases affecting ecosystems. There are no Project elements that would substantially increase the risks to local, regional, or global biological resources from increased GHG emissions. Therefore, there would be no significant impacts from Project-specific GHG emissions on biological resources and no additional mitigation for biological resources is required.

Cultural Resources

Section 4.13, Cultural and Paleontological Resources, identifies significant impacts to archaeological and paleontological resources that would occur associated with the proposed Project. A portion of one archaeological site, CA-ORA-844B, overlaps the area of biological disturbance assumed as a part of the Biological Resources analysis. The Mitigation Program set forth in Section 4.13 requires this site to be either capped or data recovery to be performed. Either capping or data recovery of the deposit could result in temporary impacts to approximately 0.92 acre of coastal sage scrub (0.29 acre of Encelia scrub and 0.63 acre of cactus scrub). This potential impact to additional coastal sage scrub would require the same

level of mitigation (restoration at a ratio of 1:1) as outlined in MM 4.6-1 and PDFs 4.6-1 through 4.6-3 would reduce this impact to a less than significant level.

Impact Summary: ***Less Than Significant With Mitigation.*** The Project would have direct and indirect impacts on habitat that supports special status species. This impact would be mitigated to a level considered less than significant with implementation of MMs 4.6-1 through 4.6-16.

Threshold 4.6-2 ***Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFG or USFWS?***

In addition to providing an inventory of special status plant and wildlife species, the CNDDB also provides an inventory of vegetation types that are considered special status by State and federal resource agencies, academic institutions, and various conservation groups. Determination of the sensitivity level is based on the Nature Conservancy Heritage Program Status Ranks, which ranks both species and vegetation types on a global and statewide basis according to (1) the number and size of remaining occurrences; (2) recognized threats (e.g., proposed developments, habitat degradation, and non-native species invasion); and (3) the Central/Coastal NCCP/HCP. All vegetation types below are considered a high priority for preservation by agencies and conservation groups.

Coastal Sage Scrub

Special status coastal sage scrub vegetation types on the Project site include southern coastal bluff scrub, disturbed southern coastal bluff scrub, California sagebrush scrub, Encelia scrub, coyote brush scrub, coyote brush scrub/mule fat scrub, goldenbush scrub, southern cactus scrub, and southern cactus scrub/Encelia scrub. The proposed Project would impact approximately 14.18 acres (12.26 acres permanent, 1.92 acres temporary) of special status coastal sage scrub vegetation. Impacts on these coastal sage scrub vegetation types are considered significant because (1) the loss of these vegetation types in the Project region would be considered a substantial adverse effect on the coastal sage scrub community and (2) impacts to these areas would reduce the habitat for the coastal California gnatcatcher and other wildlife species. Implementation of MM 4.6-1 and PDFs 4.6-1 through 4.6-4 would reduce this impact to a less than significant level. MM 4.6-1 requires habitat restoration of permanent impacts to coastal sage scrub (including southern coastal bluff scrub) at a 3:1 ratio and disturbed coastal sage scrub (excluding southern coastal bluff scrub) at a 1:1 ratio either on site or off site. In addition, all temporarily impacted coastal sage scrub would be restored at a 1:1 ratio. In total, 47.75 acres of coastal sage scrub restoration and an additional 35.16 acres of coastal sage scrub would be preserved through Project implementation. MM 4.6-1 also requires the Applicant to follow the Construction Minimization Measures that would provide conservation and avoidance actions to reduce the adverse impact to the habitat and associated wildlife species. PDFs 4.6-1 through 4.6-4 require the designation and methodology of habitat restoration/preservation and indirect effect minimization measures. These features also provide conservation and avoidance value to the habitat and associated wildlife species.

Riparian

Special status riparian vegetation types on the Project site include freshwater marsh, alkali meadow, salt marsh, willow scrub, and willow riparian forest. The following communities are not considered to be a CDFG special status vegetation type: disturbed alkali meadow, disturbed salt marsh, mule fat scrub, disturbed willow scrub, and disturbed willow riparian forest. These

vegetation types are biologically important, however, because they are (1) riparian and/or (2) they have a small component of a CDFG special status vegetation type interspersed with primarily non-native vegetation.

The proposed Project would impact approximately 14.44 acres of special status riparian habitats (including the disturbed forms described above) (6.62 acres permanent, 7.82 acres temporary). These impacts would be considered significant because of these vegetation types' decline in the region and also because these habitats potentially support special status wildlife species. Implementation of MMs 4.6-4 and 4.6-5 and PDFs 4.6-1 through 4.6-4 would reduce impacts on these resources to less than significant levels. MMs 4.6-4 and 4.6-5 require the restoration and preservation of 48.70 acres of riparian habitat. PDFs 4.6-1 through 4.6-4 require the designation and methodology of habitat restoration/preservation and indirect effect minimization measures. These features also provide conservation and avoidance value to the habitat and associated wildlife species.

Vernal Pools

Vernal pools are a wetland ecosystem characterized by the temporary ponding of water, typically during the winter and spring. They are found in a variety of landscapes, usually underlain by an impermeable layer such as a hardpan, claypan, or basalt (USACE 2008). In California, extensive areas of vernal pool habitat developed over a long geological timeframe, and unique ecosystems of plants and animals evolved to survive the ephemeral nature of vernal pools (USFWS 2005d). The prolonged annual dry phase has excluded fish and other predators and has prevented the establishment of plant species typical of more permanent wetlands (USFWS 2005d).

Habitat loss and fragmentation is the largest threat to vernal pool species. It is estimated that 95 to nearly 100 percent of vernal pool habitat in Southern California has been lost (USFWS 2005d). In addition to direct habitat loss, vernal pool hydrology can be altered by changes in hydrology, invasive species, contaminants, and climate change (USFWS 2005d).

The proposed Project is designed to protect the two areas previously described as vernal pools that are occupied by San Diego fairy shrimp. The proposed Project would permanently impact 0.07 acre of ephemeral pool and 0.06 acre of vernal pool habitat in order to remediate the soil and remove the pipelines in these areas. Once the remediation and pipeline removal are completed, the vernal pool areas would be restored and protected. Because oilfield pipelines are located on top of the soil surface in the pooled areas, their removal would be conducted with the minimum possible soil disturbance and would occur outside the rainy season to reduce direct impacts to this species. However, pipe removal activities would disrupt the soils within the vernal pools in which the San Diego fairy shrimp has been observed and which potentially contain fairy shrimp cysts. Therefore, these pipe removal activities would be considered a potentially significant temporary impact. This impact would be mitigated through preservation and restoration of a 3.58-acre conservation area. This includes enlarging and protecting the pools watershed.

During Project grading, a small area of the surrounding upland portion of the watershed would be impacted, but the Project proposes to replace this portion of the watershed so that the protected pools and 1.49 acre of contributing watershed would be permanently protected within a 1.85-acre vernal pool conservation area. Remediation, restoration and permanent protection of the two pools and protection of its watershed would ensure that Project impacts to these two pools are less than significant. In addition, the Project has identified an additional 1.73 acres of

upland area, adjacent to the 1.85-acre area, which would be available for future vernal pool creation, restoration, and/or enhancement.

The 1.85-acre area would provide sufficient area for mitigating impacts to Features E and G at a 1:1 ratio and Features I and J at a 2:1 ratio using the pool to watershed ratio of the existing 0.32-acre of vernal pool habitat within the vernal pool complex.

Implementation of MM 4.6-3, which requires the restoration and preservation of a 3.58-acre vernal pool complex, would reduce this impact to a less than significant level. In addition, PDFs 4.6-1 through 4.6-4 require the designation and methodology of habitat restoration/preservation and indirect effect minimization measures which would provide conservation and avoidance value to the grassland vernal pool areas and associated wildlife species.

Impact Summary: ***Less Than Significant With Mitigation.*** Grading activities could impact several sensitive natural communities. This impact would be reduced to a level considered less than significant with implementation of MMs 4.6-1, 4.6-3, 4.6-4, and 4.6-5.

Threshold 4.6-3 ***Would the project have a 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?***

Jurisdictional Features

Typically, riparian resources and jurisdictional areas are addressed concurrently because the resources overlap; however, delineation of jurisdictional areas on the Project site is complex because portions of many of the vegetation types are located outside resource agency jurisdiction. Impacts to jurisdictional features are summarized in Table 4.6-7.

TABLE 4.6-7
JURISDICTIONAL FEATURES[a] IMPACT SUMMARY

Jurisdictional Features	Permanent Impacts (Acres)	Temporary Impacts (Acres)	Total Impacts (Acres)
USACE (Waters and Wetlands)	0.32	3.93	**4.25**
CDFG	1.87	0.05	**1.92**
California Coastal Commission	2.52	6.48	**9.00**

a It is important to note that riparian vegetation types and jurisdictional areas should not be considered as identical resources. Although these resources often overlap, there are many areas on site where the riparian vegetation types are located outside resource agency jurisdiction. As an example, mule fat scrub typically occurs in riparian areas (relating to or located on the banks of a river or stream); however, the majority (96%) of the mule fat scrub impacted on the Project site occurs in upland areas or areas outside jurisdictional boundaries.

Note: USACE jurisdictional resource base data was provided by GLA and verified by BonTerra Consulting. CDFG and California Coastal Commission jurisdictional resource base data was provided by BonTerra Consulting.

The Project would permanently impact 0.32 acre of "Waters of the U.S." and USACE wetlands, 1.87 acres under the jurisdiction of the CDFG, and 2.52 acres under the jurisdiction of the California Coastal Commission. A total of 3.93 acres of "Waters of the U.S." and USACE wetlands, 0.05 acre under the jurisdiction of the CDFG, and 6.48 acres under the jurisdiction of the California Coastal Commission would be temporarily impacted by the proposed Project

(Exhibits 4.6-7a, 4.6-7b, and 4.6-7c). Implementation of MMs 4.6-3, 4.6-4, and 4.6-5, and PDFs 4.6-1 through 4.6-4 would reduce impacts on jurisdictional resources to less than significant levels through habitat restoration and preservation (totaling approximately 52.28 acres). PDFs 4.6-1 through 4.6-4 also require the designation and methodology of habitat restoration/preservation and indirect effect minimization measures. These features also provide conservation and avoidance value to the habitat and associated wildlife species.

Impact Summary: ***Less Than Significant With Mitigation.*** Grading and oilfield remediation activities could impact areas under the jurisdiction of the USACE, CDFG, and California Coastal Commission. This impact would be less than significant with implementation of MMs 4.6-3 through 4.6-5.

Threshold 4.6-4 ***Would the project interfere substantially with the movement of any native or migratory fish or wildlife species; inhibits established native resident or migratory fish or wildlife corridors; or impedes the use of native wildlife nursery sites?***

The Project site is adjacent or proximate to the Talbert Marsh, the Santa Ana River, the USACE salt marsh restoration site, and Talbert Park, as well as extensive urbanization in the Project vicinity. Wildlife movement opportunities between the Project site and the above-mentioned large areas of open space in the region are already constrained by extensive urbanization in the Project vicinity, security fencing around the Project site, and ongoing use of the Project site as an operating oilfield. As discussed above, the proposed Project would permanently reduce the size of this coastal open space, which is currently an operating oilfield, by approximately 205.83 acres. The impact to native and non-native habitat types and the conversion of the oilfield would reduce the habitat available for a suite of species moving along the Santa Ana River and using the upland portions of the Project site as a migration stopover point. This impact would be considered significant. However, following oilfield remediation activities within the upland and lowland, large contiguous areas would be revegetated and remain contiguous with the USACE salt marsh restoration site, the Santa Ana River, and the Talbert Marsh. The revegetation following oilfield remediation activities would result in a higher-quality habitat resulting from invasive species removal; removal of human activity and disturbance related to oilfield operations; and availability of larger blocks of contiguous native habitat in the open space area. Therefore, with implementation of MMs 4.6-1 through 4.6-5, this impact would be reduced to a less than significant level.

Impact Summary: ***Less Than Significant With Mitigation.*** The impact to native and non-native habitat types and the conversion of the oilfield would reduce wildlife movement opportunities. This impact would be reduced to a level considered less than significant with implementation of MMs 4.6-1 through 4.6-5.

Threshold 4.6-5 ***Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? Would the project conflict with any applicable plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?***

Santa Ana River
Balboa Boulevard
19th Street
18th Street
17th Street
16th Street
Whittier Avenue
Monrovia Avenue
West Coast Highway
Superior Avenue
Ticonderoga Street
Drainage A*
Drainage B*
Drainage C*
Drainage D
Consolidated Oil Site
Consolidated Oil Site
1
2
17

Project Boundary
Oil Consolidated Site
Project Impacts
Permanent
Temporary
USACE Jurisdiction**
Waters of the U.S.
Wetlands
*Drainage boundary not to scale.
**Note: USACE data provided by Glenn Lukos Associates.

Path: D:\Projects\Newport\J015\MXD\EIR\Ex_BioTech_Impacts_USACE_GLA_v002.mxd

USACE Jurisdictional Impacts

Exhibit 4.6-7a

Newport Banning Ranch EIR

N W E S

600 300 0 600 Feet

BonTerra CONSULTING

(REV: 07-05-11 JFG) R:\Projects\Newport\J015\Graphics\EIR\Ex4.6-7A_Impacts_USACE_JD.pdf

Balboa Boulevard
19th Street
Drainage A
Santa Ana River
18th Street
Drainage B
Whittier Avenue
Monrovia Avenue
17th Street
Consolidated Oil Site
16th Street
Drainage C
West Coast Highway
Consolidated Oil Site
Drainage D
Ticonderoga Street
Superior Avenue

Project Boundary
Consolidated Oil Site
CDFG Jurisdiction

Project Impacts

Permanent
Temporary

*Drainage boundary not to scale.
**Note: CDFG data provided by BonTerra Consulting.

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CDFG Jurisdictional Impacts

Exhibit 4.6-7b

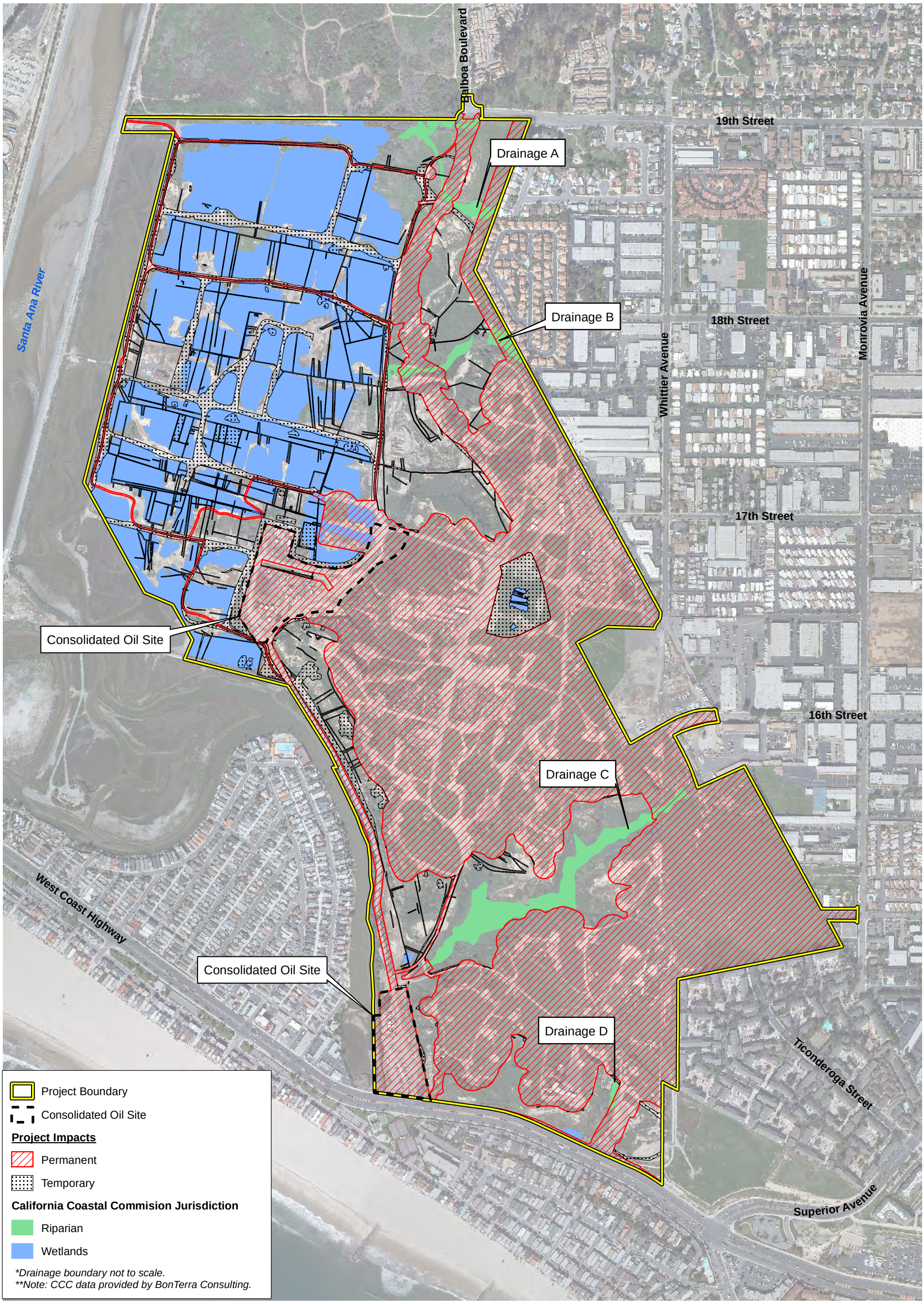
Newport Banning Ranch EIR

N W E S

600 300 0 600 Feet

BonTerra CONSULTING

(REV: 07-06-11 JFG) R:\Projects\Newport\J015\Graphics\EIR\Ex4.6-7B_Impacts_CDFG_JD.pdf



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CCC Jurisdictional Impacts

Exhibit 4.6-7c

Newport Banning Ranch EIR

N W E S

600 300 0 600 Feet

BonTerra CONSULTING

(REV: 071811 JFG) R:\Projects\Newport\J015\Graphics\EIR\Ex4.6-7C_Impacts_CCC_JD.pdf

Tables 4.6-8, 4.6-9, and 4.6-10[11] address the Project's consistency with applicable goals and policies of SCAG, the City's General Plan and Coastal Land Use Plan, and the California Coastal Act. The Project is considered consistent with the applicable goals and policies identified in the analysis. The Project site occurs within the Santa Ana River Mouth Existing Use Area of the Central/Coastal Subregion NCCP/HCP. Existing Use Areas are comprised of areas with important populations of Identified Species, but which are geographically removed from the Reserve System. The NCCP/HCP does not authorize Incidental Take within the Existing Use Areas; such activities must be submitted to the USFWS for review and approval, consistent with existing federal law. The Project would not conflict with the provisions of an adopted NCCP/HCP because it does not impact areas identified as part of the Central/Coastal Subregion Reserve System, nor does it utilize the Take allocations associated with projects in the Subregion that are outside the Existing Use Areas. In addition, the Project would comply with the NCCP/HCP requirement to obtain separate USFWS and CDFG authorization.

Impact Summary: ***No Impact.*** As identified in Tables 4.6-8, 4.6-9, and 4.6-10, the proposed Project would not conflict with any goals or policies of SCAG, the *City of Newport Beach General Plan* or Local Coastal Plan, or the California Coastal Act. The Project would not conflict with the Central/Coastal Subregion NCCP/HCP.

4.6.8 MITIGATION PROGRAM

Project Design Features

The following Project Design Features are applicable to the Project with respect to biological resources: PDFs 4.6-1 through 4.6-4.

Mitigation Measures

This section focuses on the development of mitigation measures for proposed Project impacts that were found to be significant or potentially significant. Strategies to mitigate each impact to a less than significant level are identified and described in the following section. Table 4.6-8 provides a summary of the mitigation areas for the Project.

[11] For ease of reading, the policy tables are located at the end of this section.

TABLE 4.6-8
HABITAT MITIGATION SUMMARY

Vegetation Type	Existing (Acres)	Total Impacts (Acres)	Area Not Affected (Acres)	Preservation (Acres)	Restoration (Acres)	Total Preservation and Restoration (Acres)	Preservation/ Restoration to Impact Ratio[a]
Coastal Sage Scrub and Disturbed Coastal Sage Scrub	58.27	23.11	35.16	35.16	47.75	82.91	Approx. 3.5:1
Grassland and Ruderal	120.40	100.13	20.27	20.27	50.07	70.34	Approx. 0.7:1
Grassland Depression Features (includes Features VP1, VP2, AD3, E, G, I, and J)	0.50	0.24	0.26	0.26	3.32	3.58	Approx. 15:1
Marsh	31.45	2.45	29.00	7.25	2.65	9.90	Approx. 4:1
Riparian and Disturbed Riparian	60.58	12.93	47.65	23.03	15.77	38.80	Approx. 3:1
Total	**271.20**	**138.86**	**132.34**	**85.97**	**119.56**	**205.53**	

[a] The preservation/restoration to impact ratio (last column in table) is not a required mitigation ratio. Rather it identifies the ratio that could be achieved.

Source: BonTerra Consulting 2011.

Direct Impacts

MM 4.6-1 ***Coastal Sage Scrub Habitat Preservation and Restoration.*** Permanent impacts on coastal sage scrub vegetation (including disturbed southern coastal bluff scrub) (12.32 acres) shall be mitigated at a 3:1 ratio (36.96 acres) on the Project site or off site (nearby) through the restoration of southern coastal bluff scrub and California sagebrush scrub. Permanent impacts on disturbed coastal sage scrub vegetation (excluding disturbed southern coastal bluff scrub) (8.21 acres) shall be mitigated at a 1:1 ratio (8.21 acres) elsewhere on the Project site or off site. In addition, temporary impacts (2.58 acres) to coastal sage scrub and disturbed coastal sage scrub vegetation types shall be mitigated by revegetation with locally occurring native coastal sage scrub species following remediation at a 1:1 ratio. The required restoration is summarized in Table A. In addition to restoration, the Project shall preserve 35.16 acres of coastal sage scrub on site. Coastal sage scrub restoration and preservation on site would total 82.91 acres.

TABLE A
REQUIRED COASTAL SAGE SCRUB RESTORATION

	Impact (Acres)	Ratio Required	Restoration Required (Acres)
Permanent Impact			
Coastal Sage Scrub (including disturbed southern coastal bluff scrub)	12.32	3:1	**36.96**
Disturbed Coastal Sage Scrub (excluding disturbed southern coastal bluff scrub)	8.21	1:1	**8.21**
Temporary Impact			
Coastal Sage Scrub (including disturbed southern coastal bluff scrub)	1.92	1:1	**1.92**
Disturbed Coastal Sage Scrub (excluding disturbed southern coastal bluff scrub)	0.66	1:1	**0.66**
Total	***23.11***		***47.75***

The Applicant shall be required to plan, implement, monitor, and maintain a coastal sage scrub revegetation program for the Project consistent with the most current technical standards/knowledge regarding coastal sage scrub restoration. Prior to issuance of the first permit that would allow for site disturbance (e.g., grading permit), a detailed restoration program shall be prepared by a qualified Biologist and approved by the City of Newport Beach (City) and the resource agencies (i.e., the U.S. Fish and Wildlife Service [USFWS] and the California Coastal Commission). The program shall include, at a minimum, the items listed below.

1. ***Responsibilities and qualifications of the personnel to implement and supervise the plan.*** The responsibilities of the landowner, specialists, and maintenance personnel that would supervise and implement the plan shall be specified.

2. ***Site selection.*** The mitigation site shall be determined in coordination with the City and the resource agencies. The site shall either be located on the Project site in a dedicated open space area or land shall be purchased/obtained immediately off site. Selected sites shall not result in the removal of a biologically valuable resource (i.e., native grassland).

3. ***Site preparation and planting implementation.*** Site preparation shall include (a) protection of existing native species; (b) trash and weed removal; (c) native species salvage and reuse (i.e., duff); (d) soil treatments (i.e., imprinting, decompacting); (e) temporary irrigation installation; (f) erosion-control measures (i.e., rice or willow wattles); (g) seed mix application; and (h) container species planting. Locally occurring native plants and seeds shall be used and shall include species present on site, in adjacent areas, and uncommon species known to occur on site such as California box-thorn and woolly seablite.

4. ***Schedule.*** A schedule shall be developed that includes planting to occur in late fall and early winter (i.e., between October 1 and January 30).

5. ***Maintenance plan/guidelines.*** The maintenance plan shall include (a) weed control; (b) herbivory control; (c) trash removal; (d) irrigation system maintenance; (e) maintenance training; and (f) replacement planting. The maintenance plan shall also include biological monitoring during maintenance activities if they occur during the gnatcatcher breeding season (February 15 to July 15).

6. ***Monitoring plan.*** The coastal sage scrub monitoring plan shall include (a) qualitative monitoring (i.e., photographs and general observations); (b) quantitative monitoring (i.e., randomly placed transects, wildlife monitoring); (c) performance criteria as approved by the resource agencies; (d) monthly reports for the first year and reports every other month thereafter; and (e) annual reports for five years, which shall be submitted to the resource agencies. The site shall be monitored and maintained for five years to ensure successful sage scrub habitat establishment within the restored and created areas.

7. ***Long-term preservation.*** Long-term preservation of the site shall also be outlined in the conceptual mitigation plan to ensure the mitigation site is not impacted by future development.

The Applicant shall begin coastal sage scrub restoration activities (e.g., soil prep, seeding) no later than one year after issuance of the first permit that allows for ground disturbance (e.g., grading permit). The Applicant shall be fully responsible for implementing the coastal sage scrub revegetation program until the restoration areas have met the success criteria outlined in the program. The City and the resource agencies (i.e., the USFWS and the California Coastal Commission) shall have final authority over mitigation area sign-off).

The Natural Communities Conservation Plan/Habitat Conservation Plan (NCCP/HCP) program does not authorize Incidental Take resulting from the conversion of habitat occupied by coastal California gnatcatchers in Existing Use Areas. Therefore, the Applicant has elected to seek a Take Authorization through Section 7 of the FESA. Prior to issuance of the first permit that would allow for site disturbance (e.g., grading permit), the Applicant shall provide, a Biological Opinion issued from the U.S. Fish and Wildlife Service (USFWS) to the City that authorizes the removal of coastal sage scrub (i.e., coastal California gnatcatcher habitat). It is anticipated that the USFWS Biological Opinion will contain conservation recommendations to avoid or reduce the Project impact. Although any additional conservation measures identified by the USFWS shall be enforced, at a minimum, the Construction Minimization Measures listed below also shall be followed.

1. Prior to the commencement of clearing operations or other activities involving significant soil disturbance, all areas of coastal sage scrub habitat to be avoided shall be identified with temporary fencing or other markers that are clearly visible to construction personnel.

2. A USFWS-approved Biological Monitor shall be on site during any clearing of coastal sage scrub. The Applicant shall advise the USFWS at least 7 calendar days—but preferably 14 calendar days—prior to the clearing of coastal sage scrub. The Biological Monitor shall flush avian or other mobile

species from habitat areas immediately prior to brush-clearing and earth-moving activities. It shall be the responsibility of the Monitoring Biologist to ensure that identified bird species are not directly impacted by brush-clearing and earth-moving equipment in a manner that also allows for construction activities to continue on a timely basis.

3. Following the completion of initial clearing activities, all areas of coastal sage scrub habitat to be avoided by construction equipment and personnel shall be marked with temporary fencing or other clearly visible, appropriate markers. No construction access, parking, or equipment storage shall be permitted within such marked areas.

The combined restoration and preservation of 82.91 acres of coastal sage scrub would result in a net increase in habitat by 24.64 acres.

MM 4.6-2 ***Grassland Habitat Preservation and Restoration*.** Permanent impacts on non-native grassland and ruderal vegetation (100.13 acres) shall be mitigated at a 0.7:1 ratio through on-site or off-site restoration and preservation. These permanent impacts to non-native grassland and ruderal vegetation shall be mitigated by the restoration of 48.63 acres (0.5:1) of grassland and alkali meadow within both the upland and lowland portions of the Project site as summarized in Table B and may include native grassland areas within Fuel Modification Zone C. Temporary impacts (2.87 acres) shall be mitigated by native grassland or alkali meadow revegetation following remediation at a 0.5:1 ratio (1.44 acres). An additional 20.27 acres of grassland habitat shall be preserved on site. The grassland restoration and preservation would total 70.34 acres.

TABLE B
REQUIRED GRASSLAND RESTORATION

	Impact (Acres)	Ratio Required	Restoration Required (Acres)
Permanent Impact			
Non-Native Grassland and Ruderal	97.26	0.5:1	**48.63**
Temporary Impact			
Non-Native Grassland and Ruderal	2.87	0.5:1	**1.44**
Total	***100.13***		***50.07***

The Applicant shall begin grassland restoration activities (e.g., soil prep, seeding) no later than one year after issuance of the first grading permit. The Applicant shall be required to plan, implement, monitor, and maintain a native grassland preservation/restoration program for the Project. A grassland preservation/ restoration program shall be (1) developed by a qualified Biologist; (2) submitted for review and approval to the City of Newport Beach (City) prior to the first permit that would allow for site disturbance (e.g., grading permit); and (3) shall be implemented by a qualified Biologist. The grassland mitigation plan shall also provide mitigation for the loss of raptor foraging and burrowing owl habitat; therefore, site selection measures shall include considerations that influence the site's suitability for burrowing owl and other raptor species. Restoration shall

consist of seeding with appropriate needlegrass species and, if appropriate, incorporating seeds collected from special status plant species (southern tarplant) that may be impacted by the Project. A detailed restoration program shall contain the following items:

1. ***Responsibilities and qualifications of the personnel to implement and supervise the plan.*** The responsibilities of the Applicant, specialists, and maintenance personnel that would supervise and implement the plan shall be specified.

2. ***Site selection.*** The mitigation site shall be determined in coordination with the City and a qualified Biologist knowledgeable about native grassland restoration, raptors, and the burrowing owl. The site shall either be located on the Project site in a dedicated open space area, or suitable adjacent off-site open space shall be purchased/obtained. The mitigation shall occur entirely in one to two locations to provide the maximum habitat value for the raptors, burrowing owls, and other wildlife species that require contiguous blocks of open habitat types. The site(s) shall consist of level or gently sloping terrain, soil types, and microhabitat conditions suitable for occupation by raptors and burrowing owl, as determined by a qualified Biologist.

3. ***Site preparation and planting implementation.*** Site preparation shall include (a) protection of existing native species; (b) trash and weed removal; (c) native species salvage and reuse (i.e., duff); (d) soil treatments (i.e., imprinting, decompacting); (e) temporary irrigation installation; (f) erosion-control measures (i.e., rice or willow wattles); (g) seed mix application; and (h) container species installation. If mammal burrows are limited on the mitigation site(s), the qualified Biologist shall recommend creation of artificial burrows suitable for occupation by the burrowing owl. The burrows shall be constructed using standard specifications established for the owl. Depending on the topography of the site(s) and the availability of natural perches, the qualified Biologist shall make recommendations regarding whether additional perching sites (e.g., large rocks) shall be placed on the mitigation site(s).

4. ***Schedule.*** A schedule shall be developed that includes planting to occur in late fall and early winter (i.e., between October 1 and January 30).

5. ***Maintenance plan/guidelines.*** The maintenance plan shall include (a) weed control; (b) herbivory control; (c) trash removal; (d) irrigation system maintenance; (e) maintenance training; and (f) replacement planting. The maintenance plan shall also include biological monitoring during maintenance activities if they occur during the burrowing owl/raptor breeding season (February 1 to August 31).

6. ***Monitoring plan.*** The monitoring plan shall include (a) qualitative monitoring (i.e., photographs and general observations); (b) quantitative monitoring (i.e., randomly placed transects); (c) performance criteria, as approved by the resource agencies; (d) monthly reports for the first year and reports every other month thereafter; and (e) annual reports for five years, which shall be submitted to the resource agencies. The grassland mitigation site shall be monitored and maintained for five years to ensure successful establishment

of native grassland habitat within the restored and created areas. The performance criteria shall take into consideration the habitat requirements for burrowing owl, particularly that they occur in grasslands with openings or lower vegetation coverage; thus, the performance criteria shall include a requirement for openings or a lower percent cover for portions of the mitigation site.

7. ***Long-term preservation.*** Long-term preservation of the site shall also be outlined in the conceptual grassland mitigation plan to ensure the mitigation site is not impacted by future development.

The Project would result in the restoration of 50.07 acres of native grassland and alkali meadow and preservation of 20.27 acres of non-native grassland areas, for a total of 70.34 acres. Because the value of habitat to be replaced (native grassland and alkali meadow) is higher than those habitat values impacted by the Project, a less than 1:1 mitigation ratio is deemed adequate to compensate for the loss of non-native grassland areas.

MM 4.6-3 ***Grassland Depression Feature and Fairy Shrimp Habitat Preservation and Restoration. Grassland Depression Feature Habitat Preservation and Restoration.***

The proposed Project is designed to protect the two areas previously described as vernal pools that are occupied by San Diego fairy shrimp. The proposed Project would permanently impact 0.07 acre of ephemeral pool and 0.06 acre of vernal pool habitat in order to remediate the soil and remove the pipelines in these areas. Once the remediation and pipeline removal are completed, the vernal pool areas would be restored and protected. Because oilfield pipelines are located on top of the soil surface in the pooled areas, their removal would be conducted with the minimum possible soil disturbance and would occur outside the rainy season to reduce direct impacts to this species. However, pipe removal activities would disrupt the soils within the vernal pools in which the San Diego fairy shrimp has been observed and which potentially contain fairy shrimp cysts. Therefore, these pipe removal activities would be considered a potentially significant temporary impact. This impact would be mitigated through preservation and restoration of a 3.58-acre conservation area. This includes enlarging and protecting the pools watershed.

During Project grading, a small area of the surrounding upland portion of the watershed would be impacted, but the Project proposes to replace this portion of the watershed so that the protected pools and 1.49 acre of contributing watershed would be permanently protected within a 1.85-acre vernal pool conservation area. Remediation, restoration and permanent protection of the two pools and protection of its watershed would ensure that Project impacts to these two pools are less than significant. In addition, the Project has identified an additional 1.73 acres of upland area, adjacent to the 1.85-acre area, which would be available for future vernal pool creation, restoration, and/or enhancement. If this additional area is restored, a total vernal pool conservation area of 3.58 acres would be provided by the Project (Table C).

TABLE C
REQUIRED VERNAL POOL PRESERVATION/RESTORATION

Feature	Temporary Impact	Permanent Impact	Total Impact	VP1, VP2, and Upland Watershed Preservation	Upland Area Vernal Pool Enhancement Area	Total Preservation/ Enhancement Areas
VP1	0.06	0.00	0.06			
VP2	0.00	0.00	0.00			
Feature AD3	0.00	0.007	0.007			
Total for VP1, VP2, and AD3	**0.06**	**0.007**	**0.067**	**1.85**		
Features E and G (oilfield sumps)	0	0.053	0.053			
Features I and J (grasslands)	0	0.12	0.12			
Total for E, G, I, and J		**0.173**	**0.173**		**1.73**	
Total San Diego Fairy Shrimp Habitat Impacts			***0.24***			***3.58***

Expansion of the watershed by 1.73 acres would increase hydrological input by creating hydrological conditions for additional pools, which would promote more and higher quality habitat created as mitigation for Features E, G, I, and J, which support the San Diego fairy shrimp.

Restoration of the pool areas, by removing mule fat and non-native species, would restore the pools to characteristic vernal pool habitat, as vernal pools do not typically support woody vegetation such as mule fat. The restoration program would also provide increased wildlife habitat function for migratory birds that use the pools as a migration stopover, and the increased watershed area would be planted with native alkali meadow or native upland grasses favorable for raptor foraging and would be "counted" toward the approximately 50 acres of grassland habitat.

Impacts to San Diego fairy shrimp detected in Features E and G, which are to be remediated as part of the oilfield clean up and remediation, shall be mitigated by testing the soils, and if the soils are not contaminated to the degree requiring environmental remediation, they shall be removed and relocated to the vernal pool conservation area at a ratio of 1:1. Soils shall also be removed and relocated within features I and J.[12] All mitigation shall occur within the 1.73 acres that have been set aside along with the 1.85-acre conservation area to provide a 3.58-acre vernal pool conservation area.

The Applicant shall be required to plan, implement, monitor, and maintain a vernal pool preservation/restoration program for the Project. A vernal pool

[12] The final ratio would be determined in consultation with USFWS and would be based on the character of the features known to be occupied. Features such as E and G, which are oilfield sumps would require a lower mitigation ratio than less disturbed pools I and J.

program shall be developed by a qualified Biologist and shall be submitted for review and approval to the City of Newport Beach (City) and the resource agencies (i.e., the U.S. Fish and Wildlife Service [USFWS] and the California Coastal Commission) prior to the first action and/or permit which would allow for site disturbance (e.g., issuance of a grading permit). The Applicant shall begin the vernal pool restoration activities (e.g., soil preparation) no later than one year after issuance of the first grading permit. Restoration shall consist of seeding/planting with appropriate vernal pool species and, if appropriate, incorporate seeds collected from special status plant species that may be impacted by the Project. A detailed restoration program shall contain the following items:

1. ***Responsibilities and qualifications of the personnel to implement and supervise the plan.*** The responsibilities of the landowner, specialists, and maintenance personnel that would supervise and implement the plan shall be specified.

2. ***Site selection.*** The mitigation site shall be determined in coordination with the City and the resource agencies. The site shall be located on the Project site in a dedicated open space area. The mitigation areas shall not result in the removal of a biologically valuable resource (e.g., native grassland).

3. ***Site preparation and planting implementation.*** Site preparation shall include (a) protection of existing native species; (b) trash and weed removal; (c) native species salvage and reuse (i.e., duff); (d) soil treatments (i.e., imprinting, decompacting); (e) temporary irrigation installation; (f) erosion-control measures (i.e., rice or willow wattles); (g) seed mix application; and (h) container species installation.

4. ***Schedule.*** Planting shall occur by a qualified Biologist who is monitoring on site rainfall to minimize impacts to existing fairy shrimp.

5. ***Maintenance plan/guidelines.*** The maintenance plan shall include (a) weed control; (b) herbivory control; (c) trash removal; (d) irrigation system maintenance; (e) maintenance training; and (f) replacement planting.

6. ***Monitoring plan.*** The monitoring plan shall include (a) qualitative monitoring (i.e., photographs and general observations); (b) quantitative monitoring (i.e., randomly placed transects); (c) performance criteria, as approved by the resource agencies; (d) monthly reports for the first year and reports every other month thereafter; and (e) annual reports for five years, which shall be submitted to the resource agencies.

7. ***Long-term preservation.*** Long-term preservation of the site shall also be outlined in the conceptual mitigation plan to ensure the mitigation site is not impacted by future development.

The Applicant shall be fully responsible for the implementation of the vernal pool revegetation program until the restoration areas have met the success criteria outlined in the program. The City and the resource agencies (i.e., the USFWS and the California Coastal Commission) shall have final authority over mitigation area sign-off. The site shall be monitored and maintained for five years to ensure

successful establishment of vernal pool habitat within the restored and created areas.

The preservation of the vernal pool habitat and the expansion of the watershed habitat will result in a net increase in habitat occupied by the San Diego fairy shrimp on the site that would also exhibit higher levels of function for the fairy shrimp.

MM 4.6-4 ***Marsh Habitat Preservation and Restoration.*** The Project would impact 2.45 acres (0.10 permanent/2.35 temporary) of marshes. Permanent impacts to marshes shall be restored at a replacement ratio of 3:1, totaling 0.30 acre (Table D). Temporary impacts associated with oilfield remediation shall be mitigated at a 1:1 ratio[13] (totaling 2.35 acres). In addition, 7.25 acres shall be preserved on site, for a total of 9.90 acres of restoration and preservation.

TABLE D
REQUIRED MARSH/MEADOW/OPEN WATER
HABITAT RESTORATION

	Impact (Acres)	Ratio Required	Restoration Required (Acres)
Permanent Impact			
Marsh/Meadow/Open Water	0.10	3:1	**0.30**
Temporary Impact			
Marsh/Meadow/Open Water	2.35	1:1	**2.35**
Total	***2.45***		***2.65***

The Applicant shall be required to plan, implement, monitor, and maintain a marsh/meadow preservation/restoration program for the Project. A marsh/meadow preservation/restoration program shall be developed by a qualified Biologist, and submitted for review and approval to the City of Newport Beach (City) and the resource agencies (i.e., the U.S. Fish and Wildlife Service [USFWS], the California Department of Fish and Game [CDFG], and the California Coastal Commission) prior to the first action and/or permit that would allow for site disturbance (e.g., grading permit). The Applicant shall begin marsh habitat restoration activities (e.g., soil prep, seeding) no later than one year after issuance of the first permit allowing ground disturbance (e.g., grading permit). The marsh/meadow preservation/restoration program shall also mitigate for the potential loss of light-footed clapper rail, western snowy plover, and Belding's savannah sparrow habitat; therefore, site selection measures shall include considerations that influence the site's suitability for these species. Restoration shall consist of seeding with appropriate marsh/meadow species and, if appropriate, incorporation of seeds collected from special status plant species that may be impacted by the Project. A detailed restoration program shall contain the items listed below.

[13] It is important to note that all temporary impacts are for purposes of oilfield remediation and habitat restoration and, as such, are an allowable use in wetland areas under Section 30233 of the California Coastal Act, which includes habitat restoration as an allowable activity in wetlands.

1. ***Responsibilities and qualifications of the personnel to implement and supervise the plan.*** The responsibilities of the landowner, specialists, and maintenance personnel that would supervise and implement the plan shall be specified.

2. ***Site selection.*** The mitigation site shall be determined in coordination with the City and the resource agencies. The site shall either be located on the Project site in a dedicated open space area, or suitable adjacent off-site open space shall be obtained/purchased. Selected sites shall not result in the removal of a biologically valuable resource (e.g., native grassland).

3. ***Site preparation and planting implementation.*** The site preparation shall include (a) protection of existing native species; (b) trash and weed removal; (c) native species salvage and reuse (i.e., duff); (d) soil treatments (i.e., imprinting, decompacting); (e) temporary irrigation installation; (f) erosion-control measures (i.e., rice or willow wattles); (g) seed mix application; and (h) container species installation. Locally occurring, native plants and seeds shall be used and shall include species present on site and in adjacent areas, and shall also include uncommon species known to occur on site such as southwestern spiny rush.

4. ***Schedule.*** A schedule shall be developed that includes planting to occur in late fall and early winter (i.e., between October 1 and January 30).

5. ***Maintenance plan/guidelines.*** The maintenance plan shall include (a) weed control; (b) herbivory control; (c) trash removal; (d) irrigation system maintenance; (e) maintenance training; and (f) replacement planting. The maintenance plan shall also include biological monitoring during maintenance activities if they occur during the light-footed clapper rail, western snowy plover, and Belding's savannah sparrow breeding season (March 1 to September 15).

6. ***Monitoring plan.*** The monitoring plan shall include (a) qualitative monitoring (i.e., photographs and general observations); (b) quantitative monitoring (i.e., randomly placed transects); (c) performance criteria, as approved by the resource agencies; (d) monthly reports for the first year and reports every other month thereafter; and (e) annual reports for five years, which shall be submitted to the resource agencies.

7. ***Long-term preservation.*** Long-term site preservation shall also be outlined in the conceptual mitigation plan to ensure the mitigation site is not impacted by future development.

The Applicant shall be fully responsible for the implementation of the marsh and mudflat restoration program until the restoration areas have met the success criteria outlined in the program. The City and the resource agencies (i.e., the USFWS and the California Coastal Commission) shall have final authority over mitigation area sign-off.

The site shall be monitored and maintained for five years to ensure successful restoration of marsh and mudflat habitat within the restored and created areas. The performance criteria shall take into consideration the habitat requirements

for light-footed clapper rail, western snowy plover, and Belding's savannah sparrow. For example, the light-footed clapper rail requires areas with tidal influence and prefers using cordgrass to build their nests; the western snowy plover nests on bare ground in areas of little to no vegetation coverage; and the Belding's savannah sparrow uses the upper portions of the marsh dominated by pickleweed. Thus, performance criteria shall be tailored to fit different portions of the mitigation site intended for each species.

The limits of grading shall be clearly marked, and temporary fencing or other appropriate markers shall be placed around any sensitive habitat adjacent to work areas prior to the commencement of any ground-disturbing activity or native vegetation removal. No construction access, parking, or storage of equipment or materials shall be permitted within the marked areas.

MM 4.6-5 ***Jurisdictional Resources/Riparian Habitat Preservation and Restoration*****.** The Applicant is in the process of obtaining permits/agreements/certifications from the U.S. Army Corps of Engineers (USACE), the California Department of Fish and Game (CDFG), the Regional Water Quality Control Board (RWQCB), and the California Coastal Commission that are required for direct or indirect impacts on areas within these agencies' jurisdictions. The Applicant shall be obligated to implement/comply with the mitigation measures required by the resource agencies regarding impacts on their respective jurisdictions. Jurisdictional areas shall be restored on the Project site or immediately off site at a minimum replacement ratio of 3:1 for permanent impacts and 1:1 for temporary impacts to ensure no net loss of habitat.[14] The jurisdictions of the USACE, CDFG, and California Coastal Commission are not additive areas, as many of the riparian areas on the Project site may be within the jurisdiction of several of these agencies. Therefore, the permits and associated jurisdictional replacement requirements would identify which mitigation areas apply to the corresponding jurisdictions.

Permanent impacts on willow scrub and willow riparian forest (1.42 acres) shall be mitigated at a 3:1 ratio (4.26 acres) on the Project site through restoration of willow habitat. Permanent impacts on all other riparian vegetation types and all temporary impacts to riparian vegetation types (11.51 acres) shall be mitigated at a 1:1 ratio (11.51 acres) on the Project site. In total, as compensation for permanent and temporary impacts to 12.93 acres of riparian habitat, the Project would create 15.77 acres of riparian habitat. In addition, the Project shall preserve 23.03 acres of riparian habitats, for at total of 38.80 acres of restoration and preservation. Details of the restoration required is summarized below in Table E.

[14] It is important to note that all temporary impacts are for purposes of oilfield remediation and habitat restoration and, as such, are an allowable use in wetland areas under Section 30233 of the California Coastal Act, which includes habitat restoration as an allowable activity in wetlands.

TABLE E
REQUIRED RIPARIAN RESTORATION

	Impact (Acres)	Ratio Required	Restoration Required (Acres)
Permanent Impact			
Willow Scrub/Willow Riparian Forest	1.42	3:1	**4.26**
Disturbed Willow Scrub/Disturbed Willow Riparian Forest	0.03	1:1	**0.03**
Mule Fat Scrub	0.47	1:1	**0.47**
Disturbed Mule Fat Scrub[a]	4.95	1:1	**4.95**
Temporary Impact			
Willow Scrub/Willow Riparian Forest	0.59	1:1	**0.59**
Disturbed Willow Scrub/Disturbed Willow Riparian Forest	0.70	1:1	**0.70**
Mule Fat Scrub	0.20	1:1	**0.20**
Disturbed Mule Fat Scrub[a]	4.57	1:1	**4.57**
Total	***12.93***		***15.77***

[a] Includes disturbed mule fat scrub, disturbed mule fat scrub/ruderal, and disturbed mule fat scrub/goldenbush scrub.

Prior to the first permit that would allow for site disturbance, a detailed restoration program shall be prepared for approval by the City of Newport Beach (City) and the resource agencies (i.e., the USACE, the CDFG, the RWQCB, and the California Coastal Commission). The program shall include, at a minimum, the following items:

1. ***Responsibilities and qualifications of the personnel to implement and supervise the plan.*** The responsibilities of the landowner, specialists, and maintenance personnel that would supervise and implement the plan shall be specified.

2. ***Site selection.*** The mitigation site shall be determined in coordination with the City and the resource agencies (i.e., the USFWS, the CDFG, the RWQCB, and the California Coastal Commission). The site shall either be located on the Project site in a dedicated open space area, or suitable adjacent off-site open space shall be obtained/purchased. Selected sites shall not result in the removal of a biologically valuable resource (e.g., native grassland).

3. ***Site preparation and planting implementation.*** Site preparation shall include (a) protection of existing native species; (b) trash and weed removal; (c) native species salvage and reuse (i.e., duff); (d) soil treatments (i.e., imprinting, decompacting); (e) temporary irrigation installation; (f) erosion-control measures (i.e., rice or willow wattles); (g) seed mix application; and (h) container species installation.

4. ***Schedule.*** A schedule shall be developed that includes planting to occur in late fall and early winter (i.e., between October 1 and January 30).

5. ***Maintenance plan/guidelines.*** The maintenance plan shall include (a) weed control; (b) herbivory control; (c) trash removal; (d) irrigation system maintenance; (e) maintenance training; and (f) replacement planting. The maintenance plan shall also include biological monitoring during maintenance activities if they occur during the least Bell's vireo breeding season (March 15 to September 15).

6. ***Monitoring plan.*** The riparian vegetation/jurisdictional resources monitoring plan shall include (a) qualitative monitoring (i.e., photographs and general observations); (b) quantitative monitoring (i.e., randomly placed transects); (c) performance criteria, as approved by the resource agencies; (d) monthly reports for the first year and reports every other month thereafter; and (e) annual reports for five years, which shall be submitted to the resource agencies.

7. ***Long-term preservation.*** Long-term preservation of the site shall also be outlined in the conceptual mitigation plan to ensure the mitigation site is not impacted by future development.

The limits of grading shall be clearly marked, and temporary fencing or other appropriate markers shall be placed around any sensitive habitat adjacent to work areas prior to the commencement of any ground-disturbing activity or native vegetation removal. No construction access, parking, or storage of equipment or materials shall be permitted within marked areas.

The Applicant shall begin riparian habitat restoration activities (e.g., soil prep, seeding) no later than one year after issuance of the first grading permit. The Applicant shall be fully responsible for the implementation of the riparian revegetation program until the restoration areas have met the success criteria outlined in the program. The City and the resource agencies (i.e., the USFWS and the California Coastal Commission) shall have final authority over mitigation area sign-off.

The site shall be monitored and maintained for five years to ensure successful establishment of riparian habitat within the restored and created areas, and the performance criteria shall take least Bell's vireo habitat requirements into consideration. For example, the presence of a shrubby understory is important for this species; thus, performance criteria shall include a requirement for structural complexity.

The Applicant is seeking a Take Authorization through Section 7 of the Federal Endangered Species Act for impacts to habitat for the least Bell's vireo. Prior to issuance of the first action and/or permit that would allow for site disturbance (e.g., grading permit), the Applicant shall provide to the City of Newport Beach a Biological Opinion issued from the U.S. Fish and Wildlife Service (USFWS) authorizing the removal of jurisdictional resources (i.e., potential least Bell's vireo habitat). It is anticipated that the USFWS Biological Opinion would contain conservation recommendations to avoid or reduce the Project's impact. Although additional conservation measures identified by the USFWS shall be enforced, at a minimum, the Construction Minimization Measures listed below shall be followed.

1. Activities involving the removal of riparian habitat shall be prohibited during the least Bell's vireo breeding season (March 15 to September 15) unless otherwise directed by the USFWS and the CDFG.

2. Vegetation-clearing activities shall be monitored by a qualified Biologist. The Biological Monitor shall ensure that only the amount of riparian habitat approved during the consultation process shall be removed. The Biological Monitor shall delineate (by the use of orange snow fencing or lath and ropes/flagging) all areas adjacent to the impact area that contain habitat suitable for least Bell's vireo occupation.

3. The use of any large construction equipment during site grading shall be prohibited within 500 feet of an active least Bell's vireo nest during the breeding season of this species (March 15 to September 15), unless otherwise directed by the USFWS and the CDFG. Construction may be allowed within 500 feet of an active nest if appropriate noise measures are implemented, as approved by the resource agencies.

4. Appropriate noise-abatement measures (e.g., sound walls) shall be implemented to ensure that noise levels are less than 60 A-weighted decibels (dBA) at specified monitoring locations near active nest(s), as determined by the Biological Monitor. This shall be verified by weekly noise monitoring conducted by a qualified Acoustical Engineer during the breeding season (March 15 to September 15) or as otherwise determined by a qualified Biological Monitor based on vireo nesting activity.

5. If construction occurs during the breeding season, a summary of construction monitoring activities and noise monitoring results shall be provided to the USFWS and the CDFG following completion of construction.

MM 4.6-6 ***Migratory Bird Treaty Act.*** No vegetation removal shall occur between February 15 and September 15 unless a qualified Biologist, approved by the City of Newport Beach (City), surveys the Project's impact area prior to disturbance to confirm the absence of active nests. If an active nest is discovered, disturbance within a particular buffer shall be prohibited until nesting is complete; the buffer distance shall be determined by the Biologist in consultation with applicable resource agencies and in consideration of species sensitivity and existing nest site conditions. Limits of avoidance shall be demarcated with flagging or fencing. The Biologist shall record the results of the recommended protective measures described above and shall submit a memo summarizing any nest avoidance measures to the City to document compliance with applicable State and federal laws pertaining to the protection of native birds.

MM 4.6-7 ***Special Status Plant Species.*** The Applicant shall be required to plan, implement, monitor, and maintain a southern tarplant restoration program for the Project consistent with the most current technical standards/knowledge regarding southern tarplant restoration. Prior to the first action and/or permit that would allow for site disturbance (e.g., a grading permit), a qualified Biologist shall prepare a detailed southern tarplant restoration program that would focus on (1) avoiding impacts to the southern tarplant to the extent possible through Project planning; (2) minimizing impacts; (3) rectifying impacts through the repair, rehabilitation, or restoration of the impacted environment; (4) reducing or

eliminating the impact over time by preservation and maintenance operations during the life of the Project; and (5) compensating for impacts by replacing or providing substitute resources or environments. The program shall be reviewed and approved by the City of Newport Beach (City) prior to site disturbance.

Impacts on southern tarplant shall be mitigated by seed collection and re-establishment. The seeds shall be collected and then placed into a suitable mitigation area in the undeveloped or restored portion of the Project site or at an approved adjacent off-site location. The southern tarplant restoration program shall have the requirements listed below.

1. Seed ripeness shall be monitored every two weeks by a qualified Biologist and/or a qualified Seed Collector at the existing southern tarplant locations to determine when the seeds are ready for collection. A qualified Seed Collector shall collect all the seeds from the plants to be impacted when the seeds are ripe. The seeds shall be cleaned and stored by a qualified nursery or institution with appropriate storage facilities.

2. The mitigation site shall be located in dedicated open space on the Project site or at an adjacent off-site mitigation site. The mitigation site shall be prepared for seeding as described in a conceptual restoration plan.

3. The topsoil shall be collected from areas with limited amounts of weeds from the impacted population and re-spread in the selected location, as approved by the qualified Biologist. Approximately 60 to 80 percent of the collected seeds shall be spread in the fall following soil preparation and seed preparation. The remainder of the seeds shall be kept in storage for subsequent seeding, if necessary.

4. The qualified Biologist shall have the full authority to suspend any operation at the site which is, in the qualified Biologist's opinion, not consistent with the restoration program. Any disputes regarding consistency with the restoration program shall be resolved by the Applicant, the qualified Biologist, and the City.

MM 4.6-8 ***Light-footed Clapper Rail, Western Snowy Plover, Belding's Savannah Sparrow.*** Due to temporary impacts to marsh habitat in the lowland by oilfield remediation activities, a focused survey shall be conducted for light-footed clapper rail, western snowy plover, and Belding's savannah sparrow in the spring prior to the proposed impact to determine if these species nest on or immediately adjacent to the Project site. If any of these species are observed, the Applicant shall obtain approvals from the resource agencies (i.e., the U.S. Fish and Wildlife Service [USFWS], the California Department of Fish and Game [CDFG], and the California Coastal Commission) prior to the initiation of grading or any activity that involves the removal/disturbance of marsh habitat, including clearing, grubbing, mowing, disking, trenching, grading, or any other construction-related activity on the Project site. If any of these species would be impacted, mitigation for impacts on these species shall include replacement of marsh habitat as described in MM 4.6-4. In addition, the measures listed below shall be implemented.

1. Marsh vegetation shall be removed after September 15 and before March 1.

2. If marsh vegetation is proposed for removal prior to September 15, a series of pre-construction surveys shall be conducted to ensure that no light-footed clapper rail, western snowy plover, or Belding's savannah sparrows are in the area of impact. If any of these species are observed within 100 feet of the impact areas, the resource agencies shall be contacted to determine if additional consultation and/or minimization measures are required.

3. A Biological Monitor familiar with light-footed clapper rail, western snowy plover, and Belding's savannah sparrow shall be present during all activities involving marsh vegetation removal to ensure that impacts to marsh habitats do not extend beyond the limits of grading and to minimize the likelihood of inadvertent impacts to marsh habitat. In addition, the Biological Monitor shall monitor construction activities in or adjacent to marsh habitat during the light-footed clapper rail, western snowy plover, and Belding's savannah sparrow breeding season (March 1 to September 15).

4. The limits of disturbance during oilfield cleanup shall be clearly marked, and temporary fencing or other appropriate markers shall be placed around any sensitive habitat adjacent to work areas prior to the commencement of any ground-disturbing activity or native vegetation removal. No construction access, parking, or storage of equipment or materials shall be permitted within the marked areas.

MM 4.6-9 ***California Gnatcatcher.*** Prior to initiation of grading or any activity that involves the removal/disturbance of coastal sage scrub habitat, including clearing, grubbing, mowing, disking, trenching, grading or any other construction-related activity on the Project site, the Applicant shall obtain a Biological Opinion from the U.S. Fish and Wildlife Service to authorize incidental take. Mitigation for impacts on the California gnatcatcher shall include restoration and preservation of 82.91 acres of coastal sage scrub habitat and implementation of the Construction Minimization Measures listed in MM 4.6-1.

MM 4.6-10 ***Coastal Cactus Wren.*** Impacts on southern cactus scrub, southern cactus scrub/Encelia scrub, disturbed southern cactus scrub, and disturbed southern cactus scrub/Encelia scrub shall be avoided to the maximum extent practicable. If it is determined by the City of Newport Beach (City) during the final grading plan check that impacts on cactus habitat cannot be avoided, the coastal sage scrub mitigation plan shall incorporate cactus into the planting palette at no less than a 1:1 ratio for impacted cactus areas. The Applicant shall submit the coastal sage scrub mitigation plan to the City to verify that an appropriate amount of cactus has been incorporated into the plan. Mitigation for impacts on the coastal cactus wren shall include replacement of coastal sage scrub habitat and implementation of the Construction Minimization Measures described in MM 4.6-1.

MM 4.6-11 ***Least Bell's Vireo.*** Prior to initiation of grading or any activity that involves the removal/disturbance of riparian habitat, including clearing, grubbing, mowing, disking, trenching, grading or any other construction-related activity on the Project site, the Applicant shall obtain approvals from the resource agencies (i.e., the U.S. Fish and Wildlife Service [USFWS], the California Department of Fish and Game [CDFG], and the California Coastal Commission). Mitigation for impacts on the least Bell's vireo shall include (1) replacement of riparian and

upland scrub and riparian forest habitat and the Construction Minimization Measures described in MM 4.6-5; (2) protection of nests and nesting birds as described in MM 4.6-6; and (3) any additional provisions imposed by the permitting agencies.

MM 4.6-12 ***Burrowing Owl.*** Impacts on known burrowing owl burrows and surrounding non-native grasslands shall be avoided to the maximum extent practicable, as determined by a qualified Biologist in coordination with the City of Newport Beach (City). If impacts on grassland habitat occupied by burrowing owl cannot be avoided, mitigation for impacts on the burrowing owl shall include restoration of native grassland habitat, as described in MM 4.6-2.

Within 30 days prior to any ground-disturbing activity to suitable burrowing owl habitat, a focused pre-construction survey shall be conducted to determine the presence or absence of the burrowing owl on the Project site. If the species is not observed, no further mitigation shall be necessary. Results of the survey shall be provided to the California Department of Fish and Game (CDFG).

If an active burrow is observed during the non-nesting season, a qualified Biologist shall monitor the nest site; when the owl is away from the nest, the Biologist shall exclude the owl from the burrow and then remove the burrow so the owl cannot return.

If an active burrowing owl burrow is observed during the nesting season, the active site shall be protected until nesting activity has ended to ensure compliance with Section 3503.5 of the *California Fish and Game Code.* Peak nesting activity for burrowing owl normally occurs from April to July. To protect the active burrow, the following restrictions to construction activities shall be required until the burrow is no longer active (as determined by a qualified Biologist): (1) clearing limits shall be established within a 300-foot buffer around any active burrow, unless otherwise determined by a qualified Biologist and (2) access and surveying shall be prohibited within 200 feet of any active burrow, unless otherwise determined by a qualified Biologist. Any encroachment into the buffer area around the active burrow shall only be allowed if the Biologist determines that the proposed activity shall not disturb the nest occupants. Construction can proceed when the qualified Biologist has determined that fledglings have left the nest burrow.

MM 4.6-13 ***Raptor Nesting.*** To the maximum extent practicable, habitats that provide potential nest sites for raptors shall be removed from July 1 through January 31. If Project construction activities are initiated during the raptor nesting season (February 1 to June 30), a qualified Biologist shall conduct a nesting raptor survey. Seven days prior to the onset of construction activities, a qualified Biologist shall survey within the limits of the Project disturbance area for the presence of any active raptor nests (common or special status). Any nest found during survey efforts shall be mapped on the construction plans. If no active nests are found, no further mitigation would be required, and survey results shall be provided to the California Department of Fish and Game (CDFG).

If nesting activity is present, the active site shall be protected until nesting activity has ended to ensure compliance with Section 3503.5 of the *California Fish and Game Code.* To protect any nest site, the following restrictions on construction

are required between February 1 and June 30 (or until nests are no longer active, as determined by a qualified Biologist): (1) clearing limits shall be established a minimum of 300 feet in any direction from any occupied nest and (2) access and surveying shall be prohibited within 200 feet of any occupied nest. Any encroachment into the 300- and/or 200-foot buffer area(s) around the known nest shall only be allowed if a qualified Biologist determines that the proposed activity shall not disturb the nest occupants. During the non-nesting season, proposed work activities can occur only if a qualified Biologist has determined that fledglings have left the nest.

Indirect Impacts

Please also refer to the Mitigation Program in Section 4.4, Hydrology and Water Quality.

MM 4.6-14 ***Invasive Exotic Plant Species.*** A qualified Biologist shall monitor any oilfield remediation activities that involve disturbance of native habitat but that would not include removal of the habitat in its entirety. During vegetation removal for remediation activities, the Biological Monitor shall direct the construction crew to remove invasive plant species, including but not limited to pampas grass and giant reed. The Biologist shall also direct the crew on any additional measures that may be needed to eradicate these species, such as removal of roots, painting cut stems with Round-up or other approved herbicide, or follow-up applications of herbicide.

The Applicant shall submit Landscape Plans to the City of Newport Beach (City) for review and approval by a qualified Biologist. The review shall ensure that no invasive, exotic plant species are used in landscaping adjacent to any open space and that suitable substitutes are provided. When the process is complete, the qualified Biologist shall submit a memo approving the Landscape Plans to the City.

MM 4.6-15 ***Human Activity.*** Prior to issuance of a grading permit, the Applicant shall submit a fencing plan to the City of Newport Beach (City) for review to demonstrate that access to the open space within the lowland shall be limited to designated access points that link to existing trails. To best protect habitat from human activity, fence rails shall be placed along the boardwalk trails. Signs shall be posted along the fence indicating that habitat within the lowland is sensitive because it supports Endangered species. The signage shall also provide information on biological resources within the lowland (e.g., coastal sage scrub, marsh, riparian habitats, and special status species). In addition, signage shall require that dogs be leashed in parks, along trails, and in any areas adjacent to open space.

MM 4.6-16 ***Urban Wildlands Interface.*** To educate residents of the responsibilities associated with living at the wildland interface, the Applicant shall develop a wildland interface brochure. The brochure shall be included as part of the purchase/rental/lease agreements for the Project residents. The brochure shall address relevant issues, including the role of natural predators in the wildlands (e.g., coyotes' predation of pets) and how to minimize impacts of humans and domestic pets on native communities and their inhabitants (e.g., outdoor cats' predation of native birds, lizards, and small mammals). The brochure shall also

address invasive species that shall be avoided in landscaping consistent with MM 4.6-14.

4.6.9 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The Project site currently consists of native habitats that are fragmented by roads, heavily invaded by non-native plant species, and coated with dust from traffic on dirt roads. In addition, there is a moderate ongoing level of human activity associated with the oilfield activities. Following oilfield remediation and implementation of the mitigation measures listed in Section 4.6.8, restored native habitat in the open space of the lowland is expected to be of high quality because habitat would consist of larger patches of contiguous habitat dominated by native plant species and would be without the constant layer of dust from traffic on dirt roads that currently occurs on the Project site. Limiting human activity to trails is also expected to increase the habitat quality of the native habitats in the lowland. Therefore, implementation of the Mitigation Program would mitigate biological impacts to a level considered less than significant.

TABLE 4.6-9
SCAG REGIONAL POLICY CONSISTENCY ANALYSIS

Relevant Goals and Policies	Consistency Analysis
Open Space and Habitat OSN-14 Developers and local governments should implement mitigation for open space impacts through the following activities: • Individual projects should either avoid significant impacts to regionally significant open space resources or mitigate the significant impacts through measures consistent with regional open space policies for conserving natural lands, community open space and farmlands. All projects should demonstrate consideration of alternatives that would avoid or reduce impacts to open space. • Individual projects should include into project design, to the maximum extent practicable, mitigation measures and recommended best practices aimed at minimizing or avoiding impacts to natural lands, including, but not limited to FHWA's Critter Crossings, and Ventura County Mitigation Guidelines. • Project level mitigation for RTP's significant cumulative and growth-inducing impacts on open space resources will include but not be limited to the conservation of natural lands, community open space and important farmland through existing programs in the region or through multi-party conservation compacts facilitated by SCAG. • Project sponsors should ensure that transportation systems proposed in the RTP avoid or mitigate significant impacts to natural lands, community open space and important farmland, including cumulative impacts and open space impacts from the growth associated with transportation projects and improvements. • Project sponsors should fully mitigate direct and indirect impacts to open space resulting from implementation of regionally significant projects.	The Project is consistent with this policy. The Project would preserve and enhance approximately 205.53 acres of native habitat. This includes the following natural habitat areas: 82.91 acres of coastal sage scrub and disturbed coastal sage scrub; 70.34 acres of grassland and ruderal; 3.58 acres of grassland depression features; 9.90 acres of marshes; and 38.80 acres of riparian scrub/forest and disturbed riparian scrub/forest. With respect to the *City of Newport Beach General Plan* land use designation for the property, the General Plan requires the "majority of the property be preserved as open space". The proposed Project would provide approximately 252.3 gross acres (approximately 63%) of the Project site for permanent open space (which includes more than the preservation of native habitat); therefore, the Project exceeds this General Plan requirement. The majority of the development has been located in the eastern portion of the Project site adjacent to the developed areas within the cities of Newport Beach and Costa Mesa. The Project has taken into consideration the biological value of the areas along the bluffs facing West Coast Highway and the lowland adjacent to the Santa Ana River. Site design includes preserving larger, intact areas of high value habitat. This EIR analyzes alternatives to the proposed Project (see Section 7.0, Alternatives to the Proposed Project) that consider a reduced development footprint. Wildlife movement opportunities between the Project site and Talbert Marsh, the Santa Ana River, the USACE salt marsh restoration site, and Talbert Park are already constrained by extensive urbanization in the Project vicinity, security fencing around the Project site, and ongoing use of the Project site as an operating oilfield. The incorporation of a Critter Crossing within the Project design, such as those identified by the U.S. Department of Transportation, would not result in wildlife movement opportunities that would connect on-site resources with regionally important off-site open space areas. However, the proposed oilfield remediation activities within the upland and lowland would result in large contiguous areas of revegetated habitat that would remain contiguous with the USACE salt marsh restoration site, the Santa Ana River, and the Talbert Marsh. The revegetation following oilfield remediation activities would result in a higher-quality habitat resulting from invasive species removal, removal of human activity and disturbance related to oilfield operations, and availability of larger blocks of contiguous native habitat in the open space area. The proposed Project has provided adequate mitigation measures for significant biological impacts. The mitigation for biological resources includes the

TABLE 4.6-9 (Continued)
SCAG REGIONAL POLICY CONSISTENCY ANALYSIS

Relevant Goals and Policies	Consistency Analysis
	preservation and restoration of approximately 206 acres of native habitat.
Water WA-13 Developers and local governments should protect and preserve vital land resources—wetlands, groundwater recharge areas, woodlands, riparian corridors, and production lands. The federal government's 'no net loss' wetlands policy should be applied to all of these land resources.	The Project is consistent with this policy. As proposed, the Project would preserve 23.03 acres of the on-site riparian habitats. In addition, 15.77 acres of riparian restoration would take place on the Project site.

TABLE 4.6-10
CITY OF NEWPORT BEACH GENERAL PLAN CONSISTENCY ANALYSIS

City of Newport Beach General Plan Relevant Goals, Policies, and Programs	Consistency Analysis
Land Use Element	
Policies	
LU Policy 1.3: Natural Resources Protect the natural setting that contributes to the character and identity of Newport Beach and the sense of place it provides for its residents and visitors. Preserve open space resources, beaches, harbor, parks, bluffs, preserves, and estuaries as visual, recreational and habitat resources.	The Project is consistent with this policy. The Project would preserve and enhance approximately 206 acres of native habitat. This includes the following natural habitat areas: 82.91 acres of coastal sage scrub and disturbed coastal sage scrub; 70.34 acres of grassland and ruderal; 3.58 acres of grassland depression features; 9.90 acres of marshes; and 38.80 acres of riparian scrub/forest and disturbed riparian scrub/forest.
LU Policy 3.7: Natural Resource or Hazardous Areas Require that new development is located and designed to protect areas with high natural resource value and protect residents and visitors from threats to life or property.	The Project is consistent with this policy. The Project proposes development in areas with lower value habitat in locations adjacent to other development, while preserving the lowland areas that are in close proximity to the Santa Ana River. Please refer to the response to LU Policy 1.3. The Project also provides for enhancement of open space areas through remediation of the oilfields. The "dark sky" program which proposes reduced lighting of HOA and business land uses within 100 feet of the Open Space Preserve and Bluff Park, would enhance the natural resource value by reducing impacts of human intrusion. No permanent night lighting would be permitted within the Open Space Preserve with the exception of safety lighting in the two Oil Consolidation sites. Temporary lighting would be required associated with drilling operations on the Project site which requires some periods of 24-hour activity. Although not associated with biological resources, the Project also protects residents and visitors from threats to life and property. The Project provides for (1) remediation of the oilfields; (2) provision of water quality treatment features that treat runoff not just from the Project but also off-site flows; (3) improved drainage, which would reduce bluff erosion and stabilize the Semeniuk Slough; and (4) incorporate sufficient development setbacks from bluffs and

TABLE 4.6-9 (Continued)
CITY OF NEWPORT BEACH GENERAL PLAN CONSISTENCY ANALYSIS

City of Newport Beach General Plan Relevant Goals, Policies, and Programs	Consistency Analysis
	earthquake faults. Please also refer to Section 4.1, Land Use and Related Planning Programs; Section 4.2, Aesthetics and Visual Resources; and Section 4.3, Geology and Soils.
LU Policy 5.6.4: Conformance with the Natural Environmental Setting Require that sites be planned and buildings designed in consideration of the property's topography, landforms, drainage patterns, natural vegetation, and relationship to the Bay and coastline, maintaining the environmental character that distinguishes Newport Beach.	The Project is consistent with this policy. Where sensitive biological resources would be removed, these resources would be mitigated through both preservation and restoration on the Project site. As noted in the response to LU Policy 1.3, the Project would preserve and enhance approximately 206 acres of native habitat. This includes the following natural habitat areas: 82.91 acres of coastal sage scrub and disturbed coastal sage scrub; 70.34 acres of grassland and ruderal; 3.58 acres of grassland depression features; 9.90 acres of marshes; and 38.80 acres of riparian scrub/forest and disturbed riparian scrub/forest. Please also refer to Section 4.1, Land Use and Related Planning Programs; Section 4.2, Aesthetics and Visual Resources; Section 4.3, Geology and Soils; and Section 4.4, Hydrology and Water Quality.
Land Use Element Goal LU 6.3: Newport Banning Ranch	
Preferably a protected open space amenity, with restored wetlands and habitat areas, as well as active community parklands to serve adjoining neighborhoods.	The Project is consistent with this goal. Although the proposed Project would not implement the Primary Use (Open Space) and instead would allow for the Alternative Use (Residential Village), the Project would restore and preserve approximately 206 acres (51% of the Project site) as open space habitat and include restored wetlands and habitat areas. Additionally, the Project includes approximately 9.5 gross acres of on-site public trails and 51.4 gross acres of parklands.
Land Use Element Goal LU 6.4: Newport Banning Ranch	
If acquisition for open space is not successful, a high-quality residential community with supporting uses that provides revenue to restore and protect wetlands and important habitats.	The Project is consistent with this goal. Please refer to the response to Goal LU 6.3. Please also refer to Section 4.1, Land Use and Related Planning Programs.
Policies	
LU Policy 6.4.1: Alternative Use If not acquired for open space within a time period and pursuant to terms agreed to by the City and property owner, the site may be developed as a residential village containing a mix of housing types, limited supporting retail, visitor accommodations, school, and active community parklands, with a majority of the property preserved as open space. The property owner may pursue entitlement and permits for a residential village during the time allowed for acquisition as open space.	The Project is consistent with this policy. The Project would restore and preserve approximately 206 acres (51% of the Project site) as open space habitat and include restored wetlands and habitat areas. Additionally, the Project includes approximately 9.5 gross acres of on-site public trails and 51.4 gross acres of parklands.

TABLE 4.6-9 (Continued)
CITY OF NEWPORT BEACH GENERAL PLAN CONSISTENCY ANALYSIS

City of Newport Beach General Plan Relevant Goals, Policies, and Programs	Consistency Analysis
LU Policy 6.4.8: Open Space Network and Parklands Establish a framework of trails, community parklands, and natural habitats that provide the framework around which the residential village's uses are developed and interconnect residential districts, the village center, other uses, and open spaces.	The Project is consistent with this policy. Please refer to the response to Policy 6.4.1. Please also refer to Section 4.8, Recreation and Trails.
LU Policy 6.4.11: Comprehensive Site Planning and Design Require the preparation of a master development or specific plan for any development on the Banning Ranch specifying lands to be developed, preserved, and restored, land uses to be permitted, parcelization, roadway and infrastructure improvements, landscape and streetscape improvements, development regulations, architectural design and landscape guidelines, exterior lighting guidelines, processes for oil operations consolidation, habitat preservation and restoration plan, sustainability practices plan, financial implementation, and other appropriate elements.	The Project is consistent with this policy. With respect to biological resources, the Project includes a draft HRP. The HRP would be adopted as part of Project approvals and would serve as the primary implementation program for the conservation, creation, and restoration of a variety of native habitats within the Open Space Preserve. In addition, the HRP describes the implementation procedures, responsible entities, habitat establishment criteria, and monitoring requirements. The proposed Project would provide 252.3 gross acres in an Open Space Preserve for habitat conservation, restoration, and mitigation in the upland and lowland areas as well as the consolidation sites for oil facilities, planting buffer areas, trails, and water quality treatment facilities. Mitigation for impacts to significant biological resources is proposed through on-site restoration and enhancement in conjunction with preservation/dedication of open space. No permanent night lighting would be permitted within the Open Space Preserve with the exception of safety lighting in the two Oil Consolidation sites. Temporary lighting would be required associated with drilling operations on the Project site which requires some periods of 24-hour activity.
Policies	
LU Policy 6.5.3: Habitat and Wetlands Restore and enhance wetlands and wildlife habitats, in accordance with the requirements of state and federal agencies.	The Project is consistent with this policy. Project implementation would require mitigation for significant biological impacts and effects on resources under the jurisdiction of the regulatory authorities (USACE, CDFG, USFWS, and California Coastal Commission). Permits/approvals/agreements required from these regulatory agencies would include mitigation. The mitigation for these resources has been identified in this EIR section and includes the preservation and restoration of approximately 206 acres of native habitat.
LU Policy 6.5.4: Relationship of Development to Environmental Resources Development should be located and designed to preserve and/or mitigate for the loss of wetlands and drainage course habitat. It shall be located to be contiguous and compatible with existing and planned development along its eastern property line, preserving the connectivity of wildlife corridors, and set back from the bluff faces, along which shall be located a linear park to provide public views of	The Project is consistent with this policy. Where sensitive biological resources would be removed, these resources would be mitigated through both preservation and restoration on the Project site. The majority of the development has been located in the eastern portion of the Project site adjacent to the developed areas within the Cities of Newport Beach and Costa Mesa. The Project has taken into consideration the biological value of the areas along the bluffs facing West Coast Highway and the lowland

TABLE 4.6-9 (Continued)
CITY OF NEWPORT BEACH GENERAL PLAN CONSISTENCY ANALYSIS

City of Newport Beach General Plan Relevant Goals, Policies, and Programs	Consistency Analysis
the ocean, wetlands, and surrounding open spaces. Exterior lighting shall be located and designed to minimize light trespass from developed areas onto the bluffs, riparian habitat, arroyos, and lowland habitat areas.	adjacent to the Santa Ana River. All development would be set back a minimum of 60 feet from the bluff top edge. The proposed linear Bluff Park would also separate the Open Space Preserve from proposed development areas. Site design includes preserving larger, intact areas of high value habitat. PDF 4.6-4 identifies that street lights would be used only at key intersections and safety areas. A "dark sky" lighting concept would be implemented within areas of the Project that adjoin habitat areas. Light fixtures within these areas would be designed for "dark sky" applications, and adjusted to direct/reflect light downward and away from adjacent habitat areas. Project zoning regulations and covenants, conditions and restrictions (CC&Rs) would restrict exterior house lighting to minimize light spillage into adjacent habitat areas. No permanent night lighting would be permitted within the Open Space Preserve with the exception of safety lighting in the two Oil Consolidation sites. Temporary lighting would be required associated with drilling operations on the Project site which requires some periods of 24-hour activity.
LU Policy 6.5.6: Coordination with State and Federal Agencies Work with appropriate state and federal agencies to identify wetlands and habitats to be preserved and/or restored and those on which development will be permitted.	The Project is consistent with this policy. A jurisdictional delineation has been prepared for the Project as a part of this EIR. Project implementation would require mitigation for significant biological impacts and effects on resources under the jurisdiction of the regulatory authorities. Permits required for the Project from regulatory agencies include but are not limited to the USACE, the USFWS, the CDFG, the RWQCB, and the California Coastal Commission.
Natural Resources Element	
Natural Resources Element Goal NR 10	
Protection of sensitive and rare terrestrial and marine resources from urban development.	The Project is consistent with this goal. The majority of the development has been located in the eastern portion of the Project site adjacent to the developed areas within the Cities of Newport Beach and Costa Mesa. The Project has taken into consideration the biological value of the areas along the bluffs facing West Coast Highway and the lowland adjacent to the Santa Ana River. Site design includes preserving larger, intact areas of high value habitat. Where sensitive terrestrial resources would be removed, these resources would be mitigated through both preservation and restoration on the Project site. Part of the mitigation for these impacts includes obtaining permits/approvals from regulatory agencies including, but not limited to, the USACE, the USFWS, the CDFG, the RWQCB, and the California Coastal Commission. The Project does not impact marine resources.

TABLE 4.6-9 (Continued)
CITY OF NEWPORT BEACH GENERAL PLAN CONSISTENCY ANALYSIS

City of Newport Beach General Plan Relevant Goals, Policies, and Programs	Consistency Analysis
Policies	
Policy NR 10.1: Terrestrial and Marine Resource Protection Cooperate with the state and federal resource protection agencies and private organizations to protect terrestrial and marine resources.	The Project is consistent with this policy. Please refer to the response to LU Policy 6.5.6 and Goal NR 10.
NR Policy 10.2: Orange County Natural Communities Conservation Plan Comply with the policies contained within the Orange County Natural Communities Conservation Plan.	The Project is consistent with this policy. The Project site is designated as an Existing Use Area within the Central/Coastal NCCP/HCP Subregion. Existing Use areas consist of lands within the larger boundaries of the Central/Coastal Subregion, which are owned by non-participating landowners or public agencies and, as such, are not included in the Reserve System, nor are they covered by the take authorization provided by the NCCP/HCP. Project impacts on listed species and critical habitat would require independent authorization pursuant to the FESA. The Project complies with the policies of the NCCP/HCP.
NR Policy 10.3: Analysis of Environmental Study Areas Require a site-specific survey and analysis prepared by a qualified biologist as a filing requirement for any development permit applications where development would occur within or contiguous to areas identified as ESAs.	The Project is consistent with this policy. The Project site is 1 of 28 areas identified in the *City of Newport Beach General Plan* as an ESA. Biological studies have been prepared in accordance with this policy and have included vegetation and wildlife species surveys, focused surveys for special status plant and wildlife resources, and delineations of regulated drainages/wetland resources according to established protocols (See Section 4.6.3)
NR Policy 10.4: New Development Siting and Design Require that the siting and design of new development, including landscaping and public access, protect sensitive or rare resources against any significant disruption of habitat values.	The Project is consistent with this policy. Please refer to the responses to LU Policy 3.7 and Goal NR 10. Site design includes preserving larger, intact areas of high value habitat. Where sensitive terrestrial resources would be removed, these resources would be mitigated through both on-site preservation and restoration, with approvals/permits required by the regulatory agencies.
NR Policy 10.5: Development in Areas Containing Significant or Rare Biological Resources Limit uses within an area containing any significant or rare biological resources to only those uses that are dependent on such resources, except where application of such a limitation would result in a taking of private property. If application of this policy would likely constitute a taking of private property, then a non-resource-dependent use shall be allowed on the property, provided development is limited to the minimum amount necessary to avoid a taking and the development is consistent with all other applicable resource protection policies. Public access improvements and educational, interpretative and research facilities are considered resource dependent uses.	The Project has limited impacts to those areas of the Project site that contain areas of moderate to high biological value. These areas include coastal sage scrub, disturbed coastal sage scrub, grassland depression features, marshes, riparian scrub/forest and disturbed riparian scrub/forest. In total, the Project has avoided approximately 69% of these resources on site. The majority of the development has been located in the eastern portion of the Project site adjacent to the developed areas within the cities of Newport Beach and Costa Mesa that contain more disturbed and non-native habitat areas. To the degree feasible based on the Applicant's proposed Project, impacts to significant biological resources have been avoided. Where non-resource-dependent uses (e.g., residential development) are proposed that would impact biological resources, implementation of the biological resources Mitigation Program would mitigate significant Project biological impacts to a less than

TABLE 4.6-9 (Continued)
CITY OF NEWPORT BEACH GENERAL PLAN CONSISTENCY ANALYSIS

City of Newport Beach General Plan Relevant Goals, Policies, and Programs	Consistency Analysis
	significant level.
NR Policy 10.6: Use of Buffers Maintain a buffer of sufficient size around significant or rare biological resources, if present, to ensure the protection of these resources. Require the use of native vegetation and prohibit invasive plant species within these buffer areas.	The Project is consistent with this policy. As proposed, a public Bluff Park would be provided around most of the western and southern perimeter of the development areas on the upland mesa. This park would provide a buffer between the areas of high biological value (sage scrub/riparian/ marsh areas) and the residential, resort inn, and mixed use areas of the Project site. Mitigation Measure 4.6-14 requires the Applicant to submit Landscape Plans to the City of Newport Beach for review and approval by a qualified Biologist. The review shall ensure that no invasive, exotic plant species are used in any proposed landscaping adjacent to any open space and that suitable substitutes are proposed. When the process is complete, the qualified Biologist shall submit a memo approving the Landscape Plans to the City of Newport Beach.
NR Policy 10.7: Exterior Lighting Shield and direct exterior lighting away from significant or rare biological resources to minimize impacts to wildlife.	The Project is consistent with this policy. Please refer to the response to LU Policy 6.5.4.
NR Policy 10.9: Development on Banning Ranch Protect the sensitive and rare resources that occur on Banning Ranch. If future development is permitted, require that an assessment be prepared by a qualified biologist that delineates sensitive and rare habitat and wildlife corridors. Require that development be concentrated to protect biological resources and coastal bluffs, and structures designed to not be intrusive on the surrounding landscape. Require the restoration or mitigation of any sensitive or rare habitat areas that are affected by future development.	The Project is consistent with this policy. The Project would preserve and enhance approximately 206 acres of native habitat. This includes the following natural habitat areas: 82.91 acres of coastal sage scrub and disturbed coastal sage scrub; 70.34 acres of grassland and ruderal; 3.58 acres of grassland depression features; 9.90 acres of marshes; and 38.80 acres of riparian scrub/forest and disturbed riparian scrub/forest. Project has avoided approximately 69% of these resources on site. The majority of the development has been located in the eastern portion of the Project site adjacent to the developed areas within the cities of Newport Beach and Costa Mesa, which contain more disturbed and non-native habitat areas. The preservation and restoration areas shall be permanently protected in open space through implementation of a Habitat Restoration Plan and resource agency approvals. All biological studies that have been prepared for the Project have been conducted by qualified biologists.
Natural Resources Element Goal NR 13	
Protection, maintenance, and enhancement of Southern California wetlands.	The Project is consistent with this policy. As proposed, the Project would preserve 23.03 acres of the on-site riparian habitats. In addition, 15.77 acres of riparian restoration would take place on the Project site. The preservation and restoration areas shall be permanently protected in open space through implementation of a Habitat Restoration Plan and resource agency approvals.

TABLE 4.6-9 (Continued)
CITY OF NEWPORT BEACH GENERAL PLAN CONSISTENCY ANALYSIS

City of Newport Beach General Plan Relevant Goals, Policies, and Programs	Consistency Analysis
Policies	
NR Policy 13.1: Wetland Protection Recognize and protect wetlands for their commercial, recreational, water quality, and habitat value.	The Project is consistent with this policy. Please refer to the response to NR 13.
NR Policy 13.2: Wetland Delineation Require a survey and analysis with the delineation of all wetland areas when the initial site survey indicates the presence or potential for wetland species or indicators. Wetland delineations will be conducted in accordance with the definitions of wetland boundaries established by California Department of Fish and Game, and/or United States Fish and Wildlife Service.	The Project is consistent with this policy. Two separate jurisdictional delineations were conducted to determine whether jurisdictional "Waters of the U.S.", including wetlands (if present), and/or "Waters of the State" are present on the Project site. The delineation was conducted by BonTerra Consulting in 2009 and GLA in 2007, with supplemental information from 1998 to 2002 and from 2006 to 2009. The variation between the BonTerra Consulting and GLA delineations were minimal. The GLA assessment has been reviewed and verified by the USACE. This coordinated jurisdictional assessment effort and USACE verification resulted in a refinement of both the BonTerra Consulting and GLA Jurisdictional Delineation Reports, which would serve as the baseline for the extent of jurisdictional resources on the Project site.
Natural Resources Element Goal NR 17	
Maintenance and expansion of designated open space resources.	The Project is consistent with this goal. Under the Residential Village General Plan land use designation, the General Plan requires the majority of the property be preserved as open space. As identified on Table 3-2 in Section 3.0, Project Description, the proposed Project would include approximately 252.3 gross acres (approximately 63%) in the Open Space Preserve. As addressed in Sections 3.0 and 4.6, the Open Space Preserve includes habitat that would be preserved, enhanced, and maintained as a part of the Project.
Policy 17.1: Open Space Protection Protect, conserve, and maintain designated open space areas that define the City's urban form, serve as habitat for many species, and provide recreational opportunities.	The Project is consistent with this policy. Please refer to the response to Goal NR 17.
Policies	
NR Policy 23.7: New Development Design and Siting Design and site new development to minimize the removal of native vegetation, preserve rock outcroppings, and protect coastal resources.	The Project is consistent with this policy. The majority of the development has been located in the eastern portion of the Project site adjacent to the developed areas within the cities of Newport Beach and Costa Mesa. The Project has taken into consideration the biological value of the areas along the bluffs facing West Coast Highway and the lowland area adjacent to the Santa Ana River. Site design includes preserving larger, intact areas of high value habitat. Where sensitive terrestrial resources would be removed, these resources would be mitigated through both preservation and restoration on the Project site.
HRP: Habitat Restoration Plan; NCCP/HCP: Central/Coastal Subregion Natural Communities Conservation Program; FESA: Federal Endangered Species Act; ESA: Environmental Study Area	

TABLE 4.6-11
CALIFORNIA COASTAL ACT CONSISTENCY ANALYSIS

Relevant California Coastal Act Policies	Consistency Analysis
Marine Environment	
Section 30230 Marine resources; maintenance 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.	The Project is consistent with this section. The Project does not impact marine resources.
Section 30231 Biological productivity; water quality 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 waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.	The Project is consistent with this section. As proposed, the Project would preserve 23.03 acres of the on-site riparian habitats. In addition, 15.77 acres of riparian restoration would take place on the Project site. The preservation and restoration areas shall be permanently protected in open space through implementation of a Habitat Restoration Plan and resource agency approvals. As addressed in this EIR section, impacts on biological resources in the area could occur as a result of changes in water quality. Although indirect impacts associated with adverse water quality conditions can result in significant impacts to biological resources, the PDFs and SC identified in Section 4.4, Hydrology and Water Quality, would preclude significant water quality impacts. A WQMP would be prepared during final design consistent with revised guidelines contained in the Orange County DAMP. The Project proposes to ensure all site runoff is treated to a level protecting existing beneficial uses of downstream receiving waters of the Semeniuk Slough and lowland. The Project's Green Building Program Encourages use of natural treatment techniques, LID features, Site-Design BMPs and Source-Control BMPs, to improve water quality discharged into natural water bodies. As addressed in this EIR section, impacts on biological resources in the area could occur as a result of changes in water quality. Although indirect impacts associated with adverse water quality conditions can result in significant impacts to biological resources, the PDFs and SC identified in Section 4.4, Hydrology and Water Quality, would preclude significant water quality impacts.
Section 30233 Diking, filling or dredging; continued movement of sediment and nutrients (a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following: (l) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities; (2) Maintaining existing, or restoring	The Project is consistent with this section. A jurisdictional delineation has been prepared for the Project as a part of this EIR. Project implementation would require mitigation for significant biological impacts and effects on resources under the jurisdiction of the regulatory authorities. Permits required for the Project from regulatory agencies include but are not limited to the USACE, the USFWS, the CDFG, the RWQCB, and the California Coastal Commission.

TABLE 4.6-10 (Cont.)
CALIFORNIA COASTAL ACT CONSISTENCY ANALYSIS

Relevant California Coastal Act Policies	Consistency Analysis
previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps; (3) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities; (4) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines; (5) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas; (6) Restoration purposes; (7) Nature study, aquaculture, or similar resource dependent activities. (b) Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for these purposes to appropriate beaches or into suitable longshore current systems. (c) In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary. Any alteration of coastal wetlands identified by the Department of Fish and Game, including, but not limited to, the 19 coastal wetlands identified in its report entitled, "Acquisition Priorities for the Coastal Wetlands of California", shall be limited to very minor incidental public facilities, restorative measures, nature study, commercial fishing facilities in Bodega Bay, and development in already developed parts of south San Diego Bay, if otherwise in accordance with this division… (d) Erosion control and flood control facilities constructed on watercourses can impede the movement of sediment and nutrients that would otherwise be carried by storm runoff into coastal waters. To facilitate the continued delivery of these sediments to the littoral zone, whenever feasible, the material removed from these facilities may be placed at appropriate points on the shoreline in accordance with other applicable provisions of this division, where feasible mitigation measures have been provided to minimize adverse environmental effects. Aspects that shall be considered before issuing a coastal development permit for these purposes are the method of placement, time of year of placement, and sensitivity of the placement area.	

TABLE 4.6-10 (Cont.)
CALIFORNIA COASTAL ACT CONSISTENCY ANALYSIS

Relevant California Coastal Act Policies	Consistency Analysis
Land Resources	
Section 30240 Environmentally sensitive habitat areas; adjacent developments (a) 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. (b) 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.	The Project is consistent with this section. Section 4.6.4 of this DEIR has identified and mapped the vegetation types and special status species occurrences known to occur within the Project Site. The Project and associated mitigation measures avoid, minimize, and compensate for the placement of development within these areas to prevent a substantial degradation of these areas or significantly disrupt habitat values. The determination of what areas would be regulated as ESHA would be made by the Coastal Commission as part of the CDP process for the Project.
WQMP: Water Quality Management Plan; DAMP: Drainage Area Management Plan; LID: Low Impact Development; BMP: Best Management Practice; ESHA: Environmentally Sensitive Habitat Area; CDP: Coastal Development Permit.	