BIOLOGICAL TECHNICAL REPORT

SUNSET RIDGE PARK PROJECT, NEWPORT BEACH, CALIFORNIA

Prepared for

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SECTION 1.0 INTRODUCTION

This Biological Technical Report has been prepared to support California Environmental Quality Act (CEQA) documentation for the Sunset Ridge Park Project (hereafter referred to as "the Project"). This information has been reported in accordance with accepted scientific and technical standards that are consistent with the requirements of the U.S. Fish and Wildlife Service (USFWS), the California Department of Fish and Game (CDFG), and the Natural Communities Conservation Plan/Habitat Conservation Plan (NCCP/HCP) for the Central/Coastal Subregion.

1.1 PROJECT LOCATION AND DESCRIPTION

The 27.26-acre Project site is located in the western portion of the City of Newport Beach in Orange County, California. In addition to the 27.26-acre Project site, approximately 4.61 acres is proposed to be used for fill sites associated with the export of excess cut material from the park which would be deposited at the adjacent Newport Banning Ranch property. For the purposes of this Biotechnical Report, the area of impact is based on 27.26 acres. Of the 27.26 acres, 13.7 acres are within incorporated City of Newport Beach (City); the remainder of the Project site and export sites are in unincorporated Orange County within the City's Sphere of Influence (Exhibit 1). The Project site is located on the U.S. Geological Survey (USGS) Newport Beach 7.5-minute quadrangle (Exhibit 2). It is located north of the intersection of West Coast Highway (Highway 1) and Superior Avenue. The Project site includes both the site of the proposed park (located on City property) and the access road to the park, the off-site stockpile locations, and the off-site haul route (located within the boundaries of the Newport Banning Ranch property, which is private property).

The Project site is adjacent to residences to the north. There are residences south of West Coast Highway and east of Superior Avenue. Vacant property in oil production operations is located west of the Project site. The park portion of the Project site is terraced, with relatively flat topography on both terraces. Elevations in this area range from approximately 50 feet above mean sea level (msl) on the lower terrace to 75 feet above msl on the upper terrace. Soil types on the Project site are mapped as beaches,[1] Marina loamy sand (2 to 9 percent slopes), Myford sandy loam (0 to 2 percent slopes; 2 to 9 percent slopes; and 9 to 30 percent slopes, eroded), and pits[2] (Exhibit 3). Beaches, Myford sandy loam (2 to 9 percent slopes), and pits are considered hydric by the National Hydric Soils List for Orange County and Part of Western Riverside County, California (USDA NRCS 2009).

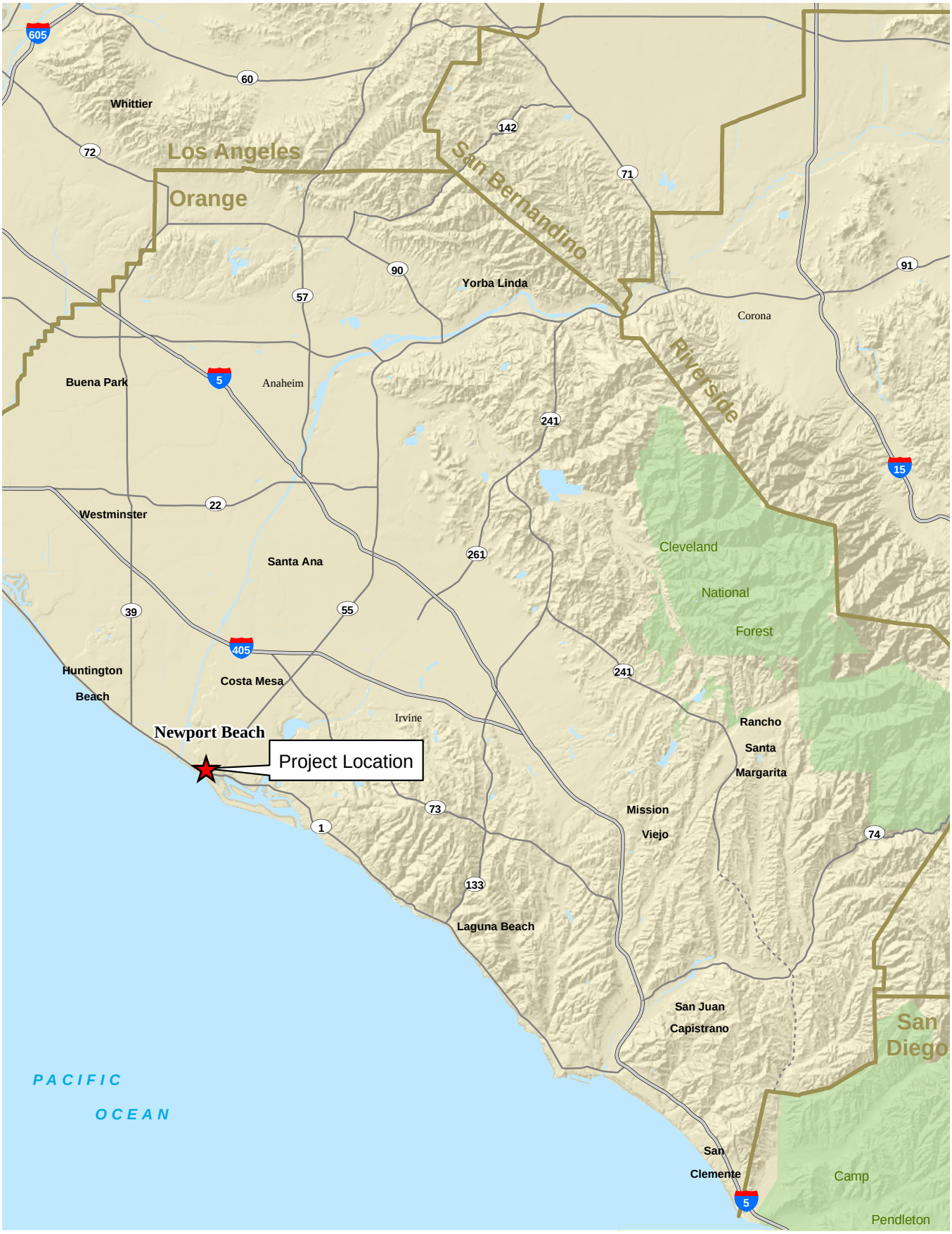
The Project includes the development of the site with active and passive recreational uses and an access road to the park through the Newport Banning Ranch property (Exhibit 4). The access road would be constructed from West Coast Highway to the Project site through the Newport Banning Ranch property. Components of the Project would include the following:

1.1.1 Youth Baseball Field

The Project would include one baseball field generally located in the northwestern portion of the park site. As proposed, the baseball field backstop and associated safety fencing would be below the height of the top of adjacent condominium balcony walls. Passive park uses and meandering pedestrian paths would surround the baseball field.

[1] Historically, "beaches" are sandy, gravelly, or cobbly shores that are washed and rewashed by tidal and wave action.

[2] Open excavations from which soil and underlying material have been removed for construction.



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Regional Location

Exhibit 1

Sunset Ridge Park

N
W E
S

5 2.5 0 5 Miles

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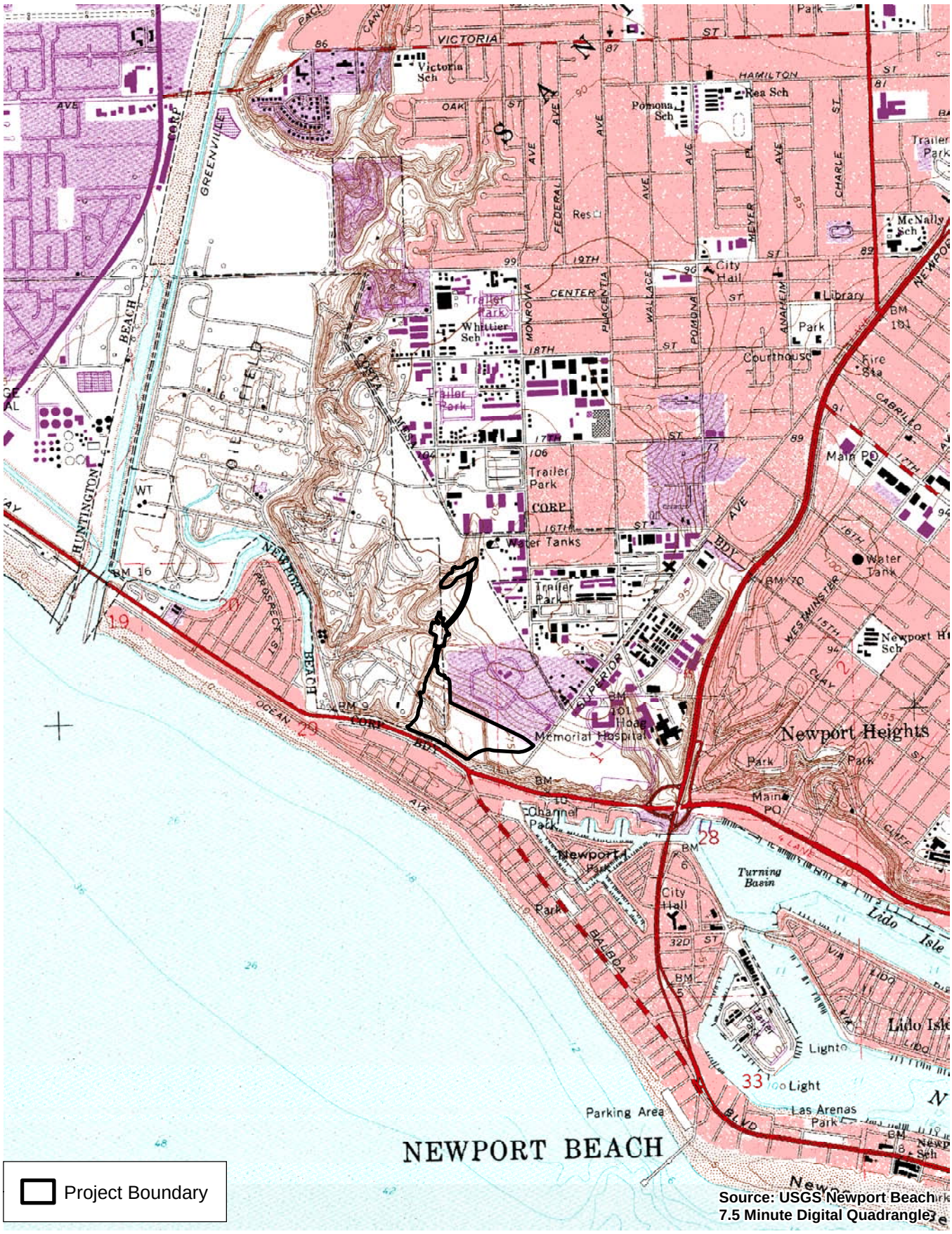

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Local Vicinity

Exhibit 2

Sunset Ridge Park

N
W E
S

2,000 1,000 0 2,000
Feet

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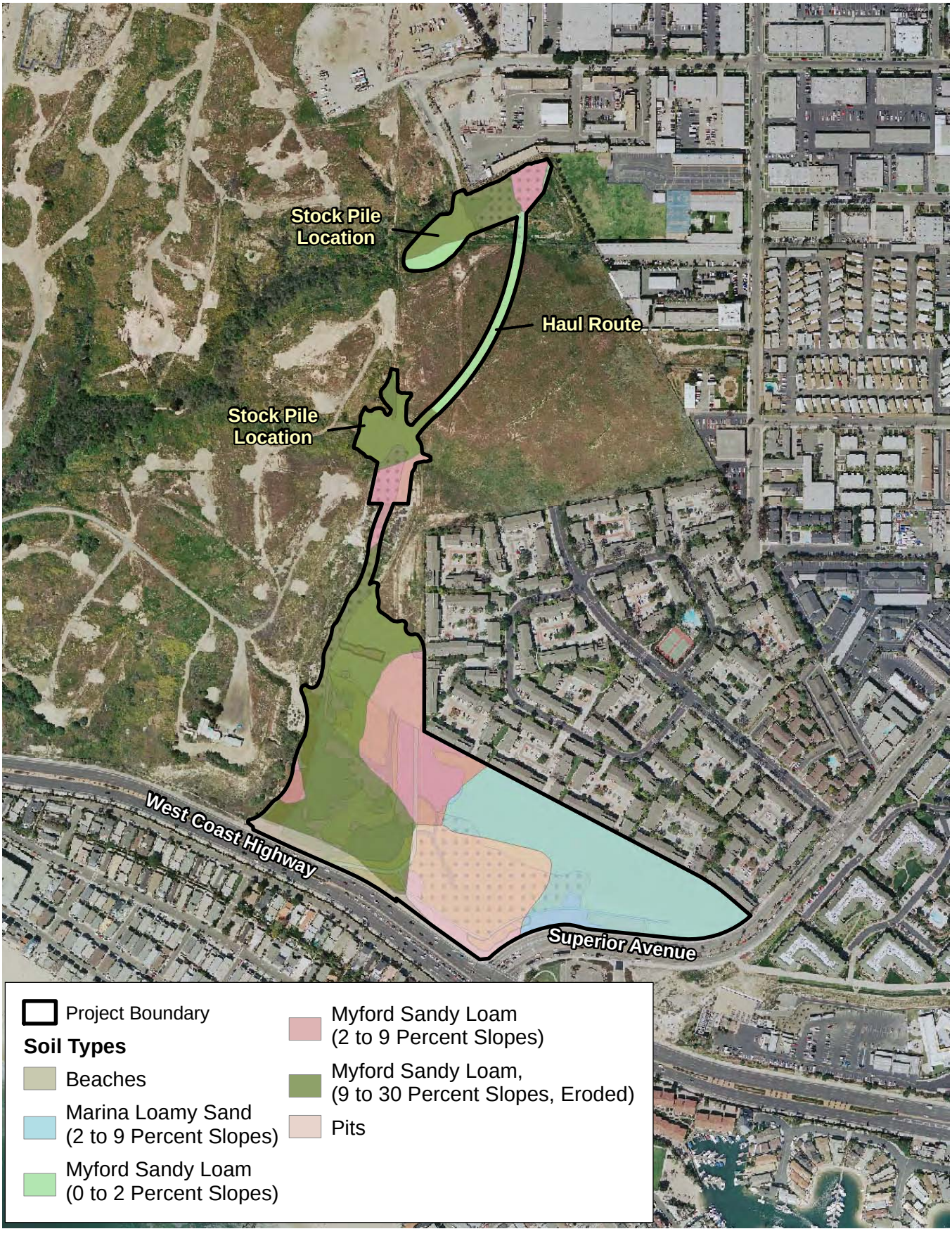

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Soil Types

Exhibit 3

Sunset Ridge Park

N W E S

500 250 0 500 Feet

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1.1.2 Youth Soccer Fields

Two youth soccer fields would be provided in the center of the park area. One soccer field would be located to the east of the baseball field; the second soccer field would be to the south of the baseball field.

1.1.3 Playground Area and Picnic Area

The playground area is proposed on the western portion of the park site directly south of the parking area and southwest of the baseball field. The playground area is proposed to include recreational amenities such as a tot lot. The picnic area would be located to the east of the playground and would include shade structures, picnic tables, and seating areas.

1.1.4 Memorial Garden/Passive Park Area

The memorial garden is a passive park area located on the upper plateau, proposed on the eastern portion of the park site. The memorial garden would be accessed via several points along the meandering pedestrian paths and pedestrian access points along Superior Avenue and West Coast Highway. This area is intended for passive recreational uses.

1.1.5 Overlook Area with Shade Structure

The overlook area is proposed directly west of the memorial garden. This area would have a shade structure and seating with views across the park site and of the ocean, and would be accessed from pedestrian paths located throughout the park.

1.1.6 Pedestrian Access and Walking Paths

The park is proposed to include three pedestrian access areas: one along West Coast Highway and two along Superior Avenue. Within the park, there would be meandering paths with the primary path along the entire perimeter of the park. Paths would lead to the playground, memorial garden, overlook, ball fields, and parking area. Bike racks would also be provided within the park site.

1.1.7 Interface with Adjacent Residences

A retaining wall, ranging in height from approximately four feet to ten feet, would be located to the north of the active park uses and would extend from approximately the parking area in the west to the end of the soccer field in the east. A landscaped berm would also be constructed north of and in the same general location as the retaining wall, and would extend to the northern property line (to the condominium residences to the north of the park). An approximate six-foot-high security fence would be located at the northern terminus of the landscaped berm between the park and the residential uses. Landscaping is proposed along the northern and southern side of the fence. No gated access from the existing residences into the park is proposed.

1.1.8 Restroom Facilities

The restroom facilities would be located on the western portion of the Project site between the parking area and the ball fields.

1.1.9 Parking Area

The parking area is proposed on the northwestern portion of the park site. The parking lot would provide 75 parking spaces and include a designated drop-off area. In addition, up to 22 parallel parking spaces may be provided along the entry access road.

1.1.10 Circulation

A park access road would be constructed from West Coast Highway through the Newport Banning Ranch property to the park. Use of this adjacent property would require an access easement from the Property Owner. The north-south leg of the access road would be constructed as a 28-foot-wide, 2-lane roadway. The east-west leg of the park access road would vary in width from 28 feet to 44 feet, with up to 22 parking spaces proposed along portions of the access road. The road would be gated to limit vehicular access into the park to daylight hours only.

1.1.11 Drainage Improvements

The existing concrete drainage channel located on the Newport Banning Ranch property east of the proposed access road would be placed underground. On-site storm water runoff would continue to discharge at West Coast Highway into the City's storm drain system.

1.1.12 Stock Pile Site

Construction of the proposed Project is planned to occur in a single construction phase lasting between 16 and 18 months. Approximately 130,000 cubic yards (cy) of cut and 96,000 cy of fill may be required during grading activities, with a net export of approximately 34,000 cy. The Project proposes that all or a portion of the exported soil would go to the adjacent Newport Banning Ranch property in 2 separate locations northwest of the proposed park (Exhibit 3). This export material would be utilized as engineered fill requiring the removal of vegetation. The potential biological effects of this export are assumed in this analysis for the Sunset Ridge Park.

1.1.13 Haul Road

An approximate 40-foot-wide haul road used to transport the export material from the park site to the Newport Banning Ranch property would be used (Exhibit 3). This road would extend from the northern loop of the proposed Sunset Ridge Park access road to the two engineered fill sites.

1.2 REGIONAL ENVIRONMENTAL SETTING

The Project is located along the Southern California coast near the mouth of the Santa Ana River to the northwest and Newport Bay to the southeast. The Project site includes a portion of the Newport Banning Ranch property. Newport Banning Ranch, including the Project site, is one of 28 areas identified in the *City of Newport Beach General Plan* as an Environmental Study Area (ESA). ESAs are undeveloped areas supporting natural habitats that may be capable of supporting sensitive biological resources and therefore require further study to determine if these areas include sensitive resources. Those portions of the ESAs within the Coastal Zone that contain sensitive or rare species are referred to as Environmentally Sensitive Habitat Areas, as defined by the California Coastal Act. The Project site is within the California Coastal Commission's coastal zone.

The County of Orange—in conjunction with the State and federal resource agencies, local jurisdictions, utility companies, the Transportation Corridor Agencies, and major private

Source: EPT Design

Conceptual Site Plan

Exhibit 4

Sunset Ridge Park

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landowners—approved the NCCP/HCP for the Central/Coastal Subregion on July 10, 1996, through the execution of the Central/Coastal Subregion NCCP/HCP Implementation Agreement (NCCP/HCP IA). This plan is intended to ensure the long-term survival of the coastal California gnatcatcher (*Polioptila californica californica*) 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 NCCP/HCP area and is within an area designated as "Existing Use" (Exhibit 5). The City of Newport Beach is a participating jurisdiction and a signatory to the NCCP/HCP IA.

1.2.1 Climate

Southern California experiences a Mediterranean climate, characterized by mild, rainy winters and hot, dry summers. There can also be dramatic differences in rainfall from year to year. Consequently, the vegetation types consist of drought-tolerant, woody shrubs and trees and annual, fall-sprouting grasses.

The temperature is moderated by the coastal influence of the Pacific Ocean, which creates mild conditions through most of the year. The stable atmosphere creates cloudless conditions, giving the dry summer subtropical climate many days of sunshine (Ritter 2006).

The most distinguishing characteristic of a Mediterranean climate is its seasonal precipitation. In Southern California, precipitation is characterized by brief, intense storms between November and March. It is not unusual for a majority of the annual precipitation to fall during a few storms over a close span of time. Rainfall patterns are subject to extreme variations from year to year and longer term wet and dry cycles. Average annual rainfall for the City of Newport Beach is 10.85 inches (U.S. Bureau of Labor Statistics et al. 2009).

SECTION 2.0 SURVEY METHODOLOGIES

The data in this report is derived from general and focused surveys conducted by BonTerra Consulting in 2008–2009 of all or portions of the Project 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. Sources reviewed include the California Native Plant Society's (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS 2009) and the CDFG's California Natural Diversity Database (CNDDB) (CDFG 2009a) and a compendium of special status species published by the USFWS and the CDFG. Database searches included the USGS Seal Beach, Newport Beach, Tustin, and Laguna Beach quadrangles.

2.1 VEGETATION MAPPING AND GENERAL PLANT SURVEYS

BonTerra Consulting Senior Ecologist Stacie Tennant and Ecologist/Regulatory Technician Allison Rudalevige mapped vegetation and conducted a general plant survey on December 19, 2008. The purpose of the survey was to describe the vegetation 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 Attachment A. Photographs of the Project site are included in Attachment B.

Plant species were identified in the field or collected for later identification. Plants were identified using taxonomic keys in Hickman (1993), Munz (1974), Abrams (1923, 1944, 1951), and Abrams and Ferris (1960). Taxonomy follows Hickman (1993) or current scientific journals for scientific and common names. Vegetation types were classified based on the County of Orange

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Natural Communities Conservation Plan/ Habitat Conservation Plan (NCCP/HCP)

Exhibit 5

Sunset Ridge Park

N W E S

500 250 0 500 Feet

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Habitat Classification System Natural Resources Geographic Information System (GIS) Project (Gray and Bramlet 1992).

2.2 GENERAL WILDLIFE SURVEYS

Vegetation mapping and general wildlife surveys were conducted concurrently. General observations of wildlife were also noted during focused surveys in 2009. All wildlife species observed were recorded in field notes and are listed in Table A-2 of Attachment A.

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 included searching for and identifying diagnostic signs, including scat, footprints, scratch-outs, dust bowls, burrows, and trails. Taxonomy and nomenclature for wildlife generally follows Stebbins (2003) for amphibians and reptiles, American Ornithologists Union (2008) for birds, and Baker et al. (2003) for mammals.

2.3 FOCUSED SURVEYS

Focused survey reports (documenting the surveys described below) are included in their entirety for reference as Attachments C and D.

2.3.1 Special Status Plant Species

Spring botanical surveys were conducted on the Project site on April 27 and June 30, 2009, by BonTerra Consulting Senior Botanist Sandy Leatherman. Prior to the surveys, a known reference population of the focal species was visited to ensure timing of the survey was appropriate. During the surveys, all areas of the Project site containing native habitats potentially suitable for special status plant species having the potential to occur on the Project site, as determined in previous biological surveys, were sampled using meandering transects. Field notes were taken during the surveys. The location of each special status plant population found on the Project site was mapped using a Global Positioning System (GPS) unit. Voucher specimens were collected and deposited in the Rancho Santa Ana Botanic Garden or at the University of California, Riverside to ensure accuracy in the identification.

2.3.2 Burrowing Owl

Focused surveys for burrowing owl followed the *Burrowing Owl Survey Protocol and Mitigation Guidelines* prepared by the California Burrowing Owl Consortium (CBOC) (CBOC 1993). These guidelines outline a survey methodology that includes a habitat assessment, a focused burrow survey, and four focused owl surveys. The habitat assessment for burrowing owl (*Athene cunicularia*) was conducted during the general survey.

A survey for wintering owls was conducted in 2009. The burrow survey was conducted by Ms. Rudalevige on January 22, 2009. Focused owl surveys were conducted within suitable habitat on the Project site on January 27 and 29, 2009, by Ms. Rudalevige, and on January 28 and 30, 2009, by BonTerra Consulting Ecologist Lindsay Messett. The burrow survey and focused surveys were conducted by walking in transects to ensure 100 percent visual coverage of suitable habitat on the Project site. The focused surveys were conducted either in the morning from one hour before sunrise to two hours after sunrise, or in the evening from two hours before sunset to one hour after sunset. The first two focused surveys were conducted in the morning, and the last two visits were conducted in the evening.

Focused surveys for this species were repeated during the 2009 breeding season following the same methodology. Focused owl surveys were conducted by Ms. Rudalevige on May 11 and 13, 2009 and by Ms. Messett on May 20, 21, and 26, 2009. The results of these surveys are also included in Attachment D.

2.3.3 Coastal California Gnatcatcher

Focused surveys for the coastal California gnatcatcher followed the USFWS presence/absence survey protocol guidelines (USFWS 1997a). Surveys were conducted on the Project site on April 1, 8, 16, and 28 and May 7 and 15, 2009, by Ms. Tennant and Ms. Messett. A total of six surveys at least one week apart were conducted during the breeding season (between March 15 and June 30).These surveys covered all suitable habitats (e.g., coastal sage scrub) on the Project site. Tape recordings of coastal California gnatcatcher songs and other vocalizations were played in appropriate habitat to solicit a response. The locations where gnatcatchers were first observed were plotted on an aerial photograph. The number of birds (individuals or pairs) was noted at each sighting. Data regarding general habitat characteristics for each gnatcatcher was also collected. The surveys were conducted during appropriate weather conditions, generally between dawn and noon. The results of these surveys are included in Attachment D.

2.4 JURISDICTIONAL DELINEATION

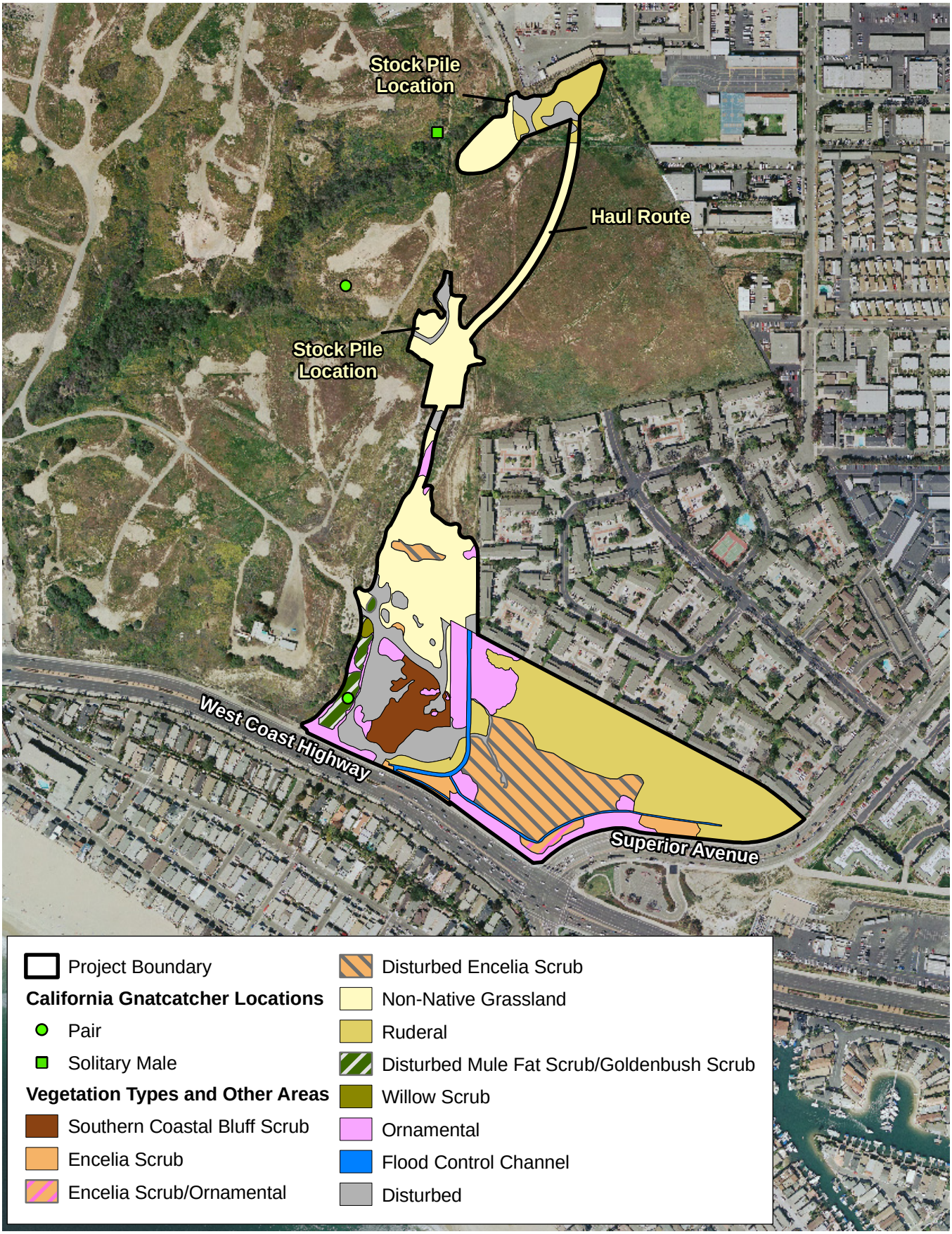
A jurisdictional delineation was conducted to determine whether jurisdictional "Waters of the U.S.", including wetlands (if present), and/or "Waters of the State" are present on the Project site. The delineation was conducted on January 26 and June 25, 2009, by BonTerra Consulting Regulatory Specialist Gary Medeiros and Ms. Rudalevige. U.S. Army Corps of Engineers (USACE) jurisdictional boundaries are based on the ordinary high water mark(s) (OHWM) on a site. The presence or absence of wetlands within or adjacent to the OHWM is verified through the determination of the presence of hydrologic conditions, hydrophytic vegetation, and hydric soils pursuant to the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008). CDFG jurisdiction is determined based on presence of bed, bank or stream, pond, or lake. CDFG jurisdictional limits are generally identified from the top of a stream bank to the top of a stream bank or to the outer limits of the adjacent marsh vegetation (outer dripline), whichever is greater. The Regional Water Quality Control Board (RWQCB) jurisdiction extends to all "Waters of the State" and to all "Waters of the U.S.", including wetlands (isolated and non isolated). It should be noted that the RWQCB shares the USACE jurisdiction unless isolated conditions are present. The results of the delineation are included in Attachment E.

SECTION 3.0 EXISTING BIOLOGICAL RESOURCES

This section describes the biological resources that occur or potentially occur on the Project site. Vegetation types, wildlife populations and movement patterns, special status vegetation types, and special status plant and wildlife species that are either known to occur or to potentially occur on the Project site are discussed below.

3.1 VEGETATION TYPES

Eleven vegetation types and other areas occur on the Project site (Exhibit 6; Table 1). Vegetation types and other areas mapped on the Project site include southern coastal bluff scrub, Encelia scrub, Encelia scrub/ornamental, disturbed Encelia scrub, non-native grassland, ruderal, disturbed mule fat scrub/goldenbush scrub, willow scrub, ornamental, flood control channel, and disturbed.



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Biological Resources

Exhibit 6

Sunset Ridge Park

N
W E
S

500 250 0 500 Feet

BonTerra CONSULTING

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TABLE 1
VEGETATION TYPES AND OTHER AREAS ON THE PROJECT SITE

Vegetation Types and Other Areas	Existing (Acres)
Southern Coastal Bluff Scrub	1.15
Encelia Scrub	0.53
Encelia Scrub/Ornamental	0.21
Disturbed Encelia Scrub	3.64
Non-Native Grassland	6.58
Ruderal	7.75
Disturbed Mule Fat Scrub/Goldenbush Scrub	0.48
Willow Scrub	0.06
Ornamental	3.19
Flood Control Channel	0.49
Disturbed	3.18
Total	**27.26**

3.1.1 Southern Coastal Bluff Scrub

Southern coastal bluff scrub occurs in the central portion of the Project site. This vegetation type is dominated by bush sunflower (*Encelia californica*) and California buckwheat (*Eriogonum fasciculatum*) with scattered bladderpod (*Isomeris arborea*), coastal cholla (*Opuntia prolifera*), and coastal prickly pear (*Opuntia littoralis*).

3.1.2 Encelia Scrub

Encelia scrub occurs in patches along the southeast edge of the Project site on the slope above West Coast Highway and Superior Avenue and in a patch in the center of the proposed access road right-of-way of the Project site. This vegetation type is dominated by bush sunflower with scattered California buckwheat.

3.1.3 Encelia Scrub/Ornamental

Encelia scrub/ornamental occurs in a patch at the southern end of the Project site on the slope above the intersection of West Coast Highway and Superior Avenue and in the proposed access road right-of-way of the Project site. This vegetation type is dominated by bush sunflower intermixed with ornamental species including saltbush (*Atriplex* sp.), Sellow's pampas grass (*Cortaderia selloana*), and hottentot fig (*Carpobrotus edulis*).

3.1.4 Disturbed Encelia Scrub

Disturbed encelia scrub occurs over the southern half of the lower terrace in the park portion of the Project site. This vegetation type is dominated by bush sunflower and deerweed (*Lotus scoparius*). The understory consists of non-native grasses and forbs including black mustard (*Brassica nigra*), foxtail chess (*Bromus madritensis* ssp. *rubens)*, Russian thistle (*Salsola tragus*), and tocalote (*Centaurea melitensis*). Shrub cover of this area is approximately 50 to 60 percent overall. It is disturbed due to the presence of high density non-native weeds and periodic mowing.

3.1.5 Non-Native Grassland

Non-native grassland occurs in the northern part of the access road right-of-way of the Project site and in the stockpile locations and haul route. This vegetation type is dominated by a mix of non-native species including ripgut grass (*Bromus diandrus*), foxtail chess, black mustard, and tocalote.

3.1.6 Ruderal

Ruderal areas occur throughout the Project site and are dominated by black mustard and tocalote. They consist of areas that have been previously disturbed and now consist primarily of non-native vegetation that is well adapted to disturbed conditions and high nitrogen soils. The ruderal vegetation that covers most of the park portion of the Project site appears to be periodically mowed.

3.1.7 Disturbed Mule Fat Scrub/Goldenbush Scrub

Disturbed mule fat scrub/goldenbush scrub is located at the southwestern edge of the Project site. This vegetation type is co-dominated by mule fat (*Baccharis salicifolia*) and goldenbush (*Isocoma menziesii*). There is an understory of hottentot fig. It is disturbed because it contains a substantial component of non-native invasive species including hottentot fig, Sellow's pampas grass, and myoporum (*Myoporum laetum*).

3.1.8 Willow Scrub

Willow Scrub occurs along the western boundary of the Project site. This vegetation type is dominated by arroyo willow (*Salix lasiolepis*). Mule fat and an understory of hottentot fig are also present.

3.1.9 Ornamental

Ornamental areas are landscaped plantings of non-native species and occur throughout the Project site. This vegetation type is dominated by a mix of ornamental species including hottentot fig, Sellow's pampas grass, myoporum (*Myoporum laetum*), and castor bean (*Ricinus communis*).

3.1.10 Flood Control Channel

A flood control channel bisects the Project site. It is a concrete trapezoidal channel that conveys storm flows from a high-density condominium development located to the north of the Project site and surface flows picked up by concrete V-ditches on site. This flood control channel then conveys storm flows to the storm drain system located within West Coast Highway, which flows into the Semeniuk Slough and ultimately into the Santa Ana River near the Santa Ana River mouth and the Pacific Ocean. No surface water was observed within the concrete channel during the surveys.

3.1.11 Disturbed

Disturbed areas consist of unvegetated portions of the Project site, including dirt roads and cleared areas.

3.2 WILDLIFE

Wildlife species observed or expected to occur on the Project site are discussed below.

3.2.1 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. There is only one drainage feature on the Project site: a concrete trapezoidal flood control channel that conveys storm flows from the Newport Crest Condominium development located immediately adjacent to and northeast of the Project site. This channel does not carry a permanent flow of water and no low flows or vegetation was present in this channel during the surveys which limits the potential for fish species to occur. Therefore, no fish species are expected to occur on the Project site.

3.2.2 Amphibians

Unlike terrestrial species, amphibians require moisture for at least a portion of their life cycle and many require standing or flowing water for reproduction. These species are able to 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.

There is only one drainage feature on the Project site (the concrete trapezoidal flood control channel) in which water is expected to occur only following storm events. This channel does not carry a permanent flow of water and no low flows or vegetation was present in this channel during the surveys which limits the potential for amphibian species to occur. Therefore, no amphibian species are expected to occur on the Project site.

3.2.3 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 in most habitats 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*).

3.2.4 Birds

A variety of bird species are expected to be residents on the Project site, using 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 will then migrate north in the spring to breed during the summer.

Sage scrub vegetation types on the Project site support an avifauna that is comprised of species adapted to the dense, low vegetation that typifies these areas. Although large numbers of individuals can often be found inhabiting this vegetation type, species diversity is usually low to moderate, depending on the season. A relatively high number of the birds breeding in the sage scrub vegetation type are permanent residents. Within the Project site, Anna's hummingbird (*Calypte anna*), Bewick's wren (*Thryomanes bewickii*), California towhee (*Pipilo*

crissalis), and house finch (*Carpodacus mexicanus*) were found to be common. During winter months, the scrub vegetation type provides habitat for a number of species that migrate from breeding grounds further north. The white-crowned sparrow is expected to be common winter resident of this habitat on the Project site.

Grassland vegetation types support fewer bird species than most other vegetation types on the Project site. However, these areas do provide important habitat for a number of species. Mourning dove (*Zenaida macroura*), black phoebe (*Sayornis nigricans*), American crow (*Corvus brachyrhynchos*), northern mockingbird (*Mimus polyglottos*), and lesser goldfinch (*Carduelis psaltria)* are year-long residents in these areas. Migratory birds expected to use this vegetation type on the Project site either during the summer or winters include Say's phoebe (*Sayornis saya*) and western kingbird (*Tyrannus verticalis*).

The riparian vegetation types (disturbed mule fat scrub/goldenbush scrub and willow scrub) on the Project site provide resources for a variety of resident and migratory birds. Resident species observed or expected to occur include the song sparrow (*Melospiza melodia*) and bushtit (*Psaltriparus minimus*). Summer residents observed or expected to occur on the Project site include the ash-throated flycatcher (*Myiarchus cinerascens*), black-headed grosbeak (*Pheucticus melanocephalus*), and Bullock's oriole (*Icterus bullockii*).

The turkey vulture (*Cathartes aura*), a scavenger, was observed on the Project site. Raptors (birds of prey) observed on the Project site include Cooper's hawk (*Accipiter cooperii*), red-shouldered hawk (*Buteo lineatus*), red-tailed hawk (*Buteo jamaicensis*), and American kestrel (*Falco sparverius*).

3.2.5 Mammals

Rodents and other small mammals are expected to be among the most diverse and widespread mammals within the Project site. Deer mouse (*Peromyscus maniculatus*) is a common rodent that is expected throughout the Project site. California pocket mouse (*Chaetodipus californicus*) and cactus mouse (*Peromyscus eremicus*) prefer sage scrub vegetation types. California mouse (*Peromyscus californicus*) and woodrat (*Neotoma* sp.) typically occur in woodlands and riparian vegetation types. The open grassy areas on the Project site provide suitable habitat for the western harvest mouse (*Reithrodontomys megalotis*), Botta's pocket gopher (*Thomomys bottae*), and California ground squirrel (*Spermophilus beecheyi*).

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, depending on the species, either hibernate or migrate. Several bat species may occur on the Project site, including big brown bat (*Eptesicus fuscus*), California myotis (*Myotis californicus*), and western pipistrelle (*Pipistrellus hesperus*).

Carnivores are expected to be common throughout the Project site and include many predatory and omnivorous species. The coyote (*Canis latrans*) was observed and is expected to occur throughout the Project site. Other carnivores observed or expected on the Project site include the Virginia opossum (*Didelphis virginiana*) and common raccoon (*Procyon lotor*).

Open grassland vegetation types and the understory of scrub vegetation types provide excellent foraging habitat for herbivorous mammals. The desert cottontail (*Sylvilagus audubonii*), a common herbivore was observed during the field surveys on the Project site.

3.2.6 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, especially the larger and more mobile mammals, will not likely persist over time in fragmented or isolated habitat areas because they prohibit the infusion of new individuals and genetic information (MacArthur and Wilson 1967; Soule 1987; Harris and Gallagher 1989; Bennett 1990). Corridors mitigate the effects of this fragmentation by (1) allowing animals to move between remaining habitats, thereby permitting depleted populations to be replenished and promoting genetic exchange; (2) providing escape routes from fire, predators and human disturbances, thus reducing the risk that catastrophic events, such as fire or disease, will result in population or local species extinction; and (3) serving as travel routes for individual animals as they move in their home ranges in search of food, water, mates, and other necessary resources (Noss 1983; Farhig and Merriam 1985; Simberloff and Cox 1987; Harris and Gallagher 1989).

Wildlife movement activities usually fall into one of three movement categories: (1) dispersal (e.g., juvenile animals from natal areas or individuals extending range distributions); (2) seasonal migration; and (3) movements related to home range activities (e.g., foraging for food or water, defending territories, or searching for mates, breeding areas, or cover). A number of terms such as "wildlife corridor", "travel route", "habitat linkage", and "wildlife crossing" have been used in various wildlife movement studies to refer to areas where wildlife move from one area to another. To clarify the meaning of these terms and to facilitate the discussion on wildlife movement in this analysis, these terms are defined as follows:

- ***Travel route* –** a landscape feature (such as a ridgeline, drainage, canyon, or riparian strip) within a larger natural habitat area that is used frequently by animals to facilitate movement and to provide access to necessary resources (e.g., water, food, cover, den sites). The travel route is generally preferred because it provides the least amount of topographic resistance in moving from one area to another. It contains adequate food, water, and/or cover while moving among habitat areas and provides a relatively direct link between target habitat areas.

- ***Wildlife corridor* –** a piece of habitat, usually linear in nature, that connects two or more habitat patches and would otherwise be fragmented or isolated from one another. Wildlife corridors are usually bound by urban land areas or other areas unsuitable for wildlife. The corridor generally contains suitable cover, food, and/or water to support species and to facilitate movement while in the corridor. Larger, landscape-level corridors often referred to as "habitat or landscape linkages", can provide both transitory and resident habitat for a variety of species.

- ***Wildlife crossing* –** a small, narrow area, relatively short in length and generally constricted in nature that allows wildlife to pass under or through an obstacle or barrier that otherwise hinders or prevents movement. Crossings typically are man made and include culverts, underpasses, drainage pipes, and tunnels to provide access across or under roads, highways, pipelines, or other physical obstacles. These often represent "choke points" along a movement corridor and may impede wildlife movement and increase the risk of predation.

In a large open space area where there are few or no man-made or naturally occurring physical constraints to wildlife movement, wildlife corridors (as defined above) may not yet exist. Given

an open space area that is both large enough to maintain viable populations of species and to provide a variety of travel routes (e.g., canyons, ridgelines, trails, riverbeds, and others), wildlife will use these "local" routes while searching for food, water, shelter, and mates and will not need to cross into other large open space areas. Based on their size, location, vegetative composition, and availability of food, some of these movement areas (e.g., large drainages and canyons) are used for longer lengths of time and serve as source areas for food, water, and cover, particularly for small- and medium-sized animals. This is especially true if the travel route is within a larger open space area. However, once open space areas become constrained and/or fragmented as a result of urban development or construction of physical obstacles (e.g., roads and highways), the remaining landscape features or travel routes that connect the larger open space areas become corridors as long as they provide adequate space, cover, food, and water and do not contain obstacles or distractions (e.g., man-made noise, lighting) that would generally hinder wildlife movement.

The Project site is located within an area that is largely constrained by urban development. The Project site is contiguous to urban land uses on the north, south, and east with currently undeveloped property (oil fields) to the west. The site is located at the southern end of a large area of open space at the mouth of the Santa Ana River. 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 of the Reserves. Birds, bats, and urban-tolerant wildlife species (e.g., coyotes, opossums, and racoons) would be able to move through the urban areas from the Reserves to the Project site. 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. Regional movement through the Project site would not occur because much of the Project site borders existing development. However, local wildlife movement may occur between the open space in Newport Banning Ranch and the Project site.

3.3 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 are recognized by federal and State resource agencies, as well as private conservation organizations. 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, which results, in most cases, from habitat loss. Tables 2 and 3 (provided later in this report) summarize special status plant and wildlife species known to occur in the Project vicinity, including information on the status, likelihood for occurrence, and definitions for the various status designations. In addition, 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. These resources have been defined by federal, State, and local government conservation programs. 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 2009); the CNDDB (CDFG 2009a); various USFWS Federal Register notices regarding listing status of plant species; and the CDFG's List of Special Vascular Plants, Bryophytes, and Lichens (CDFG 2009c).

- ***Wildlife –*** California Wildlife Habitat Relationships Database System (CDFG BDB 2009); the CNDDB (CDFG 2009a); various USFWS Federal Register notices regarding listing status of wildlife species; and the CDFG's List of Special Animals (CDFG 2009b).

- ***Habitats –*** the CNDDB (CDFG 2009a).

3.3.1 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. The presence of any federally Threatened or Endangered species on a Project site generally imposes severe constraints on development, particularly if development would result in "take" of the species or its habitat. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct. "Harm" in this sense can include any disturbance of species' habitats during any portion of its life history.

Proposed species or **Candidate species** are those officially proposed by the USFWS for addition to the federal Threatened and Endangered species list. Because proposed species may soon be listed as Threatened or Endangered, these species could become listed prior to or during implementation of a proposed development project.

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 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. "Rare species" only applies to California native plants. State Threatened and Endangered species are fully protected against take unless an incidental take permit is obtained from the wildlife agencies.

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. This designation does not provide legal protection but signifies that these species are recognized as special status by the CDFG. 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 for various reasons, such as the mountain lion (*Puma* [*Felis*] *concolor*) and white-tailed kite (*Elanus leucurus*). Fully Protected species may not be taken or possessed at any time. California Protected species include those species that may not be taken or possessed at any time except under special permit from the CDFG issued pursuant to Sections 650 and 670.7 of the *California Code of Regulations,* or Section 2081 of the *California Fish and Game Code.*

A species that is considered a **Special Animal** is one that is tracked 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 or the species is declining in the region.

The CNPS is a local resource conservation organization that has developed an inventory of California's special status plant species (CNPS 2009). This inventory is a summary of information on the distribution, rarity, and endangerment of California's vascular plants, and is

comprised of four lists. The CNPS presumes that **List 1A** plant species are extinct in California because they have not been seen in the wild for many years. The CNPS considers **List 1B** plants as Rare, Threatened, or Endangered throughout their range. **List 2** plant species are considered Rare, Threatened, or Endangered in California but more common in other states. **List 3** is a "review" list of plants for which more information is needed, and **List 4** is a "watch" list of plants that have limited distribution. The CNPS also assigns a threat code extension to the List categories (CNPS 2009). An extension of **.1** is assigned to plants that are considered to be "seriously endangered" in California with over 80 percent of the occurrences threatened or with a high degree and immediacy of threat. Extension **.2** indicates the plant is "fairly endangered" in California (between 20 and 80 percent of the occurrences threatened). Extension **.3** is assigned to plants that are considered "not very endangered" in California with less than 20 percent of occurrences threatened. The absence of a threat code extension indicates plants lacking any threat information. The CNPS List categories and threat code extensions are summarized in Table 2.

3.3.2 Special Status Vegetation Types

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 the State and federal resource agencies, academic institutions, and various conservation groups (such as the CNPS). Determination of the sensitivity level is based on the Nature Conservancy Heritage Program Status Ranks that rank both species and vegetation types on a global and statewide basis according to the number and size of remaining occurrences and recognized threats (e.g., proposed developments, habitat degradation, and non-native species invasion). Special status vegetation types on the Project site are shown on Exhibit 6. All of the vegetation types below are considered a high priority for preservation.

Coastal Sage Scrub

Coastal sage scrub has declined by approximately 70 to 90 percent in its historic range in California (Noss and Peters 1995). It has largely been lost to land use changes in Southern California basins and foothills. It also supports many special status plant and wildlife species. The ecological function in Southern California's remaining coastal sage scrub is threatened by habitat fragmentation, invasive non-native species, livestock grazing, off-highway vehicles, altered fire regime, and perhaps air pollution (O'Leary 1995). Coastal sage scrub vegetation types on the Project site that meet the definition above include southern coastal bluff scrub and areas of Encelia scrub that are adjacent to other areas of high to moderate biological value. These special status vegetation types total 1.42 acres. The 3.64 acres of disturbed Encelia scrub is regularly mowed for fuel modification and weed abatement purposes and contains a high percentage of non-native weeds; therefore, it is not considered special status. In addition, two small areas of scrub (0.26 acre of Encelia scrub and .21 acre of Encelia scrub/ornamental) are not considered special status because of their fragmentation from high value areas, presence of invasive non-native species, maintenance of concrete v-ditch under the shrubs, presence of trash, and proximity to high foot/bicycle, and vehicle traffic.

Riparian

Riparian vegetation occurs along perennial or intermittent drainages that typically are subject to seasonal flooding. Most natural riparian vegetation in Southern California has been lost or degraded by land use conversions to agricultural, urban, and recreational uses; channelization for flood control; sand and gravel mining; ground water pumping; water impoundments; and various other changes. It is estimated that as much as 95 to 97 percent of historic riparian habitats in Southern California have been lost (Faber et al. 1989). Riparian habitats are biologically productive as well as diverse, and are the exclusive habitat of several special status

species. Thus, several riparian vegetation types are ranked as special status by the CDFG. The riparian vegetation type that is considered "rare and worthy of consideration" and occurs on the Project site is is willow scrub.

Riparian habitats are often under the jurisdiction of the USACE and/or the CDFG due to their association with wetlands, "Waters of the U.S.", or streambeds. However, it should be noted that the riparian habitats described above are not equivalent to delineated areas subject to the jurisdiction of the CDFG and/or the USACE. Only the portion of these habitats associated within a discernable streambed and/or adjacent wetlands that meet certain criteria are within the jurisdiction of the USACE and/or the CDFG. According to the USACE, areas considered to be a "wetland" (and subject to the regulatory jurisdiction of the USACE) must exhibit hydrology, hydric soils, and hydrophilic vegetation that meet federal criteria, as indicated in the *1987 Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008). The CDFG jurisdiction generally includes the streambed and the canopy of associated riparian vegetation.

A jurisdictional delineation to determine the extent of USACE and CDFG jurisdictional areas on the Project site was conducted by BonTerra Consulting in 2009 (Attachment F). Based on field observations and data collection, no non-wetland "Waters of the U.S." and no resources under the jurisdiction of the RWQCB occur on the Project site. In addition, no wetlands defined by the California Coastal Act occur on the Project site. A total of 0.44 acre of CDFG jurisdiction occurs on the Project site.

3.3.3 Special Status Plants

Special status plant species that are known to occur in the vicinity of the Project site are discussed below and summarized in Table 2. A brief description of special status plant species that are known from the region are listed below alphabetically according to their scientific name. The potential for a special status plant species to occur is often dependent on the present soil type. Soil types for the proposed Project site are mapped as beaches, Marina loamy sand, Myford sandy loam, and pits (Exhibit 3).

TABLE 2
SPECIAL STATUS PLANT SPECIES KNOWN TO OCCUR
IN THE PROJECT VICINITY

Species	Status			Results
	USFWS	CDFG	CNPS	
Abronia villosa var. *aurita* chaparral sand-verbena	–	–	1B.1	Limited suitable habitat; not observed during focused surveys.
Aphanisma blitoides aphanisma	–	–	1B.2	Limited suitable habitat; not observed during focused surveys.
Astragalus pycnostachyus var. *lanosissimus* Ventura marsh milk-vetch	FE	SE	1B.1	No suitable habitat; not observed during focused surveys.
Atriplex coulteri Coulter's saltbush	–	–	1B.2	Limited suitable habitat; not observed during focused surveys.
Atriplex pacifica South Coast saltscale	–	–	1B.2	Limited suitable habitat; not observed during focused surveys.

TABLE 2 (Continued)
SPECIAL STATUS PLANT SPECIES KNOWN TO OCCUR IN THE PROJECT VICINITY

Species	Status			Results
	USFWS	CDFG	CNPS	
Atriplex parishii Parish's brittlescale	–	–	1B.1	Limited suitable habitat; not observed during focused surveys.
Atriplex serenana var. *davidsonii* Davidson's saltscale	–	–	1B.2	Limited suitable habitat; not observed during focused surveys.
Bergerocactus emoryi golden-spined cereus	–	–	2.2	Outside known range; not observed during focused surveys.
Calandrinia maritima seaside calandrinia	–	–	4.2	Limited suitable habitat; not observed during focused surveys.
Calochortus catalinae Catalina mariposa lily	–	–	4.2	Limited suitable habitat; not observed during focused surveys.
Calochortus weedii var. *intermedius* intermediate mariposa lily	–	–	1B.2	Limited suitable habitat; not observed during focused surveys.
Calystegia sepium ssp. *binghamiae* Santa Barbara morning-glory	–	–	1A	No suitable habitat; not observed during focused surveys.
Centromadia [*Hemizonia*] *parryi* ssp. *australis* southern tarplant	–	–	1B.1	Suitable habitat; not 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.
Cordylanthus maritimus ssp. *maritimus* salt marsh bird's-beak	FE	SE	1B.2	No suitable habitat; not observed during focused surveys.
Dichondra occidentalis western dichondra	–	–	4.2	Limited suitable habitat; not observed during focused surveys.
Dudleya blochmaniae ssp. *blochmaniae* Blochman's dudleya	–	–	1B.1	No 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	No suitable habitat; not observed during focused surveys.
Dudleya stolonifera Laguna Beach dudleya	FT	ST	1B.1	No suitable habitat; not observed during focused surveys.
Euphorbia misera cliff spurge	–	–	2.2	Limited suitable habitat; not observed during focused surveys.
Harpagonella palmeri Palmer's grapplinghook	–	–	4.2	No suitable habitat; not observed during focused surveys.
Helianthus nuttallii ssp. *parishii* Los Angeles sunflower	–	–	1A	No suitable habitat; not observed during focused surveys.
Hordeum intercedens vernal barley	–	–	3.2	Limited suitable habitat; 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	Limited suitable habitat; not observed during focused surveys.

TABLE 2 (Continued)
SPECIAL STATUS PLANT SPECIES KNOWN TO OCCUR IN THE PROJECT VICINITY

Species	Status			Results
	USFWS	CDFG	CNPS	
Juncus acutus ssp. *leopoldii* southwestern spiny rush	–	–	4.2	No suitable habitat; not observed during focused surveys.
Lasthenia glabrata ssp. *coulteri* Coulter's goldfields	–	–	1B.1	Limited suitable habitat; not observed during focused surveys.
Lepidium virginicum var. *robinsonii* Robinson's pepper-grass	–	–	1B.2	Limited 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	Suitable habitat; observed during focused surveys.
Nama stenocarpum mud nama	–	–	2.2	No suitable habitat; not observed during focused surveys.
Nasturtium gambelii Gambel's water cress	FE	ST	1B.1	No suitable habitat; not observed during focused surveys.
Navarretia prostrata prostrate vernal pool navarretia	–	–	1B.1	No 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	Limited suitable habitat; not observed during focused surveys.
Perideridia gairdneri ssp. *gairdneri* Gairdner's yampah	–	–	4.2	No suitable habitat; not observed during focused surveys.
Quercus dumosa Nuttall's scrub oak	–	–	1B.1	No suitable habitat; not observed during focused surveys.
Sagittaria sanfordii Sanford's arrowhead	–	–	1B.2	No suitable habitat; not observed during focused surveys.
Senecio aphanactis chaparral ragwort	–	–	2.2	No suitable habitat; not observed during focused surveys.
Suada esteroa estuary seablite	–	–	1B.2	No suitable habitat; not observed during focused surveys.
Symphyotrichum defoliatum San Bernardino aster	–	–	1B.2	No 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)

Chaparral Sand-Verbena (Abronia villosa var. aurita)

Chaparral sand-verbena is a CNPS List 1B.1 species. It typically blooms between January and September (CNPS 2009). This annual herb occurs in sandy places, primarily in coastal sage scrub and chaparral habitats (Munz 1974), and is found between sea level and approximately 5,250 feet above msl (Baldwin et al. 2002). In California, this species is known from Orange, Riverside, San Bernardino, and San Diego Counties (CNPS 2009). In the vicinity of the Project site, this species has historically been reported near the Santa Ana River approximately 1.5 to 2 miles inland (CDFG 2009a, 1932 record). Limited suitable habitat is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, chaparral sand-verbena is not expected to occur on the Project site.

Aphanisma (Aphanisma blitoides)

Aphanisma is a CNPS List 1B.2 species. It typically blooms between March and June (CNPS 2009). This annual is found on the Channel Islands and from coastal Los Angeles County south to Baja California, Mexico (Hickman 1993; Munz 1974). It is associated with sandy soils in coastal shrublands and bluffs (Hickman 1993). In the vicinity of the Project site, aphanisma has been historically reported from along coastal bluffs less than a mile northeast of the Project site (Jepson Flora Project 2008, last accessed June 2009; 1932 record) and more recently from Newport Back Bay. Limited suitable habitat is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009 and this species was not observed on the Project site. Therefore, aphanisma is not expected to occur on the Project site.

Ventura Marsh Milk-Vetch (Astragalus pycnostachyus var. lanosissimus)

Ventura marsh milk-vetch is a federally and State-listed Endangered species and a CNPS List 1B.1 species. It is known from coastal marshes and seeps (Hickman 1993). This variety was last seen in 1967 and is presumed extinct (Hickman 1993). In the vicinity of the Project site, Ventura marsh milk-vetch has been historically reported from “La Bolsa” (assumed by the CNDDB to be Bolsa Bay) (CDFG 2009a; 1882 record). No suitable habitat for this species is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, Ventura marsh milk-vetch is not expected to occur on the Project site.

Coulter’s Saltbush (Atriplex coulteri)

Coulter’s saltbush is a CNPS List 1B.2 species. It typically blooms between March and October (CNPS 2009). This perennial herb occurs in alkaline or clay soils in coastal shrubland openings at elevations below 165 feet above msl (Hickman 1993). This species is perhaps native only to the southern coast of California (Hickman 1993). It is found in Los Angeles, Orange, Riverside, Santa Barbara, San Bernardino, and San Diego Counties; the Channel Islands; and Baja California, Mexico (CNPS 2009). In the vicinity of the Project site, this species has been historically reported from Newport Bay (1932 record) and more recently from the San Joaquin Freshwater Marsh (CDFG 2009a) and the Newport Beach City Hall and Park Development Plan project site (LSA 2009). Limited suitable habitat is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the site. Therefore, Coulter’s saltbush is not expected to occur on the Project site.

South Coast Saltscale (Atriplex pacifica)

South coast saltscale is a CNPS List 1B.2 species. It typically blooms between March and October (CNPS 2009). This annual herb occurs in coastal sage scrub on coastal bluffs (Munz 1974). It is found on the Channel Islands and from coastal Los Angeles County south to Baja California, Mexico (Hickman 1993; Munz 1974). In the vicinity of the Project site, south coast saltscale has been historically reported from Newport Bay (1932 record) and from Laguna Beach and Crystal Cove State Park (CDFG 2009a). Limited suitable habitat is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009 and this species was not observed on the Project site. Therefore, south coast saltscale is not expected to occur on the Project site.

Parish's Brittlescale (Atriplex parishii)

Parish's brittlescale is a CNPS List 1B.1 species. It typically blooms between June and October (CNPS 2009). This annual herb occurs in alkaline or clay soils in flats or grasslands (Hickman 1993; Munz 1974). It is found in cismontane Southern California to the edge of deserts to the Central Valley of California (Munz 1974). In the vicinity of the Project site, Parish's brittlescale has been historically reported from Laguna Beach (CDFG 2009a; 1907 record). Limited suitable habitat is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, Parish's brittlescale is not expected to occur on the Project site.

Davidson's Saltscale (Atriplex serenana var. davidsonii)

Davidson's saltscale is a CNPS List 1B.2 species. It typically blooms between April and October (CNPS 2009). This annual herb occurs along coastal bluffs, the interior margins of coastal salt marsh, or in alkali wetlands and playa habitats. It occurs from Los Angeles County to Balboa and Laguna Beach (Munz 1974). In the vicinity of the Project site, Davidson's saltscale has been historically reported along the Santa Ana River approximately 2 miles inland (1932 record) and in the San Joaquin Freshwater Marsh (CDFG 2009a). Limited suitable habitat is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, Davidson's saltscale is not expected to occur on the Project site.

Golden-Spined Cereus (Bergerocactus emoryi)

Golden-spined cereus is a CNPS List 2.2 species. It typically blooms between May and June (CNPS 2009). This species occurs in sandy soils on dry hills along the coast (Hickman 1993). It occurs from San Diego County to Baja California, Mexico and on the southern Channel Islands (Hickman 1993). The Project site is outside the known range for this species. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, golden-spined cereus is not expected to occur on the Project site.

Seaside Calandrinia (Calandrinia maritima)

Seaside calandrinia is a CNPS List 4.2 species. It typically blooms between March and June, and uncommonly in February and August (CNPS 2009). This annual herb occurs in sandy soils and sea bluffs (Hickman 1993). It occurs along the southern coast to Baja California, Mexico and on the Channel Islands (Hickman 1993). In the vicinity of the Project site, this species has been reported from Laguna Beach (Jepson Flora Project 2008, last accessed June 2009). Limited suitable habitat is present on the Project site. Focused surveys for special status plant

species were conducted in spring/summer 2009 and this species was not observed on the Project site. Therefore, seaside calandrinia is not expected to occur on the Project site.

Catalina Mariposa Lily (Calochortus catalinae)

Catalina mariposa lily is a CNPS List 4.2 species. This mariposa lily typically blooms between March and June and uncommonly blooms in February (CNPS 2009). This lily is a bulbous perennial herb found in chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland. It is known to occur in Los Angeles, Orange, Santa Barbara, San Diego, San Luis Obispo, and Ventura Counties and on Santa Rosa, Santa Catalina, and Santa Cruz Islands (CNPS 2009). This species is present throughout Orange County. Limited suitable habitat is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, Catalina mariposa lily is not expected to occur on the Project site.

Intermediate Mariposa Lily (Calochortus weedii var. intermedius)

Intermediate mariposa lily is a CNPS List 1B.2 species. It typically blooms between May and July (CNPS 2009). This perennial bulbiferous herb occurs in coastal sage scrub and grassland on dry, rocky, open slopes below approximately 2,000 feet above msl (Munz 1974; Hickman 1993). In California, this species is known from Los Angeles, Orange, and Riverside Counties (CNPS 2009). In the vicinity of the Project site, this species has been reported from Laguna Canyon (Jepson Flora Project 2008, last accessed June 2009). Limited suitable habitat is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, intermediate mariposa lily is not expected to occur on the Project site.

Santa Barbara Morning-Glory (Calystegia sepium ssp. binghamiae)

Santa Barbara morning-glory is a CNPS List 1A species. It typically blooms between April and May (CNPS 2009). This subspecies occurs in coastal marshes of the northern and central south coast (Hickman 1993). In the vicinity of the Project site, this species has been historically reported from Bolsa Chica (CDFG 2009a; 1932 record). No suitable habitat for this species is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, Santa Barbara morning-glory is not expected to occur on the Project site.

Southern Tarplant (Centromadia [Hemizonia] parryi ssp. australis)

Southern tarplant is a CNPS List 1B.1 species. It typically blooms between May and November (CNPS 2009). This annual herb occurs in saline, seasonally moist grasslands (Hickman 1993). It historically occurred from Santa Barbara County south to Baja California, Mexico. Many historical occurrences and occurrences in Orange County have been extirpated (CNPS 2009). In the vicinity of the Project site, this species has been reported northwest of the Project site (Jepson Flora Project 2008, last accessed June 2009). Suitable habitat is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, southern tarplant is not expected to occur on the Project site.

Orcutt's Pincushion (Chaenactis glabriuscula var. orcuttiana)

Orcutt's pincushion is a CNPS List 1B.1 species. It typically blooms between January and August (CNPS 2009). This annual herb occurs in coastal dunes and bluffs below 330 feet above msl (Hickman 1993). It occurs along the southern coast of California to Baja California, Mexico.

In the vicinity of the Project site, Orcutt's pincushion has been historically reported from Laguna Beach (CDFG 2009a; 1924 record). No suitable habitat for this species is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, Orcutt's pincushion is not expected to occur on the Project site.

San Fernando Valley Spineflower (Chorizanthe parryi var. fernandina)

San Fernando Valley spineflower is a USFWS federal Candidate for listing, a State-listed Endangered species, and a CNPS List 1B.1 species. This annual herb grows in sandy soils in coastal sage scrub in relatively undisturbed habitat types. Typically blooming from April through June, it is currently known from two occurrences: one in Los Angeles County and one in Ventura County (CNPS 2009). This species was historically present in "coastal plains near Santa Ana" (Jepson Flora Project 2008, last accessed June 2009). Suitable habitat is not present due to the Project site's disturbed nature. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, San Fernando Valley spineflower is not expected to occur on the site.

Summer Holly (Comarostaphylis diversifolia ssp. diversifolia)

Summer holly is a CNPS List 1B.2 species. It typically blooms between April and June (CNPS 2009). This evergreen shrub occurs in chaparral along the Southern California coast and peninsular ranges to northern Baja California, Mexico (Hickman 1993). In the vicinity of the Project site, summer holly has been reported from upper Hobo Canyon (Jepson Flora Project 2008, last accessed June 2009). No suitable habitat for this species is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, summer holly is not expected to occur on the Project site.

Salt Marsh Bird's-Beak (Cordylanthus maritimus ssp. maritimus)

Salt marsh bird's-beak is a federally and State-listed Endangered species and a CNPS List 1B.2 species. It typically blooms between May and October (Munz 1974). This annual herb occurs in coastal salt marshes below approximately 30 feet above msl (Hickman 1993). In California, this species is known from Los Angeles, Orange, Santa Barbara, San Bernardino, San Diego, San Luis Obispo, and Ventura Counties (CNPS 2009). In the vicinity of the Project site, this species has been reported from Newport Back Bay (Jepson Flora Project 2008, last accessed June 2009). No suitable habitat for this species is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, salt marsh bird's-beak is not expected to occur on the Project site.

Western Dichondra (Dichondra occidentalis)

Western dichondra is a CNPS List 4.2 species. It typically blooms between March and July, and uncommonly from January (CNPS 2009). This perennial herb occurs on slopes and headlands, generally growing under shrubs (Hickman 1993). It occurs along the southern coast to Baja California, Mexico and on the southern Channel Islands (Hickman 1993). In the vicinity of the Project site, this species has been reported from Pelican Hill (Jepson Flora Project 2008, last accessed June 2009). Limited suitable habitat is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the site. Therefore, western dichondra is not expected to occur on the Project site.

Blochman's Dudleya (Dudleya blochmaniae ssp. blochmaniae)

Blochman's dudleya is a CNPS List 1B.1 species. It typically blooms between April and June (CNPS 2009). This perennial herb occurs on open, rocky slopes, often in serpentine or clay-dominated soils (Hickman 1993). It is found from the southern central coast south to northern Baja California, Mexico (Hickman 1993). In the vicinity of the Project site, this species has been reported from the Dana Point Headlands (Jepson Flora Project 2008, last accessed June 2009). No suitable habitat for this species is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, Blochman's dudleya is not expected to occur on the Project site.

Santa Monica Dudleya (Dudleya cymosa ssp. ovatifolia)

Santa Monica dudleya is a federally listed Threatened species and a CNPS List 1B.2 species. It typically blooms between March and June (CNPS 2009). This perennial herb occurs on shaded, rocky slopes in the Santa Monica Mountains (Hickman 1993) and in the Santa Ana Mountains (Jepson Flora Project 2008, last accessed June 2009). No suitable habitat for this species is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, Santa Monica dudleya is not expected to occur on the Project site.

Many-stemmed Dudleya (Dudleya multicaulis)

Many-stemmed dudleya is a CNPS List 1B.2 species. It typically blooms between April and July (CNPS 2009). This perennial herb, from a corm, occurs in heavy, often clayey, soils in coastal sage scrub, chaparral, and coastal plains at elevations between sea level and 2,000 feet above msl (Hickman 1993; Munz 1974). It occurs in Los Angeles, Orange, Riverside, San Bernardino, and San Diego counties (CNPS 2009). In the vicinity of the Project site, this species has been reported from Newport Back Bay (Jepson Flora Project 2008, last accessed June 2009). No suitable habitat for this species is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, many-stemmed dudleya is not expected to occur on the Project site.

Laguna Beach Dudleya (Dudleya stolonifera)

Laguna Beach dudleya is a federally and State-listed Threatened species and a CNPS List 1B.1 species. It typically blooms between May and July (CNPS 2009). This fleshy perennial occurs on north-facing cliffs and outcrops in the San Joaquin Hills of Orange County, California (Hickman 1993). In the vicinity of the Project site, this species has been reported from Laguna Canyon (Jepson Flora Project 2008, last accessed June 2009). No suitable habitat for this species is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, Laguna Beach dudleya is not expected to occur on the Project site.

Cliff Spurge (Euphorbia misera)

Cliff spurge is a CNPS List 2.2 species. It typically blooms between December and August (CNPS 2009). This deciduous shrub occurs on rocky slopes and coastal bluffs in coastal sage scrub. It occurs from Corona del Mar to Baja California, Mexico, on the southern Channel Islands, and in the western Sonoran Desert (Hickman 1993). In the vicinity of the Project site, this species has been reported from Corona del Mar State Beach (Jepson Flora Project 2008, last accessed June 2009). Limited suitable habitat is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this

species was not observed on the Project site. Therefore, cliff spurge is not expected to occur on the Project site.

Palmer's Grapplinghook (Harpagonella palmeri)

Palmer's grapplinghook is a CNPS List 4.2 species. It typically blooms between March and May (CNPS 2009). This annual herb occurs in dry sites in chaparral, coastal scrub, and grassland (Hickman 1993). This species occurs along the southern coast and peninsular ranges, in Arizona, and in northwestern Mexico (Hickman 1993). In the vicinity of the Project site, this species has been reported from Crystal Cove State Park (Jepson Flora Project 2008, last accessed June 2009). No suitable habitat for this species is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, Palmer's grapplinghook is not expected to occur on the Project site.

Los Angeles Sunflower (Helianthus nuttallii ssp. parishii)

Los Angeles Sunflower is a CNPS List 1A species; List 1A species are presumed to be extinct. It typically blooms between August and October (CNPS 2009). This perennial herb occurs in marshes. It historically occurred in Los Angeles, San Bernardino, and Orange Counties (Munz 1974). This subspecies was reported from Newport Lagoon in 1933 (Jepson Flora Project 2007) and was last seen in 1937 (Hickman 1993). No suitable habitat for this species is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, Los Angeles sunflower is not expected to occur on the Project site.

Vernal Barley (Hordeum intercedens)

Vernal barley is a CNPS List 3.2 species. It typically blooms between March and June (CNPS 2009). This annual barley occurs in vernal pools; dry, saline streambeds; and alkaline flats (Hickman 1993). It occurs in southwestern California to Baja California, Mexico (Hickman 1993). In the vicinity of the Project site, this species has been reported near MacArthur Boulevard and West Coast Highway (Jepson Flora Project 2008, last accessed June 2009). Limited suitable habitat is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, vernal barley is not expected to occur on the Project site.

Mesa Horkelia (Horkelia cuneata ssp. puberula)

Mesa horkelia is a CNPS List 1B.1 species. It typically blooms between February and July (CNPS 2009). This perennial herb occurs in dry, sandy chaparral from approximately 250 to 2,300 feet above msl (Munz 1974; Hickman 1993). In California, this species is known from Los Angeles, Orange, Santa Barbara, San Bernardino, San Luis Obispo, and Ventura Counties, and possibly Riverside and San Diego Counties (CNPS 2009). In the vicinity of the Project site, this species has been reported from Pelican Hill (CDFG 2009a). No suitable habitat for this species is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, mesa horkelia is not expected to occur on the Project site.

Decumbent Goldenbush (Isocoma menziesii var. decumbens)

Decumbent goldenbush is a CNPS List 1B.2 species. It typically blooms between April and November (CNPS 2009). This shrub occurs in sandy, often disturbed areas and in chaparral and coastal scrub. This species occurs in Orange and San Diego Counties and in Baja

California, Mexico. This species is historically known in the Corona del Mar area. Limited suitable habitat is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, decumbent goldenbush is not expected to occur on the Project site.

Southwestern Spiny Rush (Juncus acutus ssp. leopoldii)

Southwestern spiny rush is a CNPS List 4.2 species. It typically blooms between May and June (CNPS 2009). This perennial occurs in moist saline places like salt marshes and alkaline seeps (Hickman 1993). In California, it occurs along the central and southern coast, in the Sonoran Desert, and on the southern Channel Islands (Hickman 1993). This subspecies also occurs in Arizona; Baja California, Mexico; South America; and South Africa (Hickman 1993). In the vicinity of the Project site, this species has been reported from Upper Newport Bay (Jepson Flora Project 2008, last accessed June 2009) and is known to occur on adjacent sites. No suitable habitat for this species is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, southwestern spiny rush is not expected to occur on the Project site.

Coulter's Goldfields (Lasthenia glabrata ssp. coulteri)

Coulter's goldfields is a CNPS List 1B.1 species. It typically blooms between February and June (CNPS 2009). This annual herb occurs in salt marshes, vernal pools, and wet places at elevations below approximately 3,300 feet above msl (Munz 1974; Hickman 1993). It is found from southern San Diego County to Kern County and on Santa Rosa Island (Munz 1974). In the vicinity of the Project site, this species has been reported from Costa Mesa (CDFG 2009a). Limited suitable habitat is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, Coulter's goldfields is not expected to occur on the Project site.

Robinson's Pepper-Grass (Lepidium virginicum var. robinsonii)

Robinson's pepper-grass is a CNPS List 1B.2 species. It typically blooms between January and July (CNPS 2009). This annual herb occurs in dry soils in shrublands of southwestern California and Baja California, Mexico (Hickman 1993). In the vicinity of the Project site, this species has been reported from the Santa Ana Mountains (Jepson Flora Project 2008, last accessed June 2009). Limited suitable habitat is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009 and this species was not observed on the Project site. Therefore, Robinson's pepper-grass is not expected to occur on the Project site.

Santa Catalina Island Desert-thorn (Lycium brevipes var. hassei)

Santa Catalina Island desert-thorn is a CNPS List 1B.1 species. It typically blooms in June (CNPS 2009). This perennial shrub is presumed extinct (Hickman 1993). It occurred on Santa Catalina and San Clemente Islands on coastal bluffs and slopes (Hickman 1993). Reports of this variety from the southern coast are considered to be cultivated plants (Hickman 1993). The Project site is outside the known range of this species. Therefore, Santa Catalina Island desert-thorn is not expected to occur on the Project site.

California box-thorn (Lycium californicum)

California box-thorn is a CNPS List 4.2 species. It typically blooms between March and August, though uncommonly from December (CNPS 2009). This perennial shrub occurs on coastal bluffs in coastal sage scrub (Hickman 1993). It is found along the southern coast and on the Channel Islands south to Baja California, Mexico (Hickman 1993). In the vicinity of the Project

site, this species has been reported from the San Joaquin Marsh (Jepson Flora Project 2008, last accessed June 2009). Suitable habitat is present on the Project site, and this species is known to occur directly adjacent to the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was observed in the southern coastal bluff scrub on the Project site.

Mud Nama (Nama stenocarpum)

Mud nama is a CNPS List 2.2 species. It typically blooms between January and July (CNPS 2009). This species occurs in intermittently wet areas in the southwestern U.S. from Los Angeles County to San Diego County, east to Texas, and in Mexico (Hickman 1993). This species has been reported just northwest of the Project site (CDFG 2009a) in the Fairview Regional Park area. No suitable habitat for this species is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the site. Therefore, mud nama is not expected to occur on the Project site.

Gambel's water cress (Nasturtium [Rorippa] gambelii)

Gambel's water cress is a federally listed Endangered species, a State-listed Threatened species, and a CNPS List 1B.1 species. It typically blooms between April and October (CNPS 2009). This perennial herb occurs in marshes, streambanks, and lake margins (Hickman 1993). It is found from the southern central coast south to Mexico (Hickman 1993). In the vicinity of the Project site, this species has been historically reported from the Huntington Beach Area (CDFG 2009a; 1908 record). No suitable habitat for this species is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, Gambel's water cress is not expected to occur on the Project site.

Prostrate Vernal Pool Navarretia (Navarretia prostrata)

Prostrate vernal pool navarretia is a CNPS List 1B.1 species. It typically blooms between April and July (CNPS 2009). This annual herb occurs on alkaline floodplains and in vernal pools below approximately 2,000 feet above msl (Munz 1974; Hickman 1993). In California, this species is known from Alameda, Los Angeles, Merced, Monterey, Orange, Riverside, San Diego, and San Luis Obispo Counties and possibly San Bernardino County (CNPS 2009). In the vicinity of the Project site, this species has been reported from Fairview Regional Park (CDFG 2009a). No suitable habitat for this species is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, prostrate vernal pool navarretia is not expected to occur on the Project site.

Coast Woolly-Heads (Nemacaulis denudata var. denudata)

Coast woolly-heads is a CNPS List 1B.2 species. It typically blooms between April and September (CNPS 2009). This annual herb occurs on coastal beaches and dunes below approximately 330 feet above msl (Hickman 1993). It is found along the Southern California coast from Los Angeles County to northwestern Mexico (Hickman 1993; Munz 1974). In the vicinity of the Project site, this species has been reported from Newport Back Bay (CDFG 2009a). No suitable habitat for this species is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, coast woolly-heads is not expected to occur on the Project site.

Allen's Pentachaeta (Pentachaeta aurea ssp. allenii)

Allen's pentachaeta is a CNPS List 1B.1 species. This annual herb typically blooms between March and June, occurs in openings of coastal sage scrub and in grasslands, and is known from fewer than 20 occurrences in Orange County (CNPS 2009). Limited suitable habitat is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, Allen's pentachaeta is not expected to occur on the Project site.

Gairdner's Yampah (Perideridia gairdneri ssp. gairdneri)

Gairdner's yampah is a CNPS List 4.2 species. It typically blooms between June and October (CNPS 2009). This perennial herb occurs in coastal flats, grassland, and pine groves below approximately 1,150 feet above msl (Hickman 1993). It occurs along the coast from Sonoma County south, though is scarce south of Monterey County (Hickman 1993). No suitable habitat for this species is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, Gairdner's yampah is not expected to occur on the Project site.

Nuttall's Scrub Oak (Quercus dumosa)

Nuttall's scrub oak is a CNPS List 1B.1 species. It typically blooms between February and April (CNPS 2009). This evergreen shrub generally occurs in sandy soils near the coast in chaparral or coastal sage scrub, is known to hybridize with scrub oak (*Quercus berberidifolia*), and occurs along the southern coast of California to Baja California, Mexico (Hickman 1993). No suitable habitat for this species is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, Nuttall's scrub oak is not expected to occur on the Project site.

Sanford's Arrowhead (Sagittaria sanfordii)

Sanford's arrowhead is a CNPS List 1B.2 species. It typically blooms between May and October (CNPS 2009). This perennial occurs in ponds and ditches in the Central Valley from Del Norte County to Ventura County (Hickman 1993). According to the CNPS, this species is extirpated from Southern California and mostly extirpated from the Central Valley (CNPS 2009). No suitable habitat for this species is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, Sanford's arrowhead is not expected to occur on the Project site.

Chaparral Ragwort (Senecio aphanactis)

Chaparral ragwort is a CNPS List 2.2 species. It typically blooms between January and April (CNPS 2009). This annual herb occurs in drying alkaline flats in coastal sage scrub and chaparral. It occurs in central western California to Baja California, Mexico (Hickman 1993). It is considered to be rare in Los Angeles, Orange, and Riverside Counties (CNPS 2009). No suitable habitat for this species is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, chaparral ragwort is not expected to occur on the Project site.

Estuary Seablite (Suada esteroa)

Estuary seablite is a CNPS List 1B.2 species. It typically blooms between May and October, but uncommonly through to January (CNPS 2009). This species occurs in marshes and swamps (coastal salt), occurring from Goleta Slough in Santa Barbara County south to Bahia Almejas in

Baja California, Mexico (Ferren and Whitmore 1983). Most populations occur in ecological preserves; in Orange County it occurs in Anaheim Bay, Bolsa Chica, Newport Back Bay, and Corona del Mar (Roberts 2008). No suitable habitat for this species is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, estuary seablite is not expected to occur on the Project site.

San Bernardino Aster (Symphyotrichum defoliatum)

San Bernardino aster is a CNPS List 1B.2 species. It typically blooms between July and November (Munz 1974). This perennial rhizomatous herb occurs in grasslands, disturbed places, damp meadows, freshwater marshes, and coastal sage scrub below approximately 4,900 feet above msl (Munz 1974; Hickman 1993). In California, this species is known from Los Angeles, Orange, Riverside, San Bernardino, Kern, and San Diego Counties and possibly San Luis Obispo County (CNPS 2009). No suitable habitat for this species is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, San Bernardino aster is not expected to occur on the Project site.

Big-Leaved Crownbeard (Verbesina dissita)

Big-leaved crownbeard is a federally and State-listed Threatened species and CNPS List 1B.1 species. It typically blooms between April and July (CNPS 2009). It occurs on shrubby coastal slopes below approximately 330 feet above msl (Hickman 1993). In California, this species is known from only four occurrences near southern Laguna Beach (CNPS 2009). It is also known from Baja California, Mexico. No suitable habitat for this species is present on the Project site. Focused surveys for special status plant species were conducted in spring/summer 2009, and this species was not observed on the Project site. Therefore, big-leaved crownbeard is not expected to occur on the Project site.

3.3.4 Special Status Wildlife

Several special status wildlife species are known to occur within the Project vicinity. A brief description of these special status wildlife species and their potential to occur on the Project site are discussed in Table 3. Note that they are grouped by type and listed in taxonomic order.

TABLE 3
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	–	No suitable habitat; not expected to occur.
Streptocephalus woottoni Riverside fairy shrimp	FE	–	No suitable habitat; not expected to occur.
Fish			
Eucyclogobius newberryi tidewater goby	FE	SSC	No suitable habitat; not expected to occur.
Amphibians			
Spea hammondii western spadefoot	–	SSC	No suitable habitat; not expected to occur.
Anaxyrus californicus arroyo toad	FE	SSC	No suitable habitat; not expected to occur.
Reptiles			
Actinemys 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 level of disturbance on site.
Aspidoscelis hyperythra orange-throated whiptail	–	SSC	Limited potentially suitable habitat; not expected to occur due to high level 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 level 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	Suitable habitat but outside known range; not expected to occur.
Birds			
Pelecanus occidentalis californicus California brown pelican	FE[1,2]	SE[1,2]	No suitable foraging, roosting, or nesting habitat; not expected to occur for foraging, roosting, or nesting.
Ixobrychus exilis least bittern	–	SSC[4]	No suitable foraging or nesting habitat; not expected to occur for foraging or nesting.
Accipiter cooperii Cooper's hawk	–	WL[4]	Observed foraging; suitable foraging habitat. No suitable nesting habitat; not expected to occur for nesting.
Accipiter striatus sharp-shinned hawk	–	WL[4]	May occur for foraging; suitable foraging habitat. Outside known breeding range; not expected to occur for nesting.
Aquila chrysaetos golden eagle	–	WL, FP[4,5]	Potentially suitable foraging habitat but not suitable nesting habitat; not expected to occur for nesting or foraging as this raptor is very rare in coastal lowlands of the region.
Buteo regalis ferruginous hawk	–	WL[5]	Suitable foraging habitat; may occur for foraging. Outside known breeding range; not expected to occur for nesting.

TABLE 3 (Continued)
SPECIAL STATUS WILDLIFE SPECIES KNOWN TO OCCUR IN THE PROJECT VICINITY

Species	Status		Likelihood of Occurrence
	USFWS	CDFG	
Buteo swainsoni Swainson's hawk	–	ST[4]	Potentially suitable foraging habitat but outside known breeding range; not expected to occur except as a very rare migrant.
Circus cyaneus northern harrier	–	SSC[4]	Suitable foraging habitat; may occur for foraging. Potentially suitable nesting habitat; not expected to nest due to high level of disturbance on site.
Elanus leucurus white-tailed kite	–	FP[4]	Suitable foraging habitat; may occur for foraging. No suitable nesting habitat; not expected to occur for nesting.
Haliaeetus leucocephalus bald eagle	–	SE, FP[4,5]	No suitable foraging or nesting habitat; not expected to occur for foraging or nesting.
Pandion haliaetus osprey	–	WL[4]	No suitable foraging or nesting habitat; not expected to occur for foraging or nesting.
Falco columbarius merlin	–	WL[5]	Limited suitable foraging habitat; may occur for foraging. Outside known breeding range; not expected to occur for nesting.
Falco mexicanus prairie falcon	–	WL[4]	Suitable foraging habitat; may occur for foraging. No suitable nesting habitat; not expected to occur for nesting.
Falco peregrinus anatum American peregrine falcon	–	SE, FP[4]	Suitable foraging habitat; may occur for foraging. No suitable nesting habitat; not expected to occur for nesting.
Laterallus jamaicensis coturniculus California black rail	–	ST, FP	No suitable habitat; not expected to occur.
Rallus longirostris levipes Light-footed clapper rail	FE	SE, FP	No suitable habitat; not expected to occur.
Charadrius alexandrinus nivosus western snowy plover	FT[4,6]	SSC[4,7]	No suitable foraging or nesting habitat; not expected to occur for foraging or nesting.
Numenius americanus long-billed curlew	–	WL[4]	Potentially suitable foraging habitat; may occur for foraging. Outside known breeding range; not expected to occur for nesting.
Rynchops niger black skimmer	–	SSC[1]	No suitable foraging or nesting habitat; not expected to occur for foraging or nesting.
Sternula antillarum browni California least tern	FE[1]	SE, FP[1]	No suitable foraging or nesting habitat; not expected to occur for foraging or nesting.
Thalasseus elegans elegant tern	–	WL[1]	No suitable foraging or nesting habitat; not expected to occur for foraging or nesting.
Coccyzus americanus occidentalis western yellow-billed cuckoo	FC	SE[4]	No suitable foraging or nesting habitat; not expected to occur for foraging or nesting.
Asio flammeus short-eared owl	–	SSC[4]	Potentially suitable foraging habitat but not suitable nesting habitat; may occur for foraging but not for nesting.
Asio otus long-eared owl	–	SSC[4]	Limited suitable foraging habitat; limited potential to occur for foraging. No suitable nesting habitat; not expected to occur for nesting.
Athene cunicularia burrowing owl	–	SSC[8]	Limited suitable foraging and nesting habitat. Not observed during winter 2008/2009 and spring/summer 2009 focused surveys; not expected to nest due to high level of disturbance on Project site but may occur occasionally as migrant or rare winter visitor.

TABLE 3 (Continued)
SPECIAL STATUS WILDLIFE SPECIES KNOWN TO OCCUR IN THE PROJECT VICINITY

Species	Status		Likelihood of Occurrence
	USFWS	CDFG	
Chaetura vauxi Vaux's swift	–	SSC[4]	Outside known breeding range; not expected to occur for nesting. Expected to occur over the Project site during spring and fall migration.
Cypseloides niger black swift	–	SSC[4]	Outside known breeding range; not expected to occur for nesting. Only occurs in coastal lowlands of the region as very rare migrant.
Empidonax traillii extimus southwestern willow flycatcher	FE[4]	SE[4]	No suitable foraging or nesting habitat; not expected to occur for foraging or nesting.
Lanius ludovicianus loggerhead shrike	–	SSC[4]	Suitable foraging and nesting habitat; may occur for foraging and nesting.
Vireo bellii pusillus least Bell's vireo	FE[4]	SE[4]	No suitable breeding habitat; not expected to occur.
Eremophila alpestris actia California horned lark	–	WL	Suitable foraging and nesting habitat; may occur as migrant or winter visitor but not expected to nest due level of disturbance on site.
Progne subis purple martin	–	SSC[4]	Outside known breeding range; not expected to occur for nesting. Only occurs in coastal lowlands of the region as very rare migrant.
Riparia riparia bank swallow	–	ST[4]	Outside known breeding range; not expected to occur for nesting. Only occurs in coastal lowlands of the region as very rare migrant.
Campylorhynchus brunneicapillus sandiegensis coastal cactus wren	–	SSC[9]	No suitable habitat; not expected to occur.
Polioptila californica californica coastal California gnatcatcher	FT	SSC	Limited suitable habitat. Observed during 2009 focused surveys.
Dendroica petechia brewsteri yellow warbler	–	SSC[4]	No suitable nesting habitat; not expected to occur for nesting but migrants are expected to occur.
Icteria virens yellow-breasted chat	–	SSC[4]	No suitable nesting habitat; not expected to occur for nesting but migrants may occur.
Aimophila ruficeps canescens southern California rufous-crowned sparrow	–	WL	Potentially suitable habitat; not observed during surveys and not expected to occur as Project site is outside the known range for this species.
Ammodramus savannarum grasshopper sparrow	–	SSC[4]	Potentially suitable foraging and nesting habitat; not expected to occur due to high level of disturbance on the site.
Amphispiza belli belli Bell's sage sparrow	–	WL[4]	Potentially suitable habitat; not observed during surveys and not expected to occur as Project site is outside known range for this species.
Passerculus sandwichensis beldingi Belding's savannah sparrow	–	SE	No suitable habitat; not expected to occur.
Passerculus sandwichensis rostratus large-billed savannah sparrow	–	SSC[5]	No suitable foraging habitat and outside known breeding range; not expected to occur for foraging or nesting.
Agelaius tricolor tricolored blackbird	–	SSC[1]	Potentially suitable foraging but no suitable nesting habitat; not expected to occur as Project site is not near any known nesting colonies.
Mammals			
Sorex ornatus salicornicus southern California saltmarsh shrew	–	SSC	No suitable habitat; not expected to occur.

TABLE 3 (Continued)
SPECIAL STATUS WILDLIFE SPECIES KNOWN TO OCCUR IN THE PROJECT VICINITY

Species	Status		Likelihood of Occurrence
	USFWS	CDFG	
Antrozous pallidus pallid bat	–	SSC	Potentially suitable foraging habitat but no suitable roosting habitat; may occur for foraging but not for roosting.
Corynorhinus townsendii Townsend's big-eared bat	–	SSC	Potentially suitable foraging habitat 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.
Lasiurus xanthinus western yellow bat	–	SSC[10]	Potentially suitable foraging habitat but no suitable roosting habitat; may occur for foraging but not for roosting.
Eumops perotis californicus western mastiff bat	–	SSC	Potentially suitable foraging habitat but no suitable roosting habitat; not expected to occur due to lack of potential roost side in coastal lowlands of the region and high level of disturbance on the Project site.
Nyctinomops fermorosaccus pocketed free-tailed bat	–	SSC	Potentially suitable foraging and limited suitable roosting habitat; may occur for foraging and roosting.
Nyctinomops macrotis big free-tailed bat	–	SSC	Potentially suitable foraging and limited suitable roosting habitat; may occur for foraging and roosting.
Perognathus longimembris pacificus Pacific pocket mouse	FE	SSC	Limited suitable habitat but not detected during regional trapping effort; not expected to occur.
Microtus californicus stephensi south coast marsh vole	–	SSC	No suitable habitat; not expected to 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 the Project site and this species' general absence from urban habitats in the region.

LEGEND:

Federal (USFWS)
FE Endangered
FT Threatened
FC Candidate

State (CDFG)
SE Endangered
ST Threatened
SSC Species of Special Concern
WL Watch List
FP Fully Protected

[1] Designation refers to nesting colony
[2] Designation refers to communal roosts
[3] Designation refers to rookery site
[4] Designation refers to nesting individuals
[5] Designation refers to wintering individuals
[6] Designation refers to Pacific coastal population only
[7] Designation refers to coastal and interior populations
[8] Designation refers to burrow sites; wintering observations not considered special status for Orange County
[9] Designation refers to San Diego and Orange counties only
[10] Designation based on the draft updated mammalian species of special concern report
[11] Designation refers to the full species

Invertebrates

San Diego Fairy Shrimp (*Branchinecta sandiegonensis*)

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. No individuals have been found in riverine waters, marine waters, or other permanent bodies of water (USFWS 1997b). This species typically occupies shallow pools (at depths of 2 to 12 inches) on chaparral covered mesas (USFWS 1997b; Fugate 1993). In Orange County, this species has been observed in Fairview Park in Costa Mesa, and near Antonio Parkway in Rancho Mission Viejo (USFWS 1997b). No suitable habitat for this species is present on the Project site. Therefore, the San Diego fairy shrimp is not expected to occur on the Project site.

On December 12, 2007, the USFWS published a final rule designating 3,082 acres of land as critical habitat for the San Diego fairy shrimp in San Diego and Orange Counties (USFWS 2007b). The Project site is not located in final critical habitat for San Diego fairy shrimp.

Riverside Fairy Shrimp (*Streptocephalus woottoni*)

Riverside fairy shrimp is a federally listed Endangered species. This species is occurs in vernal pools and ephemeral ponds in coastal Southern California from Ventura County south to northwestern Baja California, Mexico (USFWS 2005b). Riverside fairy shrimp typically occur in deep vernal pools on coastal plateaus and terraces that have emergent vegetation (USFWS 2005b). In Orange County, this species occurs in pools in the Orange County Foothills from the former El Toro Marine Corps Air Station to Camp Pendleton in San Diego County, including locations at Edison Viejo Conservation Bank, Saddleback Meadows, O'Neill Regional Park, Live Oak Plaza, Tijeras Creek, Chiquita Ridge, and Radio Tower Road. No suitable habitat for this species is present on the Project site. Therefore, the Riverside fairy shrimp is not expected to occur on the Project site.

On April 12, 2005, the USFWS published a rule designating 306 acres of land as critical habitat for the Riverside fairy shrimp in Orange, San Diego, and Ventura Counties (USFWS 2005b). The Project site is not located in final critical habitat for Riverside fairy shrimp.

Fish

Tidewater Goby (*Eucyclogobius newberryi*)

Tidewater goby is a federally listed Endangered species and a California Species of Special Concern. This species occurs in the upper end of lagoons where there is a mix of fresh and salt water. It also occurs in pure fresh water above lagoons (Harmsworth Associates 1998b). Although the range of this species extends from three miles south of the California-Oregon border (Tillas Slough in Del Norte County) south to Agua Hedionda Lagoon in San Diego County (USFWS 2008), its range has been reduced by a variety of factors; these factors include channelization, pollution, and the introduction of exotic species (Swift et al. 1993). In the vicinity of the Project site, this species has been reported from Aliso Creek within 1.5 miles of the ocean. No suitable habitat for this species is present on the Project site. Therefore, tidewater goby is not expected to occur on the Project site.

On January 31, 2008, the USFWS published a final rule revising critical habitat for the tidewater goby. The revised critical habitat designates 10,003 acres in Del Norte, Humboldt, Mendocino, Sonoma, Marin, San Mateo, Santa Cruz, Monterey, San Luis Obispo, Santa Barbara, Ventura,

and Los Angeles Counties (USFWS 2008). The Project site is not located in the revised critical habitat for the tidewater goby.

Amphibians

Western Spadefoot (*Spea hammondii*)

Western spadefoot is a California Species of Special Concern. This species inhabits grassland, coastal sage scrub, and other habitats with open sandy, gravelly soils. The western spadefoot is primarily a species of the lowlands, and frequents washes, river floodplains, alluvial fans, and alkali flats (Stebbins 2003), and breeds in quiet streams, vernal pools, and temporary ponds. This species is rarely observed outside the breeding season. This species occurs in the Great Valley and bordering foothills, in the Coast Ranges from Monterey Bay south to Baja California, Mexico (Stebbins 2003). From the Santa Clara River Valley in Los Angeles and Ventura Counties southward, an estimated 80 percent of habitat for this species has been lost (Stebbins 2003). In the vicinity of the Project site, this species has been reported from the San Joaquin Hills near Moro Canyon and Shady Canyon (CDFG 2009a). No suitable habitat for this species is present on the Project site. Therefore, western spadefoot is not expected to occur on the Project site.

Arroyo Toad (*Anaxyrus californicus*)

Arroyo toad is a federally listed Endangered species and a California Species of Special Concern. This toad only occurs in streams of southwestern California and northwestern Baja California, Mexico (USFWS 1994a). In California, it primarily occurs along the Coast Ranges from San Luis Obispo County south to San Diego County, but also occurs at a few locations on the western edge of the desert (Jennings and Hayes 1994). The arroyo toad is generally found in semi-arid regions near washes or intermittent streams (Zeiner et al*.* 1988). However, this species has highly specialized habitat requirements such as breeding pools within approximately 300 feet of juvenile and adult habitat consisting of shoreline with stable, sandy terraces (Jennings and Hayes 1994). Streams must be of low velocity with sand or gravel substrate; silt interferes with the development of tadpoles and is avoided (Harmsworth Associates 1998a). No suitable habitat for this species (i.e., creeks with breeding pools) is present on the Project site. Therefore, arroyo toad is not expected to occur on the Project site.

On April 13, 2005, the USFWS published a final rule designating critical habitat for arroyo toad (USFWS 2005d). This final rule designated 11,695 acres in Santa Barbara, Ventura, Los Angeles, San Bernardino, and Riverside Counties as critical habitat. The Project site is not located in designated critical habitat for this species.

Reptiles

Southwestern Pond Turtle (*Actinemys marmorata pallida*)

Southwestern pond turtle is a California Species of Special Concern. The southwestern pond turtle occurs primarily in freshwater rivers, streams, lakes, ponds, vernal pools, and seasonal wetlands requiring basking sites such as logs, banks, or other suitable areas above water level. This subspecies of the western pond turtle (*Actinemys* [*Clemmys*] *marmorata*) occurs from approximately the San Francisco Bay area south through the Coast Ranges into northern Baja California, Mexico (Stebbins 2003). The western pond turtle is estimated to be in decline throughout 75 to 80 percent of its range (Stebbins 2003). The current range is similar to the historic range, but populations have become fragmented by agriculture and urban development. In addition to loss of habitat, this subspecies is also threatened by grazing, non-native species, and disease (Jennings and Hayes 1994). In the vicinity of the Project site, this subspecies has

been reported from multiple locations; however, the location information is suppressed by the resource agencies to protect the species from collection (CDFG 2009a). No suitable habitat for this subspecies (i.e., water bodies) is present on the Project site. Therefore, southwestern pond turtle is not expected to occur on the Project site.

Coast (San Diego) Horned Lizard (*Phrynosoma coronatum* [*blainvillii* population])

Coast (San Diego) horned lizard (*blainvillii* population) is a California Species of Special Concern. The two former subspecies of the coast horned lizard, (*P. c. blainvillei* and *P. c. frontale*) have recently been eliminated in scientific literature, such as Stebbins (2003), based on current scientific studies on this species. Coast horned lizard is a small, spiny, somewhat rounded lizard that occurs in scrubland, grassland, coniferous forests, and broadleaf woodland vegetation types. The coast horned lizard prefers open areas for basking and loose, friable soil for burrowing (Stebbins 2003). The coast horned lizard occurs throughout much of California, west of the desert and Cascade-Sierra highlands south to Baja California, Mexico (Stebbins 2003). However, many of the populations in lowland areas have been reduced or eliminated due to urbanization and agricultural expansion (Stebbins 2003). Three factors have contributed to its decline: loss of habitat, overcollecting, and the introduction of exotic ants. In the vicinity of the Project site, this species has been reported from Pelican Hill (CDFG 2009a). Soils on the Project site were mapped as sandy loams or loamy sands; these soils may be suitable for coast horned lizard. However, due the high level of disturbance on the Project site, the coast horned lizard is not expected to occur on the Project site.

Orange-throated Whiptail (*Aspidoscelis hyperythra*)

Orange-throated whiptail is a California Species of Special Concern. The two former subspecies of the orange-throated whiptail (*Cnemidophorus hyperythrus* and *Cnemidophorus beldingi*) have recently been eliminated in scientific literature, such as Stebbins (2003), based on current scientific studies on this species. The orange-throated whiptail occurs in washes and in open areas of sage scrub and chaparral with gravelly soils, often with rocks. It prefers the well-drained friable soil on slopes that are barren or only sparsely covered with vegetation and have a southern exposure. This species occurs between sea level and 2,000 feet above msl in the western Peninsular ranges from Orange and San Bernardino Counties south to Baja California, Mexico (Stebbins 2003). Approximately 75 percent of the former range has been lost to development, and remaining populations are highly fragmented (Stebbins 2003). In the vicinity of the Project site, this species has been reported on a bluff near Corona del Mar and in Laguna Canyon (CDFG 2009a). Limited, potentially suitable habitat for this species occurs on the Project site. However, due the high level of disturbance on the Project site, the orange-throated whiptail is not expected to occur on the Project site.

Silvery Legless Lizard (*Anniella pulchra pulchra*)

Silvery legless lizard is a California Species of Special Concern. It is a small, secretive lizard that spends most of its life beneath the soil; under stones, logs, or debris; or in leaf litter. The silvery legless lizard requires areas with loose, sandy soil, moisture, warmth, and plant cover. It occurs in chaparral, pine-oak woodland, beach, and riparian vegetation types at elevations ranging from sea level to approximately 5,100 feet above msl (Stebbins 2003). The silvery legless lizard occurs in the Coast, Transverse, and Peninsular ranges from Contra Costa County south to Baja California, Mexico (Stebbins 2003). This subspecies is naturally rare since it specializes in substrates with a high sand content, but is also threatened by grazing, off-road vehicle activity, sand mining, beach erosion, excessive recreational use of coastal dunes, and the introduction of exotic plants (Jennings and Hayes 1994). Soils on the Project site were mapped as sandy loams or loamy sands; these soils may be suitable for silvery legless lizard. Potentially suitable habitat

for this subspecies occurs on the Project site. Therefore, silvery legless lizard may occur on the Project site.

Coast Patch-nosed Snake (*Salvadora hexalepis virgultea*)

Coast patch-nosed snake is a California Species of Special Concern. It inhabits open sandy areas and rocky outcrops in scrub, chaparral, grassland, and woodland vegetation types. It occurs from sea level to approximately 7,000 feet above msl (Stebbins 2003). The coast patch-nosed snake ranges along the coast of California from San Luis Obispo County south into Baja California, Mexico. This subspecies is threatened by development, grazing, and fire control (Jennings and Hayes 1994). Limited, potentially suitable habitat for this subspecies occurs on the Project site. However, due the high level of disturbance on the Project site, the coast patch-nosed snake is not expected to occur on the Project site.

Two-striped Garter Snake (*Thamnophis hammondii*)

Two-striped garter snake is a California Species of Special Concern. It occurs primarily in wetlands and is found in freshwater marsh and riparian habitats with perennial water. The two-striped garter snake feeds on small fishes, frogs, and tadpoles. The two-striped garter snake occurs from Monterey County south to Rio Rosario in Baja California, Mexico. It is considered locally rare in southwestern California. No suitable habitat for this species (i.e., perennial water) is present on the Project site. Therefore, two-striped garter snake is not expected to occur on the Project site.

Northern Red-Diamond Rattlesnake (*Crotalus ruber ruber*)

Northern red-diamond rattlesnake is a California Species of Special Concern. It inhabits open scrub, chaparral, woodland, and grassland vegetation types. This species ranges from approximately eastern Orange County and Riverside County south to Baja California, Mexico at elevations from sea level to about 5,000 feet above msl (Stebbins 2003; Zeiner 1988). This species is threatened by development and human disturbance (Jennings and Hayes 1994). In the vicinity of the Project site, this species has been reported near Coyote Canyon (CDFG 2009a). Suitable habitat for this species occurs on the Project site. However, the Project site is outside the known range of this species; therefore, northern red-diamond rattlesnake is not expected to occur on the Project site.

Birds

California Brown Pelican (*Pelecanus occidentalis californicus*)

The California brown pelican is a federally and State-listed Endangered species. The brown pelican was delisted by the USFWS along the Atlantic Coast, Florida, and Alabama in 1985 (USFWS 2006a); however, the California population remains listed. A five-year review was recently completed and recommended the delisting of the California brown pelican (USFWS 2007d); however, the proposed rule to delist the California brown pelican has not yet been issued. The brown pelican is found in estuarine, marine subtidal, and marine pelagic waters along the California coast (Zeiner et al. 1990a). It breeds on the Channel Islands and on islands off the coast of Mexico (Zeiner et al. 1990a). The species feeds almost entirely on fish, caught by diving from 20 to 40 feet in the air, but it may occasionally also feed on crustaceans (Cogswell 1977; Zeiner et al. 1990a). It roosts on sandbars, pilings, jetties, breakwaters, mangrove islets, and offshore rocks and islands (Shields 2002). The brown pelican, including all subspecies, declined dramatically due to the widespread use of dichlorodiphenyltrichloroethane (DDT); however, the population has increased substantially following the ban of this pesticide and other contaminants. The California brown pelican is known to occur in Upper Newport Bay.

Suitable foraging habitat (i.e., open water) and communal roost areas are not present on the Project site, and this species does not breed on the mainland. Therefore, California brown pelican is not expected to occur on the Project site for foraging, roosting, or nesting.

No critical habitat has been proposed for this species.

Least Bittern (*Ixobrychus exilis*)

Least bittern is a California Species of Special Concern. This species is a common summer visitor of the Salton Sea, but is rare to coastal Southern California (Garrett and Dunn 1981). The least bittern breeds in freshwater and brackish marshes with dense, tall growth of aquatic or semi-aquatic vegetation interspersed with clumps of woody vegetation and open water (Gibbs et al. 1992). This species eats mainly small fish, aquatic and terrestrial insects, and crayfish; they may also eat amphibians and small mammals (Zeiner et al. 1990a). Least bitterns rarely venture out of the dense marsh vegetation; because of this behavior, it is likely that many escape detection (Gallagher 1997). In the past, this species has bred at San Joaquin Marsh (1979); it has also been reported in Bolsa Chica (Hamilton and Willick 1996). Suitable foraging and nesting habitat (i.e., open water with marsh vegetation) for this species is not present on the Project site. Therefore, least bittern is not expected to occur on the Project site.

Cooper's Hawk (*Accipiter cooperi*)

Cooper's hawk is a CDFG Watch List species. Both resident and migratory populations exist in Orange County. Wintering Cooper's hawks are often seen in wooded urban areas and native woodland vegetation types. Preferred nesting habitats are oak and riparian woodlands dominated by sycamores and willows. Cooper's hawks prey on small birds and rodents that live in woodland, scrub, and chaparral vegetation types. This species is relatively tolerant of man-altered landscapes; however, threats to this species include the loss of appropriate weedlots for breeding and foraging, collisions with man-made objects, and possibly pesticides (Curtis et al. 2006). In the vicinity of the Project site, this species has been reported nesting in Laguna Beach (CDFG 2009a). Suitable foraging habitat for this species occurs on the Project site and this species was observed on the Project site, but there is no suitable nesting habitat. Therefore, Cooper's hawk may forage but is not expected to nest on the Project site.

Sharp-shinned Hawk (*Accipiter striatus*)

Sharp-shinned hawk is a CDFG Watch List species. It is a fairly common species throughout Orange County; it prefers oak and riparian woodland vegetation types, but can also be found in virtually any habitat as it passes through the area during migration. Some individuals probably winter in Orange County. The primary breeding range for this species is high-elevation forests in the western U.S. and boreal forests in Canada and Alaska. Suitable foraging habitat for this species occurs on the Project site, but the site is outside the known breeding range of this species. Therefore, sharp-shinned hawk may forage but is not expected to nest on the Project site.

Golden Eagle (*Aquila chrysaetos*)

Golden eagle is a California Fully Protected species, a CDFG Watch List species, and is also protected by the federal Bald Eagle Act. Habitat for this species generally consists of grasslands, deserts, savannas, and early successional stages of forest and shrub habitats. Broad expanses of open country are required for foraging while nesting is primarily restricted to rugged mountainous areas with large trees or on cliffs (Johnsgard 2001). The golden eagle is an uncommon resident throughout Southern California, except in the Colorado Desert and Colorado River where it is a casual winter visitor (Garrett and Dunn 1981). In Orange County,

this species nests in the Santa Ana Mountains and Chino Hills (Hamilton and Willick 1996). Potentially suitable foraging habitat but no suitable nesting habitat is present on the Project site. Given that the golden eagle is very rare in the coastal lowlands, this species is not expected to occur for foraging and nesting.

Ferruginous Hawk (*Buteo regalis*)

Ferruginous hawk is a CDFG Watch List species. It occupies open, dry habitats such as grasslands, shrublands, rangelands, and plowed agricultural fields. This raptor only occurs as a winter resident in California (Bechard and Schmutz 1995). Along the coast of Southern California, it is rare to uncommon during the winter season (Garrett and Dunn 1981). Limited suitable foraging habitat for this species occurs on the Project site but the Project site is outside the breeding range of this species. Therefore, ferruginous hawk may forage but is not expected to nest on the Project site.

Swainson's Hawk (*Buteo swainsoni*)

Swainson's hawk is a State-listed Threatened species. It forages over the grassland and ruderal vegetation types during migration to and from South America, primarily feeding on small rodents, reptiles, and some insects within these habitats. It is a very rare migrant along the coast of Southern California (Garrett and Dunn 1981). 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). This species is threatened by loss of habitat, habitat deterioration on the South American wintering grounds, human disturbance at nest sites, shooting, and possibly pesticides (Remsen 1978). Potentially suitable foraging habitat for this species occurs on the Project site, but the Project site is outside the breeding range of this species. Therefore, Swainson's hawk may forage on the Project site as a rare migrant, but it is not expected to nest on the Project site.

Northern Harrier (*Circus cyaneus*)

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). Breeding habitat includes prairie, savannah, slough, wet meadow, and marsh vegetation types. Northern harrier can be expected at any month of the year and can be seen foraging in grassland, scrub, and riparian vegetation types. While once a relatively common species during fall, winter, and spring in undeveloped areas of the County, the northern harrier population is now greatly reduced and localized in distribution. This species is threatened by loss of habitat, pesticides (Ehrlich et al. 1988), and loss of suitable breeding habitat (Macwhirter and Bildstein 1996). Suitable foraging and nesting habitat for this species occurs on the Project site. However, due to the high level of disturbance on the Project site, the northern harrier is not expected to occur for nesting.

White-tailed Kite (*Elanus leucurus*)

White-tailed kite is a California Fully Protected species. Kites nest primarily in oaks, willows, and sycamores, and forage in grassland and scrub vegetation types. 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). Many populations in North America have declined in the 1980s and 1990s, including those in Southern California (Dunk 1995). Suitable foraging habitat for this species is present on the Project site during the breeding season since there is suitable nesting habitat adjacent to the Project site. However, no suitable nesting habitat is present on the site; therefore, the white-tailed kite may forage but is not expected to nest on the Project site.

Bald Eagle (*Haliaeetus leucocephalus*)

Bald eagle is a State-listed Endangered species and a CDFG Fully Protected species, and is protected by the federal Bald Eagle Act. This species was recently delisted by the USFWS and will be monitored for the next 20 years as part of the Post-delisting Monitoring Plan for the species, currently in draft form (USFWS 2007a). This species requires large bodies of water or free-flowing rivers with abundant fish with adjacent snags or perches, and nests in large, old-growth trees or snags in remote stands near water (Zeiner et al. 1990a). Through the 1970s, the bald eagle was very rare in fall and winter along the coast, with most records from Upper Newport Bay (Hamilton and Willick 1996). Hamilton and Willick (1996) report that the bald eagle has only been recorded in Orange County four times since 1975, and that three of the reports are from Upper Newport Bay (1989, 1990, and 1994). Given that the Project site is largely surrounded by development (with the exception of Banning Ranch), no suitable foraging or nesting habitat is present. Therefore, bald eagle is not expected to occur on the Project site for foraging or nesting.

No critical habitat has been proposed for the Bald Eagle.

Osprey (*Pandion haliaetus*)

Osprey is a CDFG Watch List species. This species occurs near large bodies of water including rivers, lakes, reservoirs, bays, estuaries, and surf zones (Zeiner et al*.* 1990a). Along the coast, ospreys occur most commonly through the fall and winter although a few birds remain through the summer (Garrett and Dunn 1981). This species nests on platforms of sticks at the top of large snags, dead-topped trees, cliffs, or man-made structures (Zeiner et al. 1990a). For a period of time, ospreys did not breed in Orange County, with only one recorded incident from 1895 in Laguna Beach (Hamilton and Willick 1996). However, in 2006, ospreys nested successfully at Upper Newport Bay for the first time in recent years. Suitable foraging habitat (i.e., open water) and nesting habitat are not present on the Project site. Therefore, osprey is not expected to occur on the Project site for foraging or nesting.

Merlin (*Falco columbarius*)

Merlin is a CDFG Watch List species. In California, the merlin prefers vast open space areas such as estuaries, grasslands, and deserts where it hunts small flocking birds such as sandpipers, larks, sparrows, and pipits. In Orange County, merlins are uncommon winter migrants. Limited suitable foraging habitat for this species occurs on the Project site, but the Project site is outside the breeding range of this species. Therefore, merlins may forage but is not expected to nest on the Project site.

Prairie Falcon (*Falco mexicanus*)

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). The prairie falcon is an increasingly scarce winter resident and very rare summer resident along the Southern California coast (Unitt 1984; Lehman 1994; Hamilton and Willick 1996). In Orange County, the only place this species has been reported to potentially nest was in upper Gypsum Canyon, and nesting was not confirmed (Hamilton and Willick 1996; Harmsworth Associates 1999). Suitable foraging habitat is present on the Project site, but no suitable nesting habitat is present. Therefore, prairie falcon may forage but is not expected to nest on the Project site.

American Peregrine Falcon (*Falco peregrinus anatum*)

American peregrine falcon is a State-listed Endangered species and a California Fully Protected species that, due to recent population gains, was delisted from the federal list of Endangered species by the USFWS (1999). As a delisted species, the peregrine falcon will continue to be periodically monitored until 2015 (USFWS 2006b). No such delisting has been proposed by the State. Peregrine falcons prey almost exclusively on birds and use a variety of habitats, particularly wetlands and coastal areas. This falcon is still 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 but is not expected to nest on the Project site.

All designated critical habitat for American peregrine falcon was removed upon publication of the final rule to delist the species (USFWS 1999).

California Black Rail (*Laterallus jamaicensis coturniculus*)

California black rail is a State-listed Threatened species and a California Fully Protected species. Black rails nest in salt marshes, shallow freshwater marshes, wet meadows, and flooded grassy vegetation (Eddleman et al. 1994). This subspecies is a year-round resident of a few coastal bays from Bodega Bay to northwestern Baja California, Mexico. By far, the largest population is present in northern San Francisco Bay (Eddleman et al. 1994). It is also found inland at the Salton Sea and the lower Colorado River (Garrett and Dunn 1981; Eddleman et al. 1994). In Orange County, this subspecies formerly occurred in Upper Newport Bay, but since 1980 there are only two accepted records from that location (Hamilton and Willick 1996). No suitable habitat for this subspecies occurs on the Project site. Therefore, the California black rail is not expected to occur on the Project site.

Light-footed Clapper Rail (*Rallus longirostris levipes*)

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 (*Salicovnia* ssp.) 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 Carpinteria Marsh in Santa Barbara County (Zembal and Massey 1981). There are between 8 and 19 marshes in California and 2 marshes in Baja California that support this species (Zembal and Massey 1981; Zembal 1991). Although this subspecies has been observed at other localities in Orange County, Upper Newport Bay and the Seal Beach National Wildlife Refuge support the only substantial populations (Hamilton and Willick 1996). No

suitable habitat for this subspecies occurs on the Project site. Therefore, the light-footed clapper rail is not expected to occur on the Project site.

No critical habitat has been proposed for this species.

Western Snowy Plover (*Charadrius alexandrinus nivosus*)

Western snowy plover is a federally listed Threatened species and a California Species of Special Concern. The USFWS's Final Rule for the Western Snowy Plover states that "The Pacific coast population distinct population segment of the western snowy plover is defined as those individuals nesting adjacent to tidal waters of the Pacific Ocean, and includes all nesting birds on the mainland coast, peninsulas, offshore islands, adjacent bays, estuaries and coastal rivers" (USFWS 2005a). 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 2005a). In Orange County, breeding is limited to the Bolsa Chica Ecological Reserve and the mouth of the Santa Ana River (Hamilton and Willick 1996). Migrants have been observed at the San Joaquin Marsh in the late summer and early fall, and this species can be observed in moderate numbers along the coast in winter (Hamilton and Willick 1996). Suitable foraging and nesting habitat for this subspecies is not present on the Project site. Therefore, western snowy plover is not expected to occur on the Project site.

On September 29, 2005, the USFWS published a final critical habitat for the western snowy plover. This final rule designated 12,145 acres along the coasts of Washington, Oregon, and California. Within California, critical hábitat was designated in San Diego, Orange, Los Angeles, Ventura, Santa Barbara, San Luis Obispo, Monterey, Santa Cruz, San Mateo, Marin, Mendocino, Humboldt, and Del Norte Counties (USFWS 2005a). Proposed critical habitat in Orange County includes the Bolsa Chica Ecological Reserve (Unit 22A) and the mouth of the Santa Ana River (Unit 23). The Project site is not located in areas proposed as critical habitat for the western snowy plover.

Long-billed Curlew (*Numenius americanus*)

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). Preferred wintering habitats consist of large coastal estuaries, upland herbaceous areas, and croplands (Zeiner et al. 1990a). Small numbers regularly occur at San Joaquin Marsh through the fall and winter, and it is a regular winter visitor of Upper Newport Bay (Hamilton and Willick 1996). Marginally suitable foraging habitat for this species is present on the Project site, but no suitable nesting habitat is present. Therefore, long-billed curlew has limited potential to forage but is not expected to nest on the Project site.

Black Skimmer (*Rynchops niger*)

Black skimmer is a California Species of Special Concern. This species forages over calm, shallow water, frequently at the mouths of rivers and channels that enter the sea (Garrett and Dunn 1981). This species is known for flying low over the water and using its lower mandible to cut the water's surface creating a small wake on each side that may attract fish, which it then grabs with a sideways swing of its head or in later flights over the same location (Cogswell 1977). This species nests on gravel bars, low islets, and on dikes (Garrett and Dunn 1981). In Orange County, this species nests regularly at Bolsa Chica and Upper Newport Bay on

man-made islands of dredged fill that were created for the California least tern (*Sterna antillarum browni*) (Gallagher 1997). Suitable foraging and nesting habitat for this species is not present on the Project site. Therefore, black skimmer is not expected to occur on the Project site for foraging or nesting.

California Least Tern (*Sternula* [*Sterna*] *antillarum browni*)

California least tern is a federally and State-listed Endangered species and a California Fully Protected species. This migratory tern nests on sandy beaches from April through August along the coast of California from San Francisco south to Baja California, Mexico (Thompson et al. 1997). Little is known of the least tern's winter distribution, but it primarily winters in South America (Thompson et al. 1997; AOU 2008). In recent years, terns have colonized islands created from dredge fill such as those at Bolsa Chica, Upper Newport Bay, and the Los Angeles Harbor. Breeding colonies in Orange County are at the Bolsa Chica Ecological Reserve, the Seal Beach National Wildlife Refuge, Upper Newport Bay, and the mouth of the Santa Ana River (Hamilton and Willick 1996). Suitable foraging and nesting habitat for this subspecies is not present on the Project site. Therefore, California least tern is not expected to occur on the Project site for foraging or nesting.

No critical habitat has been designated for this species.

Elegant Tern (*Sterna elegans*)

Elegant tern is a CDFG Watch List species. This species was formerly a rare and irregular post-nesting visitor to coastal California (Grinnell and Miller 1944); however, its numbers have increased considerably since the 1950s and large flocks can now be observed during most years (Cogswell 1977). This species formerly nested only in Mexico and at a small breeding colony in San Diego Bay; the elegant tern began nesting at Bolsa Chica in 1987 and by 1993 had built up a nesting colony of 2,000 pairs (Gallager 1997). This species nests on undisturbed island beaches and dikes (Dawson 1923; Cogswell 1977). Elegant terns forage primarily in shallow ocean waters beyond the turbulent breaker zone, but may also forage in protected bays and lagoons (Cogswell 1977). When not feeding, this species congregates on beaches and mudflats (Zeiner et al. 1990a). Suitable foraging and nesting habitat for this species is not present on the Project site. Therefore, elegant tern is not expected to occur on the Project site for foraging or nesting.

Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*)

Western yellow-billed cuckoo is a State-listed Endangered species and is a federal Candidate for listing by the USFWS. The western yellow-billed cuckoo requires broad areas of old-growth riparian habitats dominated by willows and cottonwoods with dense understory vegetation. California's population was once estimated to be over 15,000 pairs, but in less than a hundred years, it has declined to less than 30 pairs (Hughes 1999). Along the coast, breeding cuckoos currently persist along the Santa Ana River, in Riverside County, and perhaps along the San Luis Rey River in San Diego County (Zeiner et al. 1990a). Transients are rarely observed away from known breeding populations (Garrett and Dunn 1981). 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 until recently. Suitable foraging and nesting habitat for this subspecies is not present on the Project site. Therefore, western yellow-billed cuckoo is not expected to occur on the project site for foraging or nesting.

Short-eared Owl (*Asio flammeus*)

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 to areas with extensive grassland and marsh habitats; it is less common in agricultural habitats (Lehman 1994). This owl hunts day or night in open habitats such as marshes, grassland, and tundra (Holt and Leasure 1993). In Orange County, this owl is most common at San Joaquin Marsh, but has also been reported in Bolsa Chica (Hamilton and Willick 1996). Limited amounts of suitable foraging habitat for this species occurs on the Project site, but this species does not nest in the Project region. Therefore, short-eared owl has limited potential to occur for foraging on the Project site, but it is not expected to nest on the Project site.

Long-eared Owl (*Asio otus*)

Long-eared owl is a California Species of Special Concern. This owl hunts mostly at night over grasslands and other open habitats (Marks et al. 1994). Nesting occurs in dense trees such as oaks and willows where it occupies stick nests of other species, particularly raptors and corvids (Marks et al. 1994; Bloom 1994). This species is an uncommon resident in the deserts, and is quite rare coastally (Garrett and Dunn 1981). Long-eared owls have declined in Southern California due to the loss of riparian and grassland habitats to development (Marks et al. 1994). Limited amounts of suitable foraging habitat for this species occur on the Project site, but suitable nest trees are not present on the Project site. Therefore, long-eared owl has limited potential to occur for foraging on the Project site, but it is not expected to nest on the Project site.

Burrowing Owl (*Athene cunicularia*)

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. In Southern California, burrowing owls breed and forage in grasslands and prefer flat to low rolling hills in treeless terrain. They are small owls that nest in burrows, typically in open habitats most often along banks and roadsides. In the vicinity of the Project site, this species has been reported from Fairview Park in Costa Mesa (CDFG 2009a). Limited suitable habitat and burrow sites for this species are present on the Project site. Focused surveys for the burrowing owl were conducted in winter 2008/2009 and in spring/summer 2009; the burrowing owl was not observed. Therefore, burrowing owl is not expected to occur on the Project site due to lack of detection during focused surveys. However, there is potential for the burrowing owl to occasionally occur on the Project site as a migrant or rare winter visitor.

Vaux's Swift (*Chaetura vauxi*)

Vaux's swift is a California Species of Special Concern. This species is a fairly common spring and fall transient and a rare and irregular visitor along the coast (Garrett and Dunn 1981). This species forages over most terrains and habitats while feeding exclusively on flying insects; it shows an apparent preference for foraging over rivers and lakes (Zeiner et al. 1990a). This species nests in large hollow trees within redwood (*Sequoia* sp.), Douglas fir (*Pseudotsuga menziesii*), and other coniferous forests in the Coast Ranges, the Sierra Nevada, and possibly in the Cascades (Zeiner et al. 1990a). The Vaux's swift roosts in hollow trees and snags. They occasionally nest in chimneys and buildings, and are often in large flocks (Bent 1940). Suitable foraging habitat for this species is present on the Project site; however, this species does not

nest in the Project region. Therefore, Vaux's swift is expected to occur on the site during spring and fall migration, but is not expected to nest on the Project site.

Black Swift (*Cypseloides niger*)

Black swift is a California Species of Special Concern. This species is generally a rare and irregular transient in the coastal region (Garrett and Dunn 1981). This species nests locally in the Sierra Nevada, Cascade Range, San Gabriel, San Bernardino, and San Jacinto mountains as well as in coastal bluffs and mountains from San Mateo County south to San Luis Obispo County (Zeiner et al. 1990a). Nesting typically occurs in a moist crevice or cave on a sea cliff above the surf or on cliffs behind or adjacent to waterfalls in deep canyons (Zeiner et al. 1990a). This species feeds exclusively on flying insects caught during foraging flights high in the air (Zeiner et al. 1990a). In Orange County, a few transients have been reported, including a fall transient at San Joaquin Marsh in 1982 (Hamilton and Willick 1996). Suitable foraging habitat is present for this species on the Project site, but the species does not nest in the Project region. Therefore, black swift has limited potential to occur for foraging, but it is not expected to nest on the Project site. It only occurs in the coastal lowlands as a very rare migrant.

Southwestern Willow Flycatcher (*Empidonax traillii extimus*)

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 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 (*Populus* sp.) (USFWS 2005c). The willow scrub and disturbed mule fat scrub/goldenbush scrub vegetation on the Project site is not considered extensive enough to support this species. Therefore, southwestern willow flycatcher is not expected to occur on the Project site for foraging or nesting due to lack of suitable habitat.

On October 19, 2005, the USFWS published a final rule designating critical habitat for the southwestern willow flycatcher (USFWS 2005c). This final rule designated 120,824 acres in Arizona, California, Nevada, New Mexico, and Utah as critical habitat. Of that, 17,212 acres were designated in Kern, Santa Barbara, San Bernardino, and San Diego Counties, California. The Project site is not located in designated critical habitat for this species.

Loggerhead Shrike (*Lanius ludovicianus*)

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). They can often be found perched on fences and posts from which prey items (e.g., large insects, small mammals, and lizards) can be seen. This species was widely distributed across North America but has declined throughout most of its range in recent decades (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 habitats for this species are present on the Project site. Therefore, loggerhead shrike may occur on the Project site for foraging and nesting.

Least Bell's Vireo (*Vireo bellii pusillus*)

Least Bell's vireo is a federally and State-listed Endangered species. This subspecies was formerly considered to be a common breeder in riparian habitats throughout the Central Valley

and other low-elevation river systems in California and Baja California, Mexico (Franzreb 1989). It is now a rare and local summer resident of Southern California's lowland riparian woodlands. The least Bell's vireo breeds primarily in riparian habitats dominated by willows with dense understory vegetation (USFWS 1986). A dense shrub layer two to ten feet above ground is the most important habitat characteristic for this subspecies (Goldwasser 1981; Franzreb 1989). While destruction of lowland riparian habitats has played a large role in driving this subspecies to its present precarious situation, brood parasitism by brown-headed cowbirds is the most important factor in its decline (Garrett and Dunn 1981). Since local cowbird-control programs have been very effective in maintaining some populations (Small 1994), the subspecies has begun to recover. In the vicinity of the Project site, this subspecies has been reported from Sand Canyon Wash, Bonita Canyon Reservoir, Muddy Canyon, and the University of California, Irvine (CDFG 2009a). BonTerra Consulting Senior Biologist Brian Daniels determined that the willow scrub and disturbed mule fat scrub/goldenbush scrub vegetation on the Project site is not extensive enough and lacked sufficient dense understory vegetation to support breeding least Bell's vireo. Therefore, focused surveys for this species were not conducted. However, periodic checks made in June 2009 did not detect this species. Therefore, least Bell's vireo is not expected to occur on the Project site.

On February 2, 1994, the USFWS published a Final Critical Habitat for the least Bell's vireo, designating approximately 37,560 acres of land in California's Santa Barbara, Ventura, Los Angeles, San Bernardino, Riverside, and San Diego Counties (USFWS 1994c). The Project site is not located in designated critical habitat for this species.

California Horned Lark (*Eremophila alpestris actia*)

California horned lark is a CDFG Watch List species. This subspecies requires open habitats such as grasslands or agricultural fields that support little to no vegetation or short vegetation. It is found along the coast of Northern California, in the San Joaquin Valley, in the Coast Ranges south of San Francisco Bay, and in Southern California west of the deserts (Grinnell and Miller 1944). The horned lark occurs from Alaska and the Canadian arctic south to Mexico, with the northern populations strongly migratory and the southern populations primarily year-round residents (Beason 1995). Along the Southern California coast, Garrett and Dunn (1981) found this species to be a common migrant and winter resident that remains to breed locally. In the vicinity of the Project site, this subspecies has been reported near the Laguna Reservoir and the Bonita Canyon Reservoir (CDFG 2009a). Suitable foraging and nesting habitat for this subspecies is present on the Project site. The horned lark may occur as a migrant or winter visitor but is not expected to nest due to the high level of disturbance on the Project site.

Purple Martin (*Progne subis*)

Purple martin is a California Species of Special Concern. This species is an uncommon to rare local summer resident in a variety of woodland and low-elevation habitats in the State, where it is a rare migrant in spring and fall. This species feeds on flying insects as it forages over riparian areas, forests, and woodland; it is found in a variety of habitats during migration (Zeiner et al. 1990a). Purple martins are secondary cavity nesters, usually selecting a nest site in a conifer or California sycamore (*Platanus racemosa*) (Gallagher 1997). This species has declined because of loss of riparian habitat, removal of snags, and competition for nest cavities from European starlings (*Sturnus vulgaris*) and house sparrows (*Passer domesticus*) (Remsen 1978). In Orange County, this species nested at O'Neill Regional Park through 1981 and Upper Trabuco Canyon through 1988 (Hamilton and Wilick 1996; Gallagher 1997), but it has not been confirmed to breed in these areas in recent years. Suitable foraging habitat is present on the Project site for this species; however, no suitable nesting habitat is present. Therefore, purple martin may occur for foraging as a rare migrant but is not expected to occur for nesting.

Bank Swallow (*Riparia riparia*)

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 2009). Other colonies persist along the central coast from Monterey to San Mateo Counties and at several Counties in Northern California (Remsen 1978; CDFG 1989). Elsewhere in the State, this species is a migrant found primarily in riparian and other lowland habitats west of the desert (Zeiner et al. 1990a). Historically, this species nested at Huntington Beach, Newport Beach, and San Juan Capistrano, but no longer breeds in Orange County (Garrett and Dunn 1981, Hamilton and Willick 1996). It has been observed as a migrant in Upper Newport Bay and San Joaquin Marsh (Hamilton and Willick 1996). Suitable foraging habitat for this species is present on the Project site; however, no suitable nesting habitat is present. Therefore, the bank swallow may occur for foraging as a rare migrant, but it is not expected to nest on the Project site.

Coastal Cactus Wren (*Campylorhynchus brunneicapillus sandiegensis*)

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). Coastal populations of the cactus wren are found in Southern California from San Diego County north to Ventura County (Garrett and Dunn 1981) and are declining due to loss of habitat. Except for the Banning Pass area west of Palm Springs, the coastal populations of cactus wren appear to be isolated from interior populations. On the coastal slope of Southern California, cactus wrens inhabit coastal sage scrub and alluvial sage scrub habitats that have sufficient amounts of prickly pear cactus and/or cholla (*Opuntia* spp.). In the vicinity of the Project site, this species has been reported from the Newport Banning Ranch property. Suitable habitat for this subspecies (i.e., cactus) is not present on the Project site. Therefore, coastal cactus wren is not expected to occur on the Project site.

Coastal California Gnatcatcher (*Polioptila californica californica*)

Coastal California gnatcatcher is a federally listed Threatened species and a California Species of Special Concern. This subspecies occurs in most of Baja California and Mexico's arid regions, but this subspecies is extremely localized in the U.S. where it predominantly occurs in coastal regions of highly urbanized Los Angeles, Orange, Riverside, and San Diego Counties (Atwood 1992). In California, this subspecies is an obligate resident of coastal sage scrub vegetation types. Brood parasitism by brown-headed cowbirds and loss of habitat to urban development have been cited as causes of the coastal California gnatcatcher population decline (Unitt 1984; Atwood 1990). In the vicinity of the Project site, this subspecies has been reported from the Banning Ranch property. A limited amount of suitable habitat for this subspecies occurs on the Project site. Focused surveys for the coastal California gnatcatcher were conducted in spring/summer 2009; this species was observed nesting on the Project site. A pair nested in a coastal goldenbush shrub in the disturbed mule fat scrub/goldenbush scrub vegetation type on the Project site. The pair fledged three to four chicks during the survey period.

On December 19, 2007, the USFWS published a Final Rule revising critical habitat for the coastal California gnatcatcher. The revised critical habitat designates 197,303 acres of land in Ventura, Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties, California (USFWS 2007c). The Project site is within the revised critical habitat (Unit 7) for this species.

Yellow Warbler (*Dendroica petechia brewsteri*)

Yellow warbler is a California Species of Special Concern. It is the subspecies that breeds in Southern California (Dunn and Garrett 1997); most yellow warblers are migrants. This subspecies occurs in coastal areas from northwestern Washington south to western Baja California, Mexico (Dunn and Garrett 1997). In Southern California, yellow warblers breed locally in riparian woodlands but during migration they can forage in a variety of different habitat types. This species is threatened by loss of habitat and nest parasitism by brown-headed cowbirds (Remsen 1978). A limited amount of marginally suitable foraging habitat for this species is present on the Project site in the willow scrub and disturbed mule fat scrub/goldenbush scrub vegetation; however, no suitable nesting habitat is present. Therefore, yellow warbler has a limited potential to occur on the Project site as a migrant but is not expected for nesting.

Yellow-breasted Chat (*Icteria virens*)

Yellow-breasted chat is a California Species of Special Concern. For nesting, this species requires dense, brushy tangles near water and riparian woodlands supporting 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). This species is threatened by loss of habitat and possibly nest parasitism by the brown-headed cowbird (Remsen 1978). In the vicinity of the Project site, this species has been reported from Bonita Canyon Reservoir (CDFG 2009a). A limited amount of marginally suitable foraging habitat for this species is present on the Project site in the willow scrub and disturbed mule fat scrub/goldenbush scrub vegetation; however, no suitable nesting habitat is present. Therefore, yellow-breasted chat has a limited potential to occur on the Project site as a migrant but it is not expected for nesting.

Southern California Rufous-crowned Sparrow (*Aimophila ruficeps canescens*)

Southern California rufous-crowned sparrow is a CDFG Watch List species. In coastal Southern California, rufous-crowned sparrows are considered fairly common in scrub vegetation types and other habitats with grasses and widely spaced low shrubs. They also prefer slopes with rock outcroppings. This subspecies is present throughout the year in Southern California. This species is threatened by loss of habitat due to development. In the vicinity of the Project site, this species has been reported just north of Laguna Beach (CDFG 2009a). A limited amount of potentially suitable habitat for this species is present on the site; however, the Southern California rufous-crowned sparrow is not expected to occur as the Project site is outside the known range for this species.

Grasshopper Sparrow (*Ammodramus savannarum*)

Grasshopper sparrow is a California Species of Special Concern. It breeds in moderately open grasslands and prairies with patchy bare ground, generally avoiding grasslands with extensive shrub cover (Vickery 1996). This species forages exclusively on the ground, with exposed bare ground critical for foraging. In California, this species breeds in most coastal Counties, the western Sacramento Valley, and along the western edge of the Sierra Nevada (Vickery 1996). In the vicinity of the Project site, this species has been reported near San Diego Creek in Newport Beach (CDFG 2009a). Potentially suitable foraging and nesting habitat for this species occurs on the Project site; however, the grasshopper sparrow is not expected to occur due the high level of disturbance on the Project site.

Bell's Sage Sparrow (*Amphispiza belli belli*)

Bell's sage sparrow is a CDFG Watch List species. This coastal subspecies is an uncommon to fairly common local resident in the interior foothills of coastal Southern California. Bell's sage sparrow breeds in low, dense chamise chaparral and in dry scrub vegetation types, often with stands of cactus (Garrett and Dunn 1981). This species is threatened by loss of habitat due to development and likely nest parasitism by the brown-headed cowbird (Ehrlich et al. 1988). A limited amount of potentially suitable habitat for this subspecies is present on the Project site; however, the Bell's sage sparrow is not expected to occur since the Project site is outside the known range of this species.

Belding's Savannah Sparrow (*Passerculus sandwichensis beldingi*)

Belding's savannah sparrow is a State-listed Endangered species. The Belding's subspecies of the savannah sparrow is resident of salt marshes from Goleta in Santa Barbara County, south to El Rosario in Baja California, Mexico (Unitt 1984). Nesting habitat is usually dominated by pickleweed, with foraging often occurring far out into the marsh (Zembal et al. 1988). This species prefers the upper littoral zone of tidal marshes, that is, areas flooded only by high spring or storm tides (Unitt 1984). In the vicinity of the Project site, this species has been reported from the mouth of the Santa Ana River (CDFG 2009a). Suitable habitat for this species is not present on the Project site. Therefore, Belding's savannah sparrow is not expected to occur on the Project site.

Large-billed Savannah Sparrow (*Passerculus sandwichensis rostratus*)

Large-billed savannah sparrow is a California Species of Special Concern. This subspecies breeds in the Colorado River Delta and was once common during winter along beaches and coastal estuaries from Santa Barbara south along the coast (Grinnell and Miller 1944; Garrett and Dunn 1981). It is now a rare to uncommon winter visitor (Garrett and Dunn 1981; Hamilton and Willick 1996). Its decline in the region is thought to be due to the drying up of marshes at the mouth of the Colorado River (Garrett and Dunn 1981) since this subspecies occurs in saline emergent wetlands (Zeiner et al. 1990a). Small numbers have been regularly detected at the Seal Beach National Wildlife Refuge, with a few records from Bolsa Chica and Upper Newport Bay and one record at the San Joaquin Marsh (Hamilton and Willick 1996). No suitable foraging habitat for this subspecies occurs on the Project site; it does not nest in the Project region. Therefore, the large-billed savannah sparrow is not expected to occur on the Project site for foraging or nesting.

Tricolored Blackbird (*Agelaius tricolor*)

Tricolored blackbird is a California Species of Special Concern. These colonially nesting birds prefer to breed in marsh vegetation of bulrushes (*Scirpus* sp.) 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 but no suitable nesting habitat for this species is present on the Project site. Since the Project site is not near any known nesting colonies, the tricolored blackbird is not expected to occur.

Mammals

Southern California Saltmarsh Shrew (*Sorex ornatus salicornicus*)

Southern California saltmarsh shrew is a California Species of Special Concern. The saltmarsh shrew occurs in fresh and salt water marshes; in dense vegetation adjacent to rivers, lakes, and streams; and also in grassland, chaparral, and woodland vegetation types (Hoffman, in Wilson and Ruff 1999). In the vicinity of the Project site, this subspecies has been historically reported from Seal Beach (1968 record) and Newport Lagoon (1933 record) (CDFG 2009a). No suitable habitat for this species is present on the Project site. Therefore, the Southern California saltmarsh shrew is not expected to occur.

Pallid Bat (*Antrozous pallidus*)

Pallid bat is a California Species of Special Concern. It occurs in a wide variety of habitats including grasslands, shrublands and woodlands, but is most common in open habitats with rocky areas for roosting (Zeiner et al. 1990b). Roosting habitat consists of caves, crevices, mines, and occasionally hollow trees and buildings (Whitaker 1980; Zeiner et al. 1990b). This species occurs throughout California except for the high Sierra Nevada from Shasta to Kern Counties and in the northwestern portion of the State (Zeiner et al. 1990b). Suitable foraging habitat but no suitable roosting habitat for this species occurs on the Project site. Therefore, pallid bat may occur for foraging but is not expected to roost on the Project site.

Townsend's Big-eared Bat (*Corynorhinus townsendii*)

Townsend's big-eared bat is a California Species of Special Concern. The pale big-eared bat (*C. t. pallescens*) is one of two subspecies of the Townsend's big-eared bat that occurs throughout most of California (Williams 1986). The Townsend's big-eared bat, including both subspecies, is considered an uncommon year-round resident throughout much of California (Zeiner et al. 1990b). The Townsend's big-eared bat occupies a variety of habitats including oak woodlands, arid deserts, grasslands, and high-elevation forests and meadows (Hall 1981). Known roosting sites in California include mine tunnels, limestone caves, lava tubes, buildings, and other man-made structures (Williams 1986). The roosts, especially larger breeding colonies, are especially susceptible to disturbance (Williams 1986). Suitable foraging habitat but no suitable roosting habitat for this species occurs on the Project site. The pale big-eared bat is not expected to occur due to the lack of potential roost sites in coastal lowlands of the region and the high level of disturbance on the Project site.

Western Yellow Bat (*Lasiurus xanthinus*)

Western yellow bat is not formally listed by the resource agencies, but is tracked by the CNDDB as a CDFG Special Animal. Little is known about its habitat, but it is known to roost in leafy vegetation (Best et al. 1998). This species is associated with dry thorny vegetation of the Mexican Plateau, coastal western Mexico, and the deserts of the southwestern U.S. (Best et al. 1998). Suitable foraging habitat but no suitable roosting habitat for this species is present on the Project site. Therefore, western yellow bat may occur for foraging but not for roosting on the Project site.

Western Mastiff Bat (*Eumops perotis californicus*)

Western mastiff bat is a California Species of Special Concern. It is found in many open semi-arid to arid habitats including conifer and deciduous woodlands, coastal scrub, grasslands, palm oases, chaparral, desert scrub, and urban (Zeiner et al. 1990b). This subspecies occurs in Southern California. The western mastiff bat is a very wide-ranging and high-flying insectivore

that typically forages in open areas with high cliffs. It roosts in small colonies in crevices on cliff faces. It occurs in the southeastern San Joaquin Valley and Coastal Ranges from Monterey County southward through Southern California, and from the coast eastward to the Colorado Desert (Zeiner et al. 1990b). Threats to this subspecies include loss of habitat due to development, drainage of marshes, and conversion of land to agriculture (Williams 1986). In the vicinity of the Project site, this species has been reported from the San Joaquin Reserve and Huntington Central Park (CDFG 2009a). Suitable foraging habitat but no suitable roosting habitat for this subspecies occurs on the Project site. The western mastiff bat is not expected to occur due to the lack of potential roost sites in coastal lowlands of the region and the high level of disturbance on the Project site.

Pocketed Free-tailed Bat (*Nyctinomops femorosaccus*)

Pocketed free-tailed bat is a California Species of Special Concern. This species is known to occur in areas with ponds, streams, or arid deserts that provide suitable foraging habitats for this species. It primarily roosts in crevices in rugged cliffs, slopes, and tall rocky outcrops (Best et al. 1998). This bat occurs in the southwestern U.S. to south-central Mexico (Best et al. 1998). There is suitable foraging habitat and limited potentially suitable roosting habitat on the bluffs overlooking West Coast Highway. Therefore, pocketed free-tailed bat may occur on the Project site for foraging and roosting.

Big Free-tailed Bat (*Nyctinomops macrotis*)

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). In the vicinity of the Project site, this species has been reported from Corona del Mar (CDFG 2009a). There is suitable foraging habitat and limited potentially suitable roosting habitat on the bluffs overlooking West Coast Highway. Therefore, big free-tailed bat may occur on the Project site for foraging and roosting.

Pacific Pocket Mouse (*Perognathus longimembris pacificus*)

Pacific pocket mouse is a federally Endangered species and a California Species of Special Concern. This subspecies historically occurred coastally from Los Angeles County south to San Diego County (USFWS 1994b). This subspecies prefers coastal dune, coastal strand, and coastal sage scrub vegetation types with alluvial sands near the immediate coast (USFWS 1994b). All locations of this subspecies are known to occur within 2.5 miles of the coast. Currently, this species is only known to occur in four locations: one population in the Dana Point Headlands, two near San Mateo Creek in Camp Pendleton, and one north of the Santa Margarita River (USFWS 1998). This species was also reported from Spyglass Hill in the San Joaquin Hills (1971); however, a trapping effort in 1993 resulted in no detection of this species (USFWS 1998). Limited potentially suitable habitat is present on the Project site. However, the Pacific pocket mouse is not expected to occur on the Project site due to a lack of detection of this species during extensive trapping efforts previously conducted in the Project region.

No critical habitat has been designated for this species.

South Coast Marsh Vole (*Microtus californicus stephensi*)

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 Orange County and Playa del Rey and Sunset Beach in Los Angeles County (Williams 1986). Williams (1986) reports that

human development in the region may have more severely restricted voles to the extant marshes, and catastrophic episodes of flooding or epidemics may pose a greater threat to this subspecies than to other California voles. In the vicinity of the Project site, this subspecies has been reported from Seal Beach and historically from Sunset Beach (1916 record; CDFG 2009a). Suitable habitat for this species is not present on the Project site. Therefore, the salt marsh vole is not expected to occur on the Project site.

San Diego Desert Woodrat (*Neotoma lepida intermedia*)

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). Threats to this species involve the loss of habitat due to development. Potentially suitable habitat for this species is present on the Project site. Therefore, San Diego desert woodrat may occur on the Project site.

Southern Grasshopper Mouse (*Onychomys torridus ramona*)

Southern grasshopper mouse is a California Species of Special Concern. It is a territorial, predatory rodent of grassland and sparse scrub vegetation types that 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 primary threat to this subspecies is the loss of habitat due to development. Suitable habitat for this subspecies occurs on the Project site. Therefore, southern grasshopper mouse may occur on the Project site.

American Badger (*Taxidea taxus*)

American badger is a California Species of Special Concern. This species occupies a wide variety of habitats and ranges throughout the State except for the coastal redwood forests of the extreme northwest. In Southern California, this species is most commonly associated with grasslands and other relatively open habitats with friable, uncultivated soils. In the vicinity of the Project site, this species has been reported as a road kill immediately adjacent to the Project site (CDFG 2009a). Suitable habitat for this species is present on the Project site. However, the American badger is not expected to occur due to the high level of disturbance, and this species is generally absent from urban habitats in the region.

3.4 NATURAL COMMUNITIES CONSERVATION PLAN (NCCP)

On August 30, 1991, the California Fish and Game Commission considered a petition in support of listing the coastal California gnatcatcher as a State Endangered species. The Commission decided not to list the coastal California gnatcatcher in favor of pursuing preparation of an NCCP program, as proposed by Assembly Bill 2172 (AB 2172/Natural Communities Conservation Planning Act). AB 2172 authorizes the CDFG to enter into agreements with any person for the purpose of preparing and implementing NCCPs and preparing guidelines for development and implementation of 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 preparing and implementing 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 California Endangered Species Act and the Federal Endangered Species Act (FESA)

is costly and historically ineffective as a mechanism for protection from or the prevention of extinction of plant and wildlife species, 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 FESA that authorized 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 the State and federal resource agencies, local jurisdictions, utility companies, the Transportation Corridor Agencies, and major private landowners—has 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.

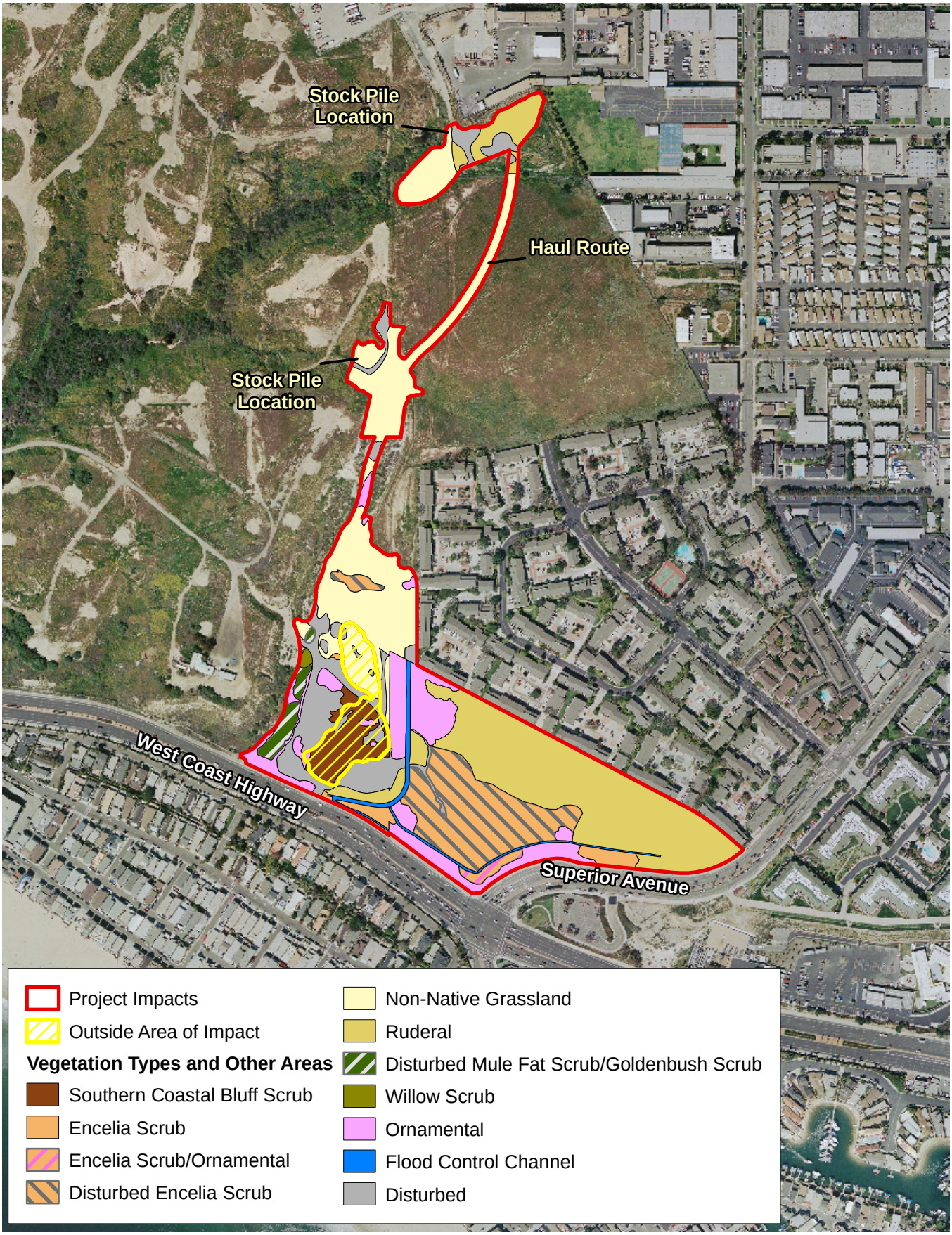
Implementation of the NCCP/HCP began when the Central/Coastal Subregional NCCP/HCP program was completed and approved in 1996. The USFWS monitors the plan to ensure the success of the implementation program. The design of the Central/Coastal NCCP/HCP Subregion was intended to preserve the most biologically 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 subject to the provisions of Chapter 4.4.1 of the NCCP/HCP. Existing Use Areas comprise areas with important populations of Identified Species but which are geographically removed from the Reserve System (i.e., these areas exist as "islands" of Identified Species populations) such that they do not provide primary connectivity functions. These areas include existing open space maintained by community and homeowner 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 IA. 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 1996).

SECTION 4.0 PROJECT IMPACTS

4.1 INTRODUCTION

The determination of impacts in this analysis is based on a comparison of maps depicting project limits and maps of biological resources on the Project site. All construction activities, including staging, dirt export areas, a haul road, and equipment areas, are assumed to be within the limits of disturbance identified on Exhibit 7. Should any of the impact areas extend beyond the limits shown, additional analysis may be required. Both direct and indirect impacts on biological resources have been evaluated. Direct impacts are those that involve the initial loss of habitats due to grading, construction, and construction-related activities. Indirect impacts are



D:/Projects/Newport/J016/ex_BioTech_impacts.mxd

Project Impacts

Exhibit 7

Sunset Ridge Park

N W E S

500 250 0 500 Feet

BonTerra CONSULTING

(REV: JFG 10-16-09) R:\Projects\Newport\J016\Graphics\BioTech\ex7_impacts.pdf

those that would be related to impacts on the adjacent remaining habitat due to construction activities (e.g., noise, dust) or operation of the Project (e.g., human activity).

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 species of plants or wildlife;
- non-listed species that meet the criteria in the definition of Rare or Endangered in the CEQA Guidelines (i.e., §15380);
- species designated as California Species of Special Concern;
- streambeds, wetlands, and their associated vegetation;
- habitats suitable to support a federally or State-listed Endangered or Threatened species of plants or wildlife;
- habitat, other than wetlands, considered special status by regulatory agencies (e.g., USFWS, CDFG) or resource conservation organizations;
- criteria in the Central/Coastal NCCP/HCP; and
- other species or issues of concern to regulatory agencies or conservation organizations.

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

4.2 SIGNIFICANCE CRITERIA

The environmental impacts relative to biological resources are assessed using impact significance criteria that mirror the policy contained 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 CEQA Section 15064.7 (Thresholds of Significance), each public agency is encouraged to develop and adopt, by ordinance, resolution, rule or regulation, their own significance thresholds that the agency would use in determining the significance level of the impact. A significant 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, CEQA provides guidance primarily in Section 15065, Mandatory Findings of Significance, and the CEQA Guidelines, Appendix G, Environmental Checklist Form. Section 15065(a) states that a project may have a significant effect where:

> The project 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 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 were considered through the checklist of questions answered during the Initial Study process used 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 in an EIR. For each of the thresholds identified below, the section of CEQA upon which the threshold is based has been provided. For the purpose of this analysis, impacts to biological resources are considered significant (before calculating the offsetting impacts of mitigation measures) if one or more of the following conditions would result from implementation of the proposed Project:

1. The project has the potential to substantially degrade the quality of the environment (§15065[a]).

2. The project has the potential to substantially reduce the habitat of any fish or wildlife species (§15065[a]).

3. The project will cause fish or wildlife populations to drop below self-sustaining levels (§15065[a]).

4. The project will threaten to eliminate a plant or animal community (§15065[a]).

5. The project will reduce the number or restrict the range of an Endangered, Rare, or Threatened species (§15065[a]).[3]

6. The project has 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 (CEQA Guidelines, Appendix G, IV[a]).

7. The project has 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 (CEQA Guidelines, Appendix G, IV[b]).

8. The project has 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,

[3] Endangered and threatened species as used in this threshold are those listed by the USFWS and/or CDFG as Threatened or Endangered. Section 15380 of CEQA indicates that a lead agency can consider a non-listed species (e.g., CNPS List 1B plants) to be Endangered, Rare, or Threatened for the purposes of CEQA if the species can be shown to meet the criteria in the definition of "Rare" or "Endangered." For the purposes of this discussion, the current scientific knowledge on the population size and distribution for each special status species was considered in determining if a non-listed species met the definitions for "Rare" and "Endangered" according to Section 15380 of CEQA.

coastal, etc.) through direct removal, filling, hydrological interruption, or other means (CEQA Guidelines, Appendix G, IV[c]).

9. The project interferes substantially with the movement of any native or migratory fish or wildlife species; inhibits established native resident or migratory wildlife corridors; or impedes the use of native wildlife nursery sites (CEQA Guidelines, Appendix G, IV[d]).

10. The project conflicts with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (CEQA Guidelines, Appendix G, IV[e]).

11. The project conflicts with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State Habitat Conservation Plan (CEQA Guidelines, Appendix G, IV[f]).

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 NCCP/HCP Subregion. This subregion is bound by the State Route 55 and State Route 91 freeways to the north; the Santa Ana River and Pacific Ocean to the west; El Toro Road and Interstate 5 (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.

4.3 DIRECT IMPACTS

4.3.1 Plant and Vegetation Type Impacts

A total of 25.34 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, and illustrated in Exhibit 7.

TABLE 4
VEGETATION TYPES AND OTHER AREAS IMPACTED
BY THE PROPOSED PROJECT

Vegetation Types and Other Areas	Existing (Acres)	Impact (Acres)
Southern Coastal Bluff Scrub	1.15	0.14
Encelia Scrub	0.53	0.53
Encelia Scrub/Ornamental	0.21	0.21
Disturbed Encelia Scrub	3.64	3.64
Non-Native Grassland	6.58	6.03
Ruderal	7.75	7.75
Disturbed Mule Fat Scrub/Goldenbush Scrub	0.48	0.48
Willow Scrub	0.06	0.06
Ornamental	3.19	3.13
Flood Control Channel	0.49	0.49
Disturbed	3.18	2.88
Total	**27.26**	**25.34**

Coastal Sage Scrub

The proposed Project would impact 0.41 acre of coastal sage scrub (i.e., areas mapped as southern coastal bluff scrub [0.14 acre] and Encelia scrub [0.27 acre]). Impacts on these coastal sage scrub vegetation types would be considered significant because these vegetation types areconsidered to be special status due to there decline in the Project region as well as there potential to support special status species. Implementation of Mitigation Measure 1 would reduce this impact to a less than significant level. In addition, the City would be required to follow the construction minimization measures listed in Mitigation Measure 5.

The proposed Project would impact approximately 0.26 acre of Encelia scrub, 0.21 acre of Encelia scrub/ornamental, and 3.64 acres of disturbed Encelia scrub. Impacts on these vegetation types are not considered significant because of their fragmentation from high value areas, presence of invasive non-native species, maintenance of concrete v-ditch under the shrubs, presence of trash, proximity to high foot/bicycle, and vehicle traffic, and are not expected to support gnatcatchers during the nesting season. Therefore, no mitigation would be required.

Riparian/Jurisdictional Resources

The USACE has determined that no resources under the jurisdiction of the USACE occur within the limits of disturbance of the proposed Project. Also, no isolated resources occur within the Project site. Since the RWQCB jurisdictional boundaries are defined as those determined by the USACE under “Waters of the U.S.”, including isolated waters, no connected or isolated non-wetlands waters occur within the Project site or limits of project disturbance. Based on current project design plans, the Project will not impact resources under the jurisdiction of the USACE or the RWQCB.

Only areas under the jurisdiction of the CDFG are present on the Project site. A total of 0.44 acre of streambed under the jurisdiction of the CDFG would be impacted by the proposed Project. In addition, the proposed Project would impact 0.06 acre of riparian vegetation (i.e., the area mapped as willow scrub). The impact on CDFG jurisdictional areas and riparian vegetation would be considered significant. Implementation of Mitigation Measure 2 would reduce impacts to these resources to less than significant.

Non-Native Grassland, Ruderal, Ornamental, Flood Control Channel, and Disturbed

The proposed Project would impact 6.03 acres of non-native grassland, 7.75 acres of ruderal vegetation, 3.13 acres of ornamental vegetation, and 0.49 acre of flood control channel. The proposed Project would also impact 2.88 acres of disturbed areas. These areas generally have low biological value because they are composed of unvegetated areas or are vegetated with non-native species. These areas generally provide limited habitat for native plant and wildlife species although they may occasionally be used by native species. Therefore, impacts on these areas would not be considered significant, and no mitigation would be required.

4.3.2 Wildlife Impacts

To assess impacts on wildlife, the total impacts on particular vegetation types that provide habitat for wildlife was assessed. Exhibit 7 illustrates the vegetation types (i.e., wildlife habitat) that would be impacted as a result of proposed Project construction. The following discussion of wildlife impacts focuses on the common species occurring on the Project site.

General Habitat Loss and Wildlife Loss

Construction of the proposed Project would result in the loss of approximately 5.06 acres of native habitat that provides 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 20.28 acres of non-native habitats (non-native grassland, ruderal, ornamental, flood control channel, and disturbed) that provide lower-quality wildlife habitat. However, 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 in the proposed 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 loss of native and non-native habitats that provide wildlife habitat is considered an adverse impact. However, the loss of habitat would not be expected to reduce wildlife populations below self-sustaining levels in the region. Therefore, this impact would be considered adverse, but less than significant.

Vegetation on the Project site could support nesting birds. Impacts to migratory nesting birds are prohibited under the Migratory Bird Treaty Act (MBTA). In addition, common raptor species such as red-tailed hawk have potential to nest on the Project site. Should an active raptor nest (common or special status species) be found on the Project site, the loss of the nest would be considered a violation of *California Fish and Game Code* Sections 3503, 3503.5, and 3513. The loss of any active nesting bird/raptor nest occurring on the Project site would be considered significant. Impacts on nesting birds/raptors would be reduced to less than significant with the implementation of Mitigation Measure 3 and 4.

Wildlife Movement and Habitat Fragmentation

The proposed Project is located at the southeastern end of a large area of open space. Wildlife movement opportunities in this area are already constrained by the extensive urbanization in the Project vicinity. Therefore, implementation of the proposed Project would not impact regional wildlife movement or result in fragmentation of habitat. Therefore, impacts on wildlife movement would be considered less than significant and no mitigation would be required.

4.3.3 Special Status Biological Resource Impacts

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.

Plants

Focused surveys for special status plant species were conducted in spring/summer 2009. California boxthorn, a CNPS List 4.2 species, was the only special status plant species found on the Project site. Impacts on CNPS List 4 (a watch list) species are considered less than significant and no mitigation is required. In addition, the majority of the southern coastal bluff scrub (the vegetation type this species was found in) will remain as open space and not be impacted by the proposed Project.

Wildlife

Invertebrates

San Diego fairy shrimp and Riverside fairy shrimp are not expected to occur on the Project site due to lack of suitable habitat. Therefore, there would be no impact on these species, and no mitigation would be required.

Fish

Tidewater goby is not expected to occur on the Project site due to lack of suitable habitat. Therefore, there would be no impact on this species, and no mitigation would be required.

Amphibians

Western spadefoot and arroyo toad are not expected to occur on the Project site due to lack of suitable habitat. Therefore, there would be no impact on these species, and no mitigation would be required.

Reptiles

Southwestern pond turtle, coast (San Diego) horned lizard, 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 lack of suitable habitat and high level of disturbance on the Project site. Therefore, there would be no impact on these species; no mitigation would be required.

The silvery legless lizard has the potential to occur on the Project site. Due to the limited amount of habitat loss relative to the availability of habitat for this species in the region, impacts on this species would be considered adverse, but less than significant; no mitigation would be required.

Birds

Twenty-five bird species are not expected to occur on the Project site. Therefore, there would be no impact on these species, and no mitigation would be required. These species are California brown pelican, least bittern, golden eagle, Swainson's hawk, bald eagle, osprey, California black rail, light-footed clapper rail, western snowy plover, black skimmer, California least tern, elegant tern, western yellow-billed cuckoo, black swift, southwestern willow flycatcher, least Bell's vireo, purple martin, bank swallow, coastal cactus wren, Southern California rufous-crowned sparrow, grasshopper sparrow, Bell's sage sparrow, Belding's savannah sparrow, large-billed savannah sparrow, and tricolored blackbird.

Five bird species have potential to occur on the Project site for some part of the year due to the presence of suitable habitat. However, these species are not expected to nest on the Project site either because they nest outside the Project region, the Project site lacks suitable nesting habitat or the level of disturbance on the Project site is too high. These species are long-billed curlew, Vaux's swift, California horned lark, yellow warbler, and yellow-breasted chat. Since these species are not expected to nest on the Project site, Project implementation would not result in the loss of nesting habitat. The minor loss of potential foraging habitat for these species is not considered significant because the loss would not substantially affect these species. Therefore, no mitigation would be required.

The proposed Project would result in the loss of suitable foraging habitat 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, short-eared owl, and long-eared owl. Of these species, one is State-listed as Endangered: the American peregrine falcon. Impacts on foraging habitat for these species would be considered adverse, but would not be expected to appreciably affect the overall population of these species given the amount of potentially suitable foraging habitat in the immediate vicinity. Therefore, impacts on these species would be considered adverse, but less than significant; no mitigation would be required.

The burrowing owl is not currently expected to occur on the Project site because it was not observed during focused surveys conducted in 2008/2009. However, limited suitable habitat for this species occurs on the Project site, and this species may occur occasionally as a migrant or rare winter visitor. If this species returns to the site, impacts on burrowing owls would be considered significant because the loss of a wintering/migrant population in the coastal area of Orange County would substantially affect the local population. Implementation of Mitigation Measure 4 would reduce the potential impacts on this species to less than significant.

The loggerhead shrike has the potential to occur on the Project site. Due to the limited amount of habitat loss relative to the availability of habitat for these species in the region, impacts on this species would be considered adverse but less than significant; no mitigation would be required.

A total of one territory of the federally Threatened coastal California gnatcatcher was observed during the 2009 focused surveys. The Project is expected to impact a total of 0.68 acre (0.14 acre southern coastal bluff scrub, 0.48 acre disturbed mule fat scrub/goldenbush scrub[4], and 0.06 acre willow scrub[5]) of habitat for this species. The Encelia scrub, Encelia scrub/ornamental, and disturbed Encelia scrub on the Project site would not be considered utilized by the gnatcatcher due to the periodic mowing and traffic/pedestrian edge effects in this area. 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. The impact on this species would be considered significant. Implementation of Mitigation Measure 1 and 5 would reduce this impact to a less than significant level.

Mammals

The Southern California saltmarsh shrew, Townsend's big-eared bat, western mastiff bat, Pacific pocket mouse, south coast marsh vole, and American badger are not expected to occur on the Project site due to a lack of suitable habitat and/or high level of disturbance on the Project site. Therefore, there would be no impact on these species, and no mitigation would be required.

The San Diego desert woodrat and southern grasshopper mouse have the potential to occur on the Project site. Due to the limited amount of habitat loss relative to the availability of habitat for these species in the region, impacts on these species would be considered adverse but less than significant, and no mitigation would be required.

Several bat species have the potential to forage on the Project site: pallid bat, western yellow bat, pocketed free-tailed bat, and big free-tailed bat. The pocketed free-tailed bat and big

[4] The disturbed mule fat scrub/goldenbush scrub vegetation type is included with the gnatcatcher impacts due to this area being occupied by the coastal California gnatcatcher.

[5] The willow scrub vegetation type is included with the gnatcatcher impacts due to this area being occupied by the coastal California gnatcatcher.

free-tailed bat also have a limited potential to roost on the Project site. Due to the limited amount of habitat loss relative to the availability of habitat for these species in the region, impacts on these species would be considered adverse but less than significant, and no mitigation would be required.

4.4 INDIRECT IMPACTS

Indirect impacts are those related to disturbance by 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 (noise, lighting, and human activity), of the construction and operation of the proposed Project.

4.4.1 Noise Impacts

Noise levels over present conditions on the Project site would temporarily occur during Project construction. These temporary noise impacts have the potential to disrupt foraging, nesting, roosting, and denning activities for a variety of wildlife species. These impacts are considered adverse but not significant for most wildlife species because the work would be temporary and localized and because the proposed Project would not impact a substantial population of these species. In addition, the use of large construction equipment (e.g., earthmovers) during the removal of on-site vegetation shall be restricted between February 15 and August 31 to avoid impacts to gnatcatchers, which would also off-set adverse noise impacts to other wildlife species in the area during this time frame.

4.4.2 Invasive Exotic Plant Species

The proposed Project includes a landscape plan that has incorporated the use of native coastal sage scrub species, drought tolerant species, and non-invasive perennials. Plantings in the interior, active park areas would consist of ornamental, manicured landscaping, including turf. Because the proposed landscape plan has incorporated native plant material while limiting the use of invasive plant species, the Project is not expected to significantly degrade on-site or off-site resources with invasive plant species. Therefore, no mitigation is required.

4.4.3 Night Lighting

Currently, the Project site is surrounded for the most part by urban development. No nighttime lighting, other than for public safety, is proposed and no nighttime park uses are proposed. Therefore, there would be no impact on biological resources as a result of night lighting, and no mitigation is required.

4.4.4 Human Activity

The increase in human activity on the park site would potentially increase the disturbance of adjacent natural open space. Human disturbance could disrupt normal foraging and breeding behavior of wildlife remaining in the area adjacent to the development, diminishing the value of the habitat. Wildlife stressed by noise may be extirpated from the natural open space adjacent to the development, leaving only wildlife tolerant of human activity. This impact would be potentially significant due to the high biological value areas to the west of the Project site. Implementation of Mitigation Measure 6 would reduce this impact to less than significant.

SECTION 5.0 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.

5.1 MITIGATION MEASURES FOR DIRECT IMPACTS

Mitigation Measure 1: Coastal Sage Scrub

The loss of coastal sage scrub (0.41 acre) within the impact area is considered a significant impact. Impacted coastal sage scrub shall be restored on site or in suitable off-site locations in the Newport Beach/Costa Mesa area at a ratio of 2:1 (two acres restored for every acre removed). A 2:1 ratio for mitigation is appropriate for the habitat impacted which is non-typical for gnatcatchers and subject to degradation by invasive, non-native species. A coastal sage scrub restoration plan shall be prepared by the City prior to issuance of grading permits. The City shall be responsible for implementing the restoration plan. Restoration shall consist of seeding and planting containers of appropriate coastal sage scrub species and cactus cuttings. The restoration areas shall be maintained and monitored by the City until the success criteria documented in the restoration plan have been met.

The restoration plan 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 will supervise and implement the plan shall be specified.

2. ***Site selection.*** The site shall be located in a dedicated open space area and shall be contiguous with other natural open space areas.

3. ***Site preparation and planting implementation.*** The site preparation shall include:

    - protection of existing native species;
    - trash and weed removal;
    - native species salvage and reuse (i.e., duff);
    - soil treatments (i.e., imprinting, decompacting);
    - erosion control measures (i.e., rice or willow wattles); and
    - seed mix application.

4. ***Schedule.*** Establishment of restoration/revegetation sites shall be conducted between October and January 30. Seeding and planting of container plants shall take place immediately after preparation of the restoration sites.

5. ***Maintenance plan/guidelines.*** The maintenance plan shall include:

    - weed control;
    - herbivory control;

- trash removal;
- irrigation system maintenance;
- maintenance training; and
- replacement planting.

6. ***Monitoring Plan.*** The monitoring plan shall be conducted for three to five years, depending upon the performance of the mitigation site, and shall include:
    - qualitative monitoring (i.e., photographs and general observations);
    - quantitative monitoring (i.e., randomly placed transects);
    - performance criteria;
    - monthly reports for the first year and bimonthly reports thereafter; and
    - annual reports for three to five years.
7. ***Long-term preservation.*** Long-term preservation of the site shall be outlined in the conceptual mitigation plan to ensure the mitigation site is not impacted by future development. A conservation easement and a performance bond shall be secured prior to implementation of the site.
8. ***Identification of performance standards for the revegetation of coastal sage scrub.*** Restoration will be considered successful at three years if the percent cover and species diversity of the restored and/or created habitat areas are similar to percent cover and species diversity of adjacent existing habitats, as determined by quantitative testing of existing, restored, and created habitat areas.

In addition, earth-moving equipment shall avoid maneuvering in areas outside the identified limits of grading in order to avoid disturbing open space areas that will remain undeveloped. Prior to grading, the natural open space limits shall be marked by the Construction Supervisor and the Project Biologist. These limits shall be identified on the grading plan. No earth-moving equipment shall be allowed within the open space areas.

Mitigation Measure 2: Riparian Vegetation and Jurisdictional Resources

A Jurisdictional Delineation Report shall be submitted to each regulatory agency (i.e., the USACE, the CDFG, and the RWQCB with a request for their concurrence. To facilitate this concurrence, the City shall coordinate and participate in a "Pre-Application Field Meeting" with the USACE, the CDFG, and the RWQCB. The meeting shall be scheduled prior to the submittal of permit applications. The meeting shall review (1) the Project; (2) the impacts that would result from Project implementation; and (3) the proposed mitigation. The intent of this meeting is to obtain a formal Jurisdictional Determination by the USACE and the CDFG.

Upon receipt of the Jurisdictional Determination, the City shall submit to the CDFG the required permit applications required for direct or indirect impacts on areas within this agency's jurisdictions. The City shall be obligated to those mitigation measures required by the resource agency relative to impacts on CDFG jurisdiction. Mitigation shall include, but is not limited to, an in-lieu fee, avoidance, enhancement, or replacement of in-kind biological value.

Prior to the final submittal of an application for a CDFG agreement, the City shall develop a riparian restoration and enhancement plan for the CDFG. The objective of the plan will be to ensure no net loss of habitat values as a result of the Project activities. This may include preservation, restoration, and enhancement within the Project site as well as off site. The mitigation ratio will be negotiated with the resource agencies. The City will implement the mitigation plan as approved by the resource agencies and according to guidelines and performance standards. Prior to implementation, a detailed riparian restoration and enhancement plan will be developed and will contain the following items.

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

2. ***Site selection.*** Site selection for restoration and enhancement mitigation shall be determined in coordination with the City and resource agencies. The mitigation site(s) shall be located within the Project site in a dedicated open space area or on land that shall be dedicated and/or purchased off site.

3. ***Site preparation and planting implementation.*** The site preparation shall include:

    - protection of existing native species;
    - trash and weed removal;
    - native species salvage and reuse (i.e., duff);
    - soil treatments (i.e., imprinting, decompacting);
    - temporary irrigation installation;
    - erosion control measures (i.e., rice or willow wattles);
    - seed mix application; and
    - container species.

4. ***Schedule.*** A schedule shall be developed which includes planting to occur in late fall and early winter, between October and January 30.

5. ***Maintenance plan/guidelines.*** The maintenance plan shall include:

    - weed control;
    - herbivory control;
    - trash removal;
    - irrigation system maintenance;
    - maintenance training; and
    - replacement planting.

6. ***Monitoring Plan.*** The site shall be monitored and maintained for five years to ensure successful establishment of riparian habitat within the restored and created areas. The monitoring plan shall include:

    - qualitative monitoring (i.e., photographs and general observations);
    - quantitative monitoring (i.e., randomly placed transects);
    - performance criteria as approved by the resource agencies;
    - monthly reports for the first year, and bimonthly for following years; and
    - annual reports from three to five years, which will be submitted to the resource agencies annually.

    Although the monitoring plan is scheduled to last five years, if there is successful coverage prior to five years, the City may request to be released from monitoring requirements by the USACE and the CDFG.

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

Mitigation Measure 3: Nesting Birds Protected Under the MBTA

Project-related activities likely to have the potential to disturb suitable nesting bird habitat shall be prohibited from February 15 through August 31, unless a Project Biologist acceptable to the City of Newport Beach surveys the Project area prior to disturbance to confirm the absence of active nests. Disturbance shall be defined as any activity that physically removes and/or damages vegetation or habitat or any action that may cause disruption of nesting behavior such as loud noise from equipment and/or artificial night lighting. Surveys shall be conducted weekly, beginning no earlier than 30 days and ending no later than 3 days prior to the commencement of disturbance. 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 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 of Newport Beach to document compliance with applicable State and federal laws pertaining to the protection of native birds.

Similarly, for preserved vegetation that occurs within 50 to 100 feet of construction activities, if construction is occurring during the nesting season, preserved vegetation shall be surveyed for the presence of nesting birds.

Mitigation Measure 4: Raptor Nesting

To the maximum extent practicable, habitats that provide potential nest sites for raptors/burrowing owls shall be removed from September 1 through January 31. If Project construction activities are initiated during the raptor/burrowing owl nesting season (February 1 to August 31), a nesting raptor/burrowing owl survey shall be conducted. Seven days prior to the onset of construction activities, a qualified Biologist shall survey within the limits of the proposed Project disturbance area for the presence of any active raptor nests/burrows (common or special status). Any nest/burrow found during survey efforts shall be mapped on the

construction plans. If no active nests/burrows are found, no further mitigation would be required, and survey results shall be provided to the 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/burrow site, the following restrictions on construction are required between February 1 and August 31 (or until nests/burrows 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/burrow and (2) access and surveying shall be restricted within 200 feet of any occupied nest/burrow. Any encroachment into the 300- and/or 200-foot buffer area(s) around the known nest/burrow 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/burrow.

If an active nest/burrow is observed during the non-nesting season, a qualified Biologist shall monitor the nest site; when the raptor/owl is away from the nest, the Biologist shall flush any raptors to open space areas or exclude the owl from the burrow and then remove the burrow so the owl cannot return.

Mitigation Measure 5: Coastal California Gnatcatcher

The NCCP/HCP does not authorize Incidental Take resulting from the conversion of habitat occupied by coastal California gnatcatchers in Existing Use Areas. Consistent with the federal ESA processes, the City has two options to mitigate for the impacts to the coastal California gnatcatcher:

1. On-site avoidance of habitat that would constitute Incidental Take of gnatcatcher habitat; or

2. Mitigation of Incidental Take through a Section 7 or Section 10 process.

In addition, the following construction-related minimization measures shall be required:

- All activities involving the removal of gnatcatcher/coastal sage scrub habitat shall be prohibited during the breeding and nesting season (February 15 to July 15) unless otherwise directed by the USFWS.

- The use of any large construction equipment during site grading will be prohibited within 200 feet of an active gnatcatcher nest during the breeding and nesting season of these species (February 15 to July 15), unless otherwise directed by the USFWS.

- All areas containing habitat suitable for occupation by the gnatcatcher adjacent to the impact area shall be delineated by the use of orange snow fencing or the use of lath and ropes/flagging.

- All grubbing operations shall be monitored by a qualified Biologist. The monitoring Biologist will ensure that only the amount of coastal sage scrub habitat approved for removal by the USFWS will be removed.

- The monitoring Biologist shall flush gnatcatchers from occupied habitat areas immediately prior to brush-clearing and earth-moving activities. It shall be the responsibility of the monitoring Biologist to assure that gnatcatchers shall not be directly impacted by brush-clearing and earth-moving equipment in a manner that also allows for construction activities on a timely basis.

- If construction occurs during the nesting season, a summary of construction monitoring activities shall be provided to the USFWS and the CDFG following completion of construction.

- 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 appropriate markers clearly visible to construction personnel. No construction access, parking, or storage of equipment shall be permitted within such marked areas.

5.2 MITIGATION MEASURES FOR INDIRECT IMPACTS

Mitigation Measure 6: Human Activity

Prior to opening the park to public use, signs and fencing shall be erected directing people to keep out of the natural open space areas. In addition, signs shall be required stating that dogs will be required to be leashed in areas (e.g., parks) near the natural open space areas.

SECTION 6.0 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Implementation of the recommended measures will mitigate biological impacts to a level considered less than significant.

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ATTACHMENT A
PLANT AND WILDLIFE COMPENDIA

TABLE A-1
PLANT COMPENDIUM

Species
FLOWERING PLANTS
CLASS DICOTYLEDONES (DICOTS)
AIZOACEAE - FIG-MARIGOLD FAMILY
*Carpobrotus edulis**   hottentot fig
*Mesembryanthemum crystallinum**   crystalline iceplant
*Mesembryanthemum nodiflorum**   slender-leaved iceplant
ANACARDIACEAE - SUMAC FAMILY
*Schinus terebinthifolius**   Brazilian pepper tree
ASTERACEAE (COMPOSITAE) - SUNFLOWER FAMILY
Baccharis salicifolia   mule fat
Baccharis sarothroides   broom baccharis
*Centaurea melitensis**   tocalote
*Chrysanthemum coronarium**   garland daisy
Encelia californica   bush sunflower
Hemizonia fasciculata   fascicled tarweed
Heterotheca grandiflora   telegraph weed
Isocoma menziesii   goldenbush
*Sonchus oleraceus**   common sow-thistle
BRASSICACEAE (CRUCIFERAE) - MUSTARD FAMILY
*Hirschfeldia incana**   shortpod mustard
Lepidium nitidum   peppergrass/shining peppergrass
*Sisymbrium irio**   London rocket
CACTACEAE - CACTUS FAMILY
Opuntia littoralis   coastal prickly pear
CAPPARACEAE - CAPER FAMILY
Isomeris arborea   bladderpod
CHENOPODIACEAE - GOOSEFOOT FAMILY
Atriplex canescens   fourwing saltbush/shad scale
Atriplex lentiformis   big saltbush

TABLE A-1
PLANT COMPENDIUM
(Continued)

Species
*Atriplex semibaccata**   Australian saltbush
*Salsola tragus**   Russian thistle
EUPHORBIACEAE - SPURGE FAMILY
Eremocarpus setigerus   doveweed/turkey mullein
*Ricinus communis**   castor bean
FABACEAE (LEGUMINOSAE) - LEGUME FAMILY
Lotus scoparius   deerweed/California broom
*Melilotus indica**   sourclover
FRANKENIACEAE - ALKALI HEATH FAMILY
Frankenia salina   alkali heath
GERANIACEAE - GERANIUM FAMILY
*Erodium botrys**   long-beaked filaree
*Erodium cicutarium**   red-stemmed filaree
MYOPORACEAE - MYOPORUM FAMILY
*Myoporum laetum**   myoporum
POLYGONACEAE - BUCKWHEAT FAMILY
Eriogonum fasciculatum var. *fasciculatum*   California buckwheat
*Rumex crispus**   curly dock
PRIMULACEAE - PRIMROSE FAMILY
*Anagallis arvensis**   scarlet pimpernel
SALICACEAE - WILLOW FAMILY
Salix lasiolepis   arroyo willow
SOLANACEAE - NIGHTSHADE FAMILY
*Nicotiana glauca**   tree tobacco
TAMARICACEAE - TAMARISK FAMILY
*Tamarix ramosissima**   Mediterranean tamarisk
CLASS MONOCOTYLEDONES (MONOCOTS)
POACEAE [GRAMINEAE] - GRASS FAMILY
Avena sp.   wild oat
Bromus madritensis ssp. *rubens**   foxtail chess

TABLE A-1
PLANT COMPENDIUM
(Continued)

Species
*Cortaderia selloana**   Sellow's pampas grass
*Schismus barbatus**   Mediterranean schismus
Schismus race.   schismus
** introduced species*

TABLE A-2
WILDLIFE COMPENDIUM

Species
Reptiles
PHRYNOSOMATIDAE - ZEBRA-TAILED, FRINGE-TOED, SPINY, TREE, SIDE-BLOTCHED, AND HORNED LIZARDS
Sceloporus occidentalis western fence lizard
PELECANIDAE - PELICANS
Pelecanus occidentalis brown pelican
ARDEIDAE - HERONS
Ardea herodias great blue heron
CATHARTIDAE - NEW WORLD VULTURES
Cathartes aura turkey vulture
ACCIPITRIDAE - HAWKS
Accipiter cooperii Cooper's hawk
Buteo lineatus red-shouldered hawk
Buteo jamaicensis red-tailed hawk
FALCONIDAE - FALCONS
Falco sparverius American kestrel
CHARADRIIDAE - PLOVERS
Charadrius vociferus killdeer
LARIDAE - GULLS & TERNS
Larus occidentalis western gull
COLUMBIDAE - PIGEONS & DOVES
Zenaida macroura mourning dove
TROCHILIDAE - HUMMINGBIRDS
Calypte anna Anna's hummingbird
Calypte costae Costa's hummingbird
Selasphorus sasin Allen's hummingbird
PICIDAE - WOODPECKERS
Picoides pubescens downy woodpecker
TYRANNIDAE - TYRANT FLYCATCHERS
Sayornis nigricans black phoebe
Sayornis saya Say's phoebe
Tyrannus verticalis western kingbird

TABLE A-2
WILDLIFE COMPENDIUM
(Continued)

Species
CORVIDAE - JAYS & CROWS
Corvus brachyrhynchos American crow
Corvus corax common raven
HIRUNDINIDAE - SWALLOWS
Stelgidopteryx serripennis northern rough-winged swallow
Petrochelidon pyrrhonota cliff swallow
AEGITHALIDAE - BUSHTITS
Psaltriparus minimus bushtit
TROGLODYTIDAE - WRENS
Thryomanes bewickii Bewick's wren
Troglodytes aedon house wren
SYLVIIDAE - GNATCATCHERS
Polioptila californica California gnatcatcher
MIMIDAE - THRASHERS
Mimus polyglottos northern mockingbird
STURNIDAE - STARLINGS
Sturnus vulgaris * European starling
PARULIDAE - WARBLERS
Dendroica coronata yellow-rumped warbler
Geothlypis trichas common yellowthroat
EMBERIZIDAE - SPARROWS & JUNCOS
Pipilo crissalis California towhee
Melospiza melodia song sparrow
Zonotrichia leucophrys white-crowned sparrow
ICTERIDAE - BLACKBIRDS
Sturnella neglecta western meadowlark
Icterus cucullatus hooded oriole
FRINGILLIDAE - FINCHES
Carpodacus mexicanus house finch
Carduelis psaltria lesser goldfinch

TABLE A-2
WILDLIFE COMPENDIUM
(Continued)

Species
Mammals
DIDELPHIDAE - NEW WORLD OPOSSUMS
Didelphis virginiana *   Virginia opossum
LEPORIDAE - HARES & RABBITS
Sylvilagus audubonii   desert cottontail
SCIURIDAE - SQUIRRELS
Spermophilus beecheyi   California ground squirrel
GEOMYIDAE - POCKET GOPHERS
Thomomys bottae   Botta's pocket gopher
CANIDAE - WOLVES & FOXES
Canis latrans   coyote
PROCYONIDAE - RACCOONS
Procyon lotor   common raccoon
Invertebrates
PIERIDAE - WHITES, SULFURS, & ORANGETIPS
Pontia protodice   common (checkered) white
** introduced species*

ATTACHMENT B
SITE PHOTOGRAPHS

Overview of the park portion of the Project site taken from west of the park area facing east.

Overview of the access road portion of the Project site taken from the center of the Project site facing south.

Disturbed mulefat scrub/goldenbush scrub vegetation on the western edge of the Project site facing southwest.

Ornamental (background) and disturbed (foreground) areas at southern edge of Project site facing north.

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Site Photographs

Attachment B

Sunset Ridge Park

BonTerra CONSULTING

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ATTACHMENT C
BURROWING OWL SURVEY REPORT

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October 20, 2009

Mr. Michael Sinacori, P.E.
Public Works Department
City of Newport Beach
3300 Newport Boulevard
Newport Beach, California 92663

VIA EMAIL AND MAIL
MSinacori@city.newport-beach.ca.us

Subject: Results of Focused Burrowing Owl Surveys for the Sunset Ridge Park Project Site, Orange County, California

Dear Mr. Sinacori:

This Letter Report presents the results of focused surveys for the western burrowing owl (*Athene cunicularia hypugaea*) on the approximate 27.26-acre Sunset Ridge Park project site (hereafter referred to as the "project site"). The majority of the project site (approximately 13.7 acres) is located within the jurisdictional boundaries of the City of Newport Beach in Orange County, California; the remainder of the site is within unincorporated Orange County, but within the City's Sphere of Influence (Exhibit 1). The project site includes both the site of the proposed park, the access road to the park, the off-site stockpile locations, and the off-site haul route, which are located within the boundaries of the Newport Banning Ranch Property (Exhibits 2 and 3). The purpose of the surveys is to determine the presence or absence of winter resident (non-breeding) as well as breeding western burrowing owl on the project site. The surveys were conducted in accordance with guidelines provided in the California Burrowing Owl Consortium survey protocol for this species (1993).

Project Location and Description

The project site is located in the City of Newport Beach and its Sphere of Influence in Orange County, California (Exhibit 1), north of the intersection of West Coast Highway (Highway 1) and Superior Avenue (Exhibit 2). The project site is adjacent to residential development to the north and open space to the west.

The project site is located on the U.S. Geological Survey's (USGS) Newport Beach 7.5-minute quadrangle at Township 6S, Range 10W, Sections 28 and 29 (Exhibit 2). The park portion of the project site is terraced, with relatively flat topography on both terraces. Elevations in this area range from approximately 50 feet above mean sea level (msl) on the lower terrace to 75 feet above msl on the upper terrace. Vegetation on the park portion of the project site consists primarily of ruderal, disturbed Encelia scrub, and ornamental (Exhibit 3). There are also smaller areas of Encelia scrub, Encelia scrub/ornamental, and a flood control channel. Additional vegetation types present in the remainder of the project site include southern coastal bluff scrub, non-native grassland, disturbed mule fat scrub/goldenbush scrub, willow scrub, and disturbed areas.

Background

The western burrowing owl is a grassland specialist distributed throughout western North America, where it occupies open areas with short vegetation and bare ground within shrub, desert, and grassland environments. Burrowing owls use a wide variety of arid and semi-arid environments, with well-drained, level to gently sloping areas characterized by sparse vegetation and bare ground (Haug et al. 1993; Dechant et al. 2003). Burrowing owls in Florida excavate their own burrows, but western burrowing owls are dependant upon the presence of burrowing mammals, whose burrows are used for roosting and nesting (Haug et al. 1993). The presence or absence of colonial mammal burrows (e.g., California ground squirrels [*Spermophilus beecheyi*]) is often a major factor that limits the presence or absence of burrowing owls. Where mammal burrows are scarce, burrowing owls have been found occupying man-made cavities, such as buried and non-functioning drain pipes, stand-pipes, and dry culverts. Burrowing mammals may burrow beneath rocks, debris, or large, heavy objects such as abandoned cars, concrete blocks, or concrete pads. Large, hard objects at burrow entrances stabilize the entrance from collapse, and may inhibit excavation by predators.

Burrowing owls often use “satellite”, or non-nesting burrows, moving chicks into them from the nesting burrow presumably to reduce the risk of predation (Desmond and Savidge 1998) and possibly to avoid nest parasites (Dechant et al. 2003). One pair may use up to ten satellite burrows (James and Seabloom 1968). Individual burrowing owls have a moderate to high site fidelity to previously used burrow complexes and often use the same burrows for nesting year after year.

The western burrowing owl was once abundant and widely distributed within coastal Southern California, but it has declined precipitously in Los Angeles, Orange, San Diego, Riverside, and San Bernardino Counties. A recent petition was submitted to list the California population of the western burrowing owl as an Endangered or Threatened species (Center for Biological Diversity et al. 2003). The California Department of Fish and Game (CDFG) declined to list the burrowing owl as either Threatened or Endangered in consideration of its overall population throughout the state. The western burrowing owl is considered locally rare in Southern California and is considered a California Species of Special Concern.

A wintering burrowing owl was reported by the California Natural Diversity Database approximately 2.7 miles north of the project site in Fairview Park (CDFG 2008).

Survey Methodology

The Burrowing Owl Survey Protocol and Mitigation Guidelines prepared by the California Burrowing Owl Consortium (CBOC) (CBOC 1993), which the CDFG has adopted, details a sequence of surveys based on the findings of each previous level of survey. These surveys are done in three phases: (1) a habitat assessment; (2) burrow surveys; and (3) focused owl surveys.

Winter (non-breeding) Surveys

Surveys for burrowing owl were conducted during the winter season (December 1–January 31). The first step of the survey protocol is a habitat assessment to determine whether or not suitable habitat for burrowing owl exists on the project site. BonTerra Consulting Senior Biologist Stacie Tennant and Ecologist Allison Rudalevige conducted the habitat assessment on December 19, 2008. Suitable habitat for burrowing owl was observed during the general survey, and focused surveys were initiated.

A focused burrow survey was conducted by Ms. Rudalevige on January 22, 2009. The burrow survey was conducted by walking transects at regularly spaced intervals to achieve 100 percent visual coverage of all potential habitat on the project site. The burrow survey was not conducted within five days of rain, which could have washed away potential sign. All natural or man-made cavities large enough to allow burrowing owl entry were inspected for evidence of occupation. Evidence of occupation may include prey remains, cast pellets, white-wash, feathers, and observations of owls adjacent to burrows. Photographs of potential burrow locations were taken during the survey (Exhibit 4). Survey times and weather conditions are summarized in Table 1 below.

TABLE 1
SURVEY DATA

Visit	Date	Time	Surveyor	Weather	Wind (mph)	Temp. (°F)	Results
Burrow Survey	1/22/2009	1500–1610	Rudalevige	Partly Cloudy	0–5	60	No owls observed
Winter Crepuscular Survey 1	1/27/2009	0630–0720	Rudalevige	Clear	0–2	47	No owls observed
Winter Crepuscular Survey 2	1/28/2009	0705–0800	Messett	Clear	0–1	48	No owls observed
Winter Crepuscular Survey 3	1/29/2009	1535–1615	Rudalevige	Clear	0–13	77	No owls observed
Winter Crepuscular Survey 4	1/30/2009	1545–1655	Messett	Clear	0–9	68	No owls observed
Spring Crepuscular Survey 1	5/11/2009 5/13/2009	0645–0715 1820–1900	Rudalevige	Cloudy Clear	2–5 0–5	60 66	No owls observed
Spring Crepuscular Survey 2	5/20/2009	0545–0700	Messett	Cloudy	0–1	60	No owls observed
Spring Crepuscular Survey 3	5/21/2009	0545–0715	Messett	Cloudy	0–1	61	No owls observed
Spring Crepuscular Survey 4	5/26/2009	0515–0630	Messett	Partly Cloudy	0–1	60	No owls observed

A crepuscular (dawn or dusk) owl survey was conducted because potential burrows were observed during the burrow survey. Morning crepuscular surveys were conducted from one hour before sunrise to two hours after sunrise, and evening crepuscular surveys were conducted from two hours before sunset to one hour after sunset. Crepuscular surveys were conducted only when there was enough light to observe potential flights of burrowing owls. Four crepuscular surveys of each potential burrow were conducted as required by the protocol. Surveys were conducted on January 27 and 29, 2009, by Ms. Rudalevige and on January 28 and 30, 2009, by BonTerra Consulting Ecologist Lindsay Messett. All potential habitat on the project site was surveyed to achieve 100 percent visual coverage of the area.

Spring (breeding) Surveys

Surveys for burrowing owl were also conducted during the spring (breeding) season (February 1–August 31). Crepuscular surveys were conducted in all areas of suitable habitat on the project site. Surveys were conducted on May 11, 13, 20, 21, and 26, 2009, by Ms. Rudalevige and Ms. Messett. These surveys were conducted from either one hour before sunrise to two hours after, or from two hours before sunset to one hour after. All potential habitat on the project site was surveyed to achieve 100 percent visual coverage of the area.

Survey Results

Suitable habitat for burrowing owl is present in the ruderal, disturbed Encelia scrub, non-native grassland, and disturbed areas on the project site and along the slopes of the project site (Exhibit 5). California ground squirrel burrows were observed scattered throughout the park portion of project site and in some undisturbed areas for the access road (Exhibit 5). Burrows were concentrated along slopes on the project site. A very small amount of avian white-wash was observed in the vicinity of some burrows. However, it is unlikely to indicate the presence of burrowing owl due to the limited amount of white-wash and lack of other owl sign (e.g., pellets).

No burrowing owls were observed during the winter or spring crepuscular surveys of the project site. A list of wildlife species observed during the owl surveys is provided in Attachment A of this Letter Report.

Recommendations

Per the CBOC guidelines, a pre-construction survey may be required within 30 days of ground disturbance even though the current surveys were negative. Pre-construction surveys can be conducted year-round.

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

If nesting activity is present at an active burrow, the active site will 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 the burrowing owl normally occurs between April and July. To protect the active burrow, the following restrictions to construction activities will be required until the burrow is no longer active (as determined by a qualified Biologist): (1) Clearing limits will be established within a 500-foot buffer around any active burrow, unless otherwise determined by a qualified Biologist and (2) Access and surveying will be restricted within 300 feet of any active burrow, unless otherwise determined by a qualified Biologist. Any encroachment into the buffer area around the active burrow will only be allowed if the Biologist determines that the proposed activity will not disturb the nest occupants. Construction can proceed when the qualified Biologist has determined that fledglings have left the nest.

BonTerra Consulting appreciates the opportunity to assist with this project. Please contact Stacie Tennant at (714) 444-9199 if you have questions or comments.

Sincerely,

BONTERRA CONSULTING

Ann M. Johnston
Principal, Biological Services

Stacie A. Tennant
Senior Project Manager/Biologist

Attachments: Exhibits 1, 2, 3, 4, and 5
Attachment A – Wildlife Compendium

cc: Ms. Janet Brown; jbrown@city.newport-beach.ca.us

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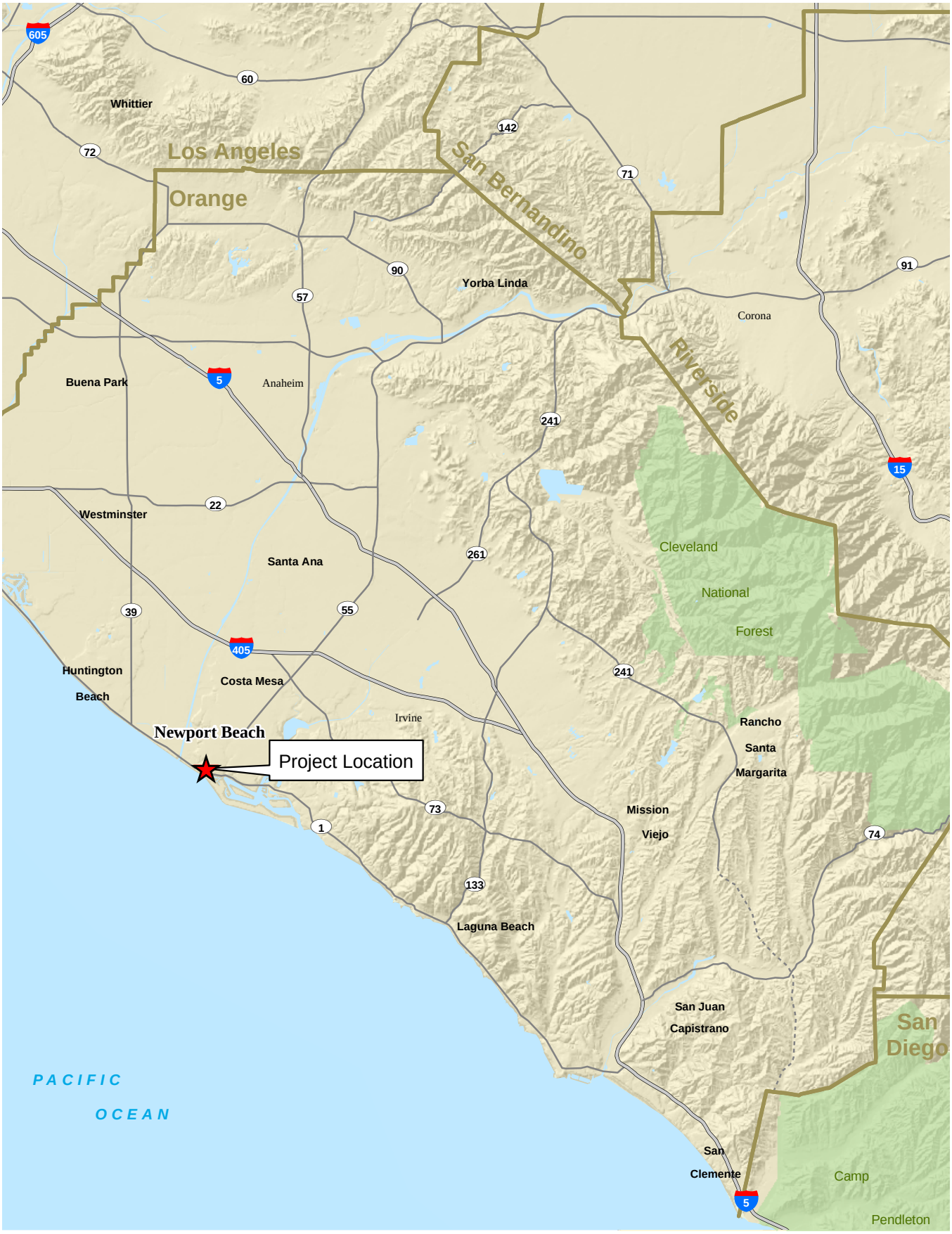

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Regional Location

Exhibit 1

Sunset Ridge Park

N
W E
S

5 2.5 0 5 Miles

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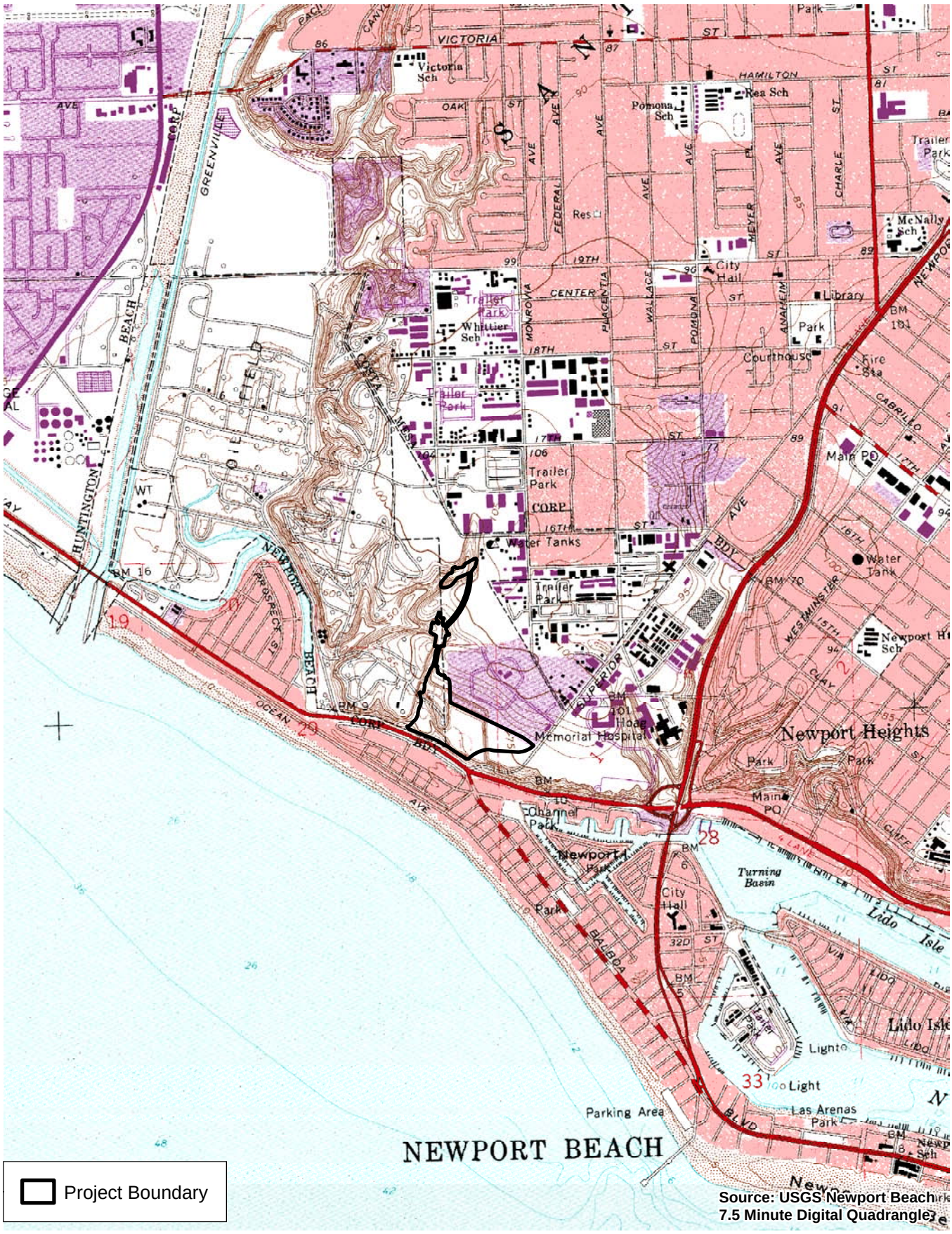

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Local Vicinity

Exhibit 2

Sunset Ridge Park

N
W E
S

2,000 1,000 0 2,000
Feet

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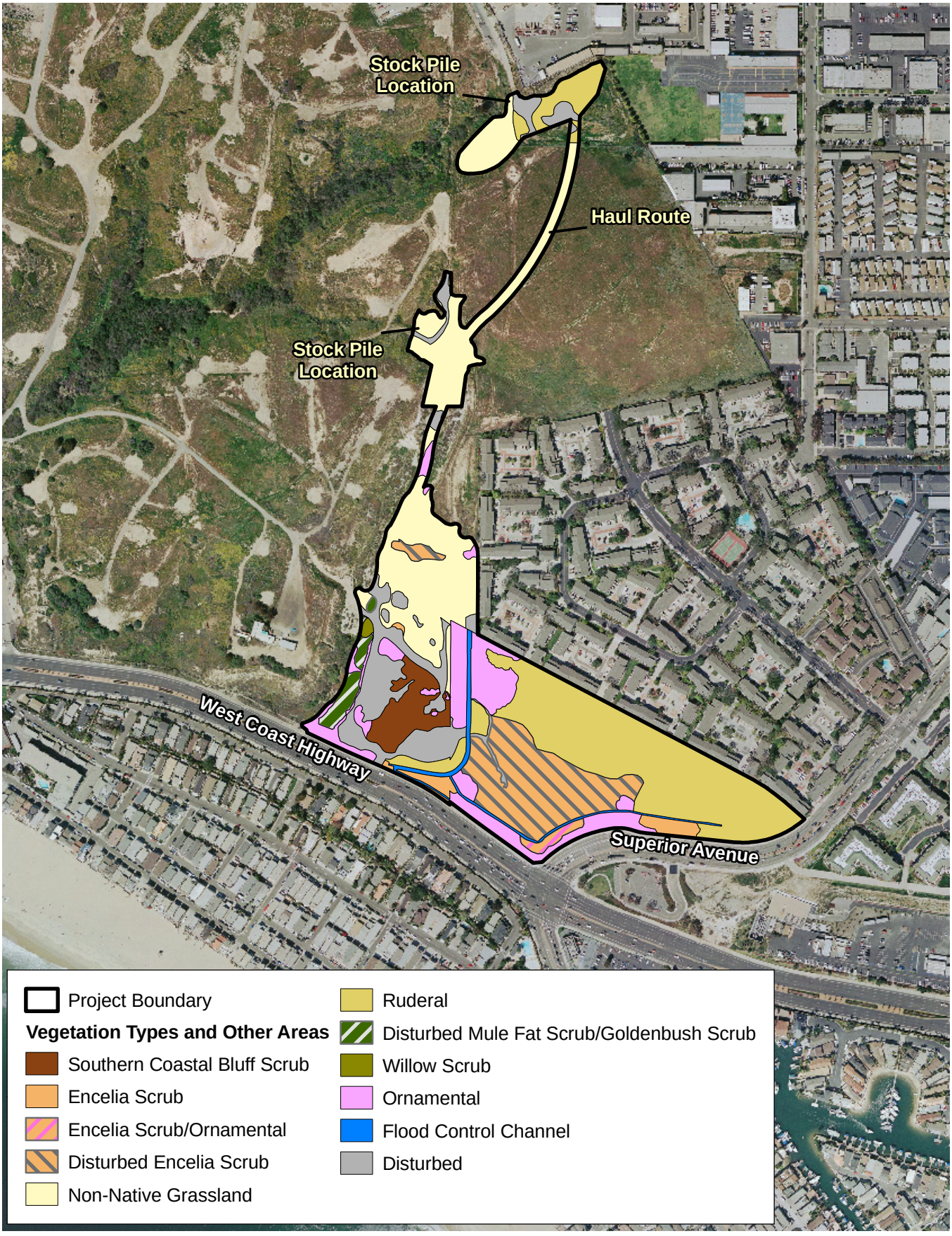

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Biological Resources

Exhibit 3

Sunset Ridge Park

N
W E
S

500 250 0 500 Feet

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(REV: JFG 10-16-09)R:/Projects/Newport/J016/Graphics/BUOW/ex3_BioResources.pdf

Overview of the park portion of the Project site taken from the west of the park area facing east.

Overview of the access road portion of the Project site taken from the center of the project site facing south.

Representative burrow on the Project site.

Representative burrow on the Project site showing very small amount of white-wash in vicinity of burrow.

Site Photographs

Exhibit 4

Sunset Ridge Park

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Potential Burrow Locations

Exhibit 5

Sunset Ridge Park

N
W E
S

400 200 0 400

Feet

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ATTACHMENT A

WILDLIFE COMPENDIUM

WILDLIFE COMPENDIUM

Species
Reptiles
PHRYNOSOMATIDAE - ZEBRA-TAILED, FRINGE-TOED, SPINY, TREE, SIDE-BLOTCHED, AND HORNED LIZARDS
Sceloporus occidentalis western fence lizard
Birds
CATHARTIDAE - NEW WORLD VULTURES
Cathartes aura turkey vulture
ACCIPITRIDAE - HAWKS
Buteo jamaicensis red-tailed hawk
FALCONIDAE - FALCONS
Falco sparverius American kestrel
CHARADRIIDAE - PLOVERS
Charadrius vociferus killdeer
COLUMBIDAE - PIGEONS & DOVES
Zenaida macroura mourning dove
TROCHILIDAE - HUMMINGBIRDS
Calypte anna Anna's hummingbird
Selasphorus sasin Allen's hummingbird
TYRANNIDAE - TYRANT FLYCATCHERS
Sayornis nigricans black phoebe
Sayornis saya Say's phoebe
CORVIDAE - JAYS & CROWS
Corvus brachyrhynchos American crow
HIRUNDINIDAE - SWALLOWS
Stelgidopteryx serripennis northern rough-winged swallow
Petrochelidon pyrrhonota cliff swallow
AEGITHALIDAE - BUSHTITS
Psaltriparus minimus bushtit
SYLVIIDAE - GNATCATCHERS
Polioptila californica California gnatcatcher
MIMIDAE - THRASHERS
Mimus polyglottos northern mockingbird

WILDLIFE COMPENDIUM (Continued)

Species
Birds (Continued)
STURNIDAE - STARLINGS
Sturnus vulgaris *   European starling
PARULIDAE - WARBLERS
Dendroica coronata   yellow-rumped warbler
Geothlypis trichas   common yellowthroat
EMBERIZIDAE - SPARROWS & JUNCOS
Pipilo crissalis   California towhee
ICTERIDAE - BLACKBIRDS
Agelaius phoeniceus   red-winged blackbird
Icterus cucullatus   hooded oriole
FRINGILLIDAE - FINCHES
Carpodacus mexicanus   house finch
Carduelis psaltria   lesser goldfinch
Mammals
DIDELPHIDAE - NEW WORLD OPOSSUMS
Didelphis virginiana *   Virginia opossum
LEPORIDAE - HARES & RABBITS
Sylvilagus audubonii   desert cottontail
SCIURIDAE - SQUIRRELS
Spermophilus beecheyi   California ground squirrel
GEOMYIDAE - POCKET GOPHERS
Thomomys bottae   Botta's pocket gopher
PROCYONIDAE - RACCOONS
Procyon lotor   common raccoon
** introduced species*

ATTACHMENT D
COASTAL CALIFORNIA GNATCATCHER SURVEY REPORT

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October 20, 2009

Ms. Sandy Marquez
U.S. Fish and Wildlife Service
6010 Hidden Valley Road
Carlsbad, California 92011

VIA EMAIL AND MAIL
sandy_marquez@fws.gov

Subject: Results of Focused Coastal California Gnatcatcher Surveys for the Sunset Ridge Park Project Site, Orange County, California

Dear Ms. Marquez:

This Letter Report presents the results of focused surveys for the coastal California gnatcatcher (*Polioptila californica californica*) on the approximate 27.26 acre Sunset Ridge Park project site (hereafter referred to as the "project site"). The majority of the project site (approximately 13.7 acres) is located within the jurisdictional boundaries of the City of Newport Beach in Orange County, California; the remainder of the site is within unincorporated Orange County, but within the City's Sphere of Influence (Exhibit 1). The project site includes both the site of the proposed park and the access road to the park, the off-site stockpile locations, and the off-site haul route, which are located within the boundaries of the Newport Banning Ranch Property (Exhibits 2 and 3). The purpose of the surveys is to determine the presence or absence of the coastal California gnatcatcher on the project site. Surveys were conducted according to guidelines established by the U.S. Fish and Wildlife Service (USFWS) by Biologists holding the required Federal Endangered Species Act (FESA) survey permit.

Project Location and Description

The project site is located in the City of Newport Beach and its Sphere of Influence in Orange County, California (Exhibit 1), north of the intersection of West Coast Highway (Highway 1) and Superior Avenue (Exhibit 2). The project site is adjacent to residential development to the north and open space to the west.

The project site is located on the U.S. Geological Survey's (USGS) Newport Beach 7.5-minute quadrangle at Township 6S, Range 10W, Sections 28 and 29 (Exhibit 2). The park portion of the project site is terraced, with relatively flat topography on both terraces. Elevations in this area range from approximately 50 feet above mean sea level (msl) on the lower terrace to 75 feet above msl on the upper terrace. Vegetation on the park portion of the project site consists primarily of ruderal, disturbed Encelia scrub, and ornamental (Exhibit 3). There are also smaller areas of Encelia scrub, Encelia scrub/ornamental, and a flood control channel. Additional vegetation types present in the remainder of the project site include southern coastal bluff scrub, non-native grassland, disturbed mule fat scrub/goldenbush scrub, willow scrub, and disturbed areas.

Background

Recent taxonomic studies indicate the California gnatcatcher consists of four subspecies that extend from southwestern

California to southern Baja California, Mexico (Atwood and Lerman 2006; Mellink and Rea 1994). The coastal California gnatcatcher, the northernmost gnatcatcher subspecies, is restricted to lowland areas from central Ventura County through Los Angeles, San Bernardino, Riverside, Orange, and San Diego Counties to the Baja California, Mexico border (Atwood and Lerman 2006; Mellink and Rea 1994). Formerly, the coastal California gnatcatcher was common from the San Fernando Valley eastward along the base of the San Gabriel Mountains to Claremont (Atwood 1990). The coastal California gnatcatcher is now rare in the northern part of its range with only a handful of sightings from Santa Clarita to the Tujunga Wash, though a small population persists near the City of Moorpark in Ventura County.

Only a few isolated populations of the coastal California gnatcatcher persist in the Los Angeles Basin, such as on the Palos Verdes Peninsula where annual surveys found 51, 56, 26, 39, and 38 breeding pairs from 1993 to 1997 (Atwood et al. 1998a), respectively. Since the nearest populations are found approximately 45 kilometers (km) away near Montebello, Los Angeles County, and near Fullerton and Newport Beach, Orange County, through almost continuous urban habitats unsuitable for coastal California gnatcatchers, immigration to the Palos Verdes Peninsula was considered to be “impossible or extremely unlikely” (Atwood et al. 1998a). Although not currently supporting breeding populations, the coastal California gnatcatcher has been found in recent years in Huntington (Beach) Central Park (one pair bred in 2002 and 2003), Bolsa Chica (one pair bred in 2005 and 2006), and the Los Angeles River in Long Beach (no breeding documented but three recent observations: September 14, 2002; April 16, 2006; and February 7, 2009). These occurrences and the distance between the Palos Verdes Peninsula and the Los Angeles River in Long Beach (approximately nine kilometers) indicate that the Palos Verdes Peninsula may not be completely or “impossibly” isolated from other populations of the coastal California gnatcatcher.

The coastal California gnatcatcher has been recorded from sea level to approximately 3,000 feet above msl (USFWS 2003); however, greater than 90 percent of gnatcatcher records are from elevations below 820 feet msl along the coast and below 1,800 feet above msl inland (Atwood and Bolsinger 1992). Recent estimates by the USFWS regarding the population size of the coastal California gnatcatcher in Southern California have been about 3,000 pairs (Atwood and Bontrager 2001).

The coastal California gnatcatcher typically occurs within coastal and inland sage scrub vegetation types. Sage scrub often occurs in a patchy distribution pattern throughout the range of the gnatcatcher. Coastal California gnatcatchers also use chaparral, grassland, and riparian habitats that are in proximity to sage scrub. These non-sage scrub habitats are used for dispersal and foraging (Atwood et al. 1998b, Campbell et al. 1998, USFWS 2003). Availability of these non-sage scrub areas is essential during certain times of the year, particularly during drought conditions, or for dispersal, foraging, or nesting (USFWS 2003).

The coastal California gnatcatcher was designated a Threatened species by the USFWS on March 25, 1993. A Special Rule was issued that would allow incidental take of coastal California gnatcatcher under Section 9 of FESA if the take results from activities conducted in accordance with the State’s Natural Community Conservation Plan (NCCP) Act (USFWS 1993). For those not participating in the state’s NCCP, any activity that may result in the take of the coastal California gnatcatcher requires formal consultation with the USFWS under Sections 7 or 10 of FESA. The County of Orange and the City of Newport Beach are participants in the NCCP program.

On December 19, 2007, the USFWS published a Final Rule that revised critical habitat and designated 197,303 acres of land in San Diego, Orange, Riverside, San Bernardino, Los Angeles, and Ventura Counties as critical habitat for the coastal California gnatcatcher (USFWS 2007). The project site is located inside the designated critical habitat for the coastal California gnatcatcher.

Survey Methodology

The USFWS coastal California gnatcatcher survey protocol recommends six visits to all potentially occupied habitat areas for surveys conducted entirely within the breeding season, which extends from March 15 to June 30 (USFWS 1997a, 1997b). All visits must take place during the morning hours and be conducted at least 1 week apart; no more than 80 acres of suitable habitat may be surveyed per visit. Following the USFWS protocol for the species, BonTerra Consulting Senior Biologist Stacie Tennant (USFWS Permit # PRT-834489), and Ecologist Lindsay Messett (USFWS Permit # PRT-067064) conducted surveys for the gnatcatcher on April 1, 8, 16, 28, and May 7 and 15, 2009. The survey covered all potentially suitable habitats for the coastal California gnatcatcher on the project site.

Weather conditions met the USFWS survey protocol requirements for optimal gnatcatcher detection. Weather conditions that were too cold (below 55 degrees Fahrenheit), too hot (above 95 degrees Fahrenheit), or too windy (wind speed greater than 15 miles per hour) were avoided. Surveys were conducted by slowly walking through all appropriate habitats while listening and watching for gnatcatcher activity. A combination of taped recordings of gnatcatcher vocalizations and "pishing" sounds were used in an attempt to elicit responses from any gnatcatchers that might be present. The frequency of vocalization playback and "pishing" varied depending on conditions, such as habitat patch size and topography in each area. All bird species detected during the surveys were recorded, which included notable observations of special status species or other birds, such as the brown-headed cowbird (*Molothrus ater*) (Appendix A). Survey times and weather conditions are summarized in Table 1 below.

TABLE 1
SURVEY DATA

Visit	Date	Time	Surveyor	Cloud Cover	Wind (mph)	Temperature (°F)	Results
1	4/01/2009	0645-1000	Messett	60%	0-2	62	1 male CAGN observed
2	4/8/2009	0630-0945	Messett	40%	0-3	64	1 male CAGN observed
3	4/16/2009	0830-1145	Tennant	10%	0-5	57	1 male CAGN observed
4	4/28/2009	0810-1115	Messett	90%	0-6	60	1 pair of CAGN with 1 fledgling and 3 nestlings observed
5	5/7/2009	0700-0950	Messett	0%	0-2	60	1 pair of CAGN with 3-4 fledglings observed
6	5/15/2009	0900-1200	Tennant	100%	0-5	62	1 pair of CAGN with 3 fledglings observed

Survey Results

One coastal California gnatcatcher territory was detected on the project site during the surveys (Exhibits 4a and 4b). During the fourth survey, the gnatcatchers were observed exhibiting behavior consistent with breeding which was confirmed by observing the pair feeding a fledgling. An active nest containing three additional nestlings was also located within a coastal goldenbush (*Isocoma menziesii*) shrub during this survey. During the fifth survey, the pair was observed feeding three to four fledglings within mule fat (*Baccharis salicifolia*) located in western portion of the project site. The gnatcatchers were observed numerous times foraging in the southern coastal bluff scrub vegetation type (Exhibit 3). In addition, a pair and solitary male were observed just adjacent to the stockpile locations (fill areas) in the northern portion of the project site (Exhibits 4a and 4b).

Coastal sage scrub vegetation on the project site is variable, but the dominant species is California encelia (*Encelia californica*). California buckwheat (*Erigonum fasciculatum*) and coastal goldenbush are fairly common on the project site. Other scrub species used by the coastal California gnatcatchers on the project site include coyote brush (*Baccharis pilularis*) and mule fat. California Natural Diversity Data Base (CNDDB) forms will be submitted to the California Department of Fish and Game (CDFG). Site photos are included as Exhibit 5.

BonTerra Consulting appreciates the opportunity to assist with this project. Please contact Ann Johnston or Stacie Tennant at (714) 444-9199 if you have questions or comments.

Sincerely,
BONTERRA CONSULTING

Ann M. Johnston
Principal, Biological Services

Stacie A. Tennant
Senior Project Manager/Biologist

I certify that the information in this survey report and enclosed exhibits fully and accurately present my work.

Stacie A. Tennant
Senior Biologist (PRT# 834489)

Lindsay A. Messett
Ecologist (PRT # 067064)

Attachments: Exhibits 1, 2, 3, 4a, 4b, and 5
Appendix A – Wildlife Compendium

cc: Michael Sinacori; msinacori@city.newport-beach.ca.us
Janet Brown; jbrown@city.newport-beach.ca.us

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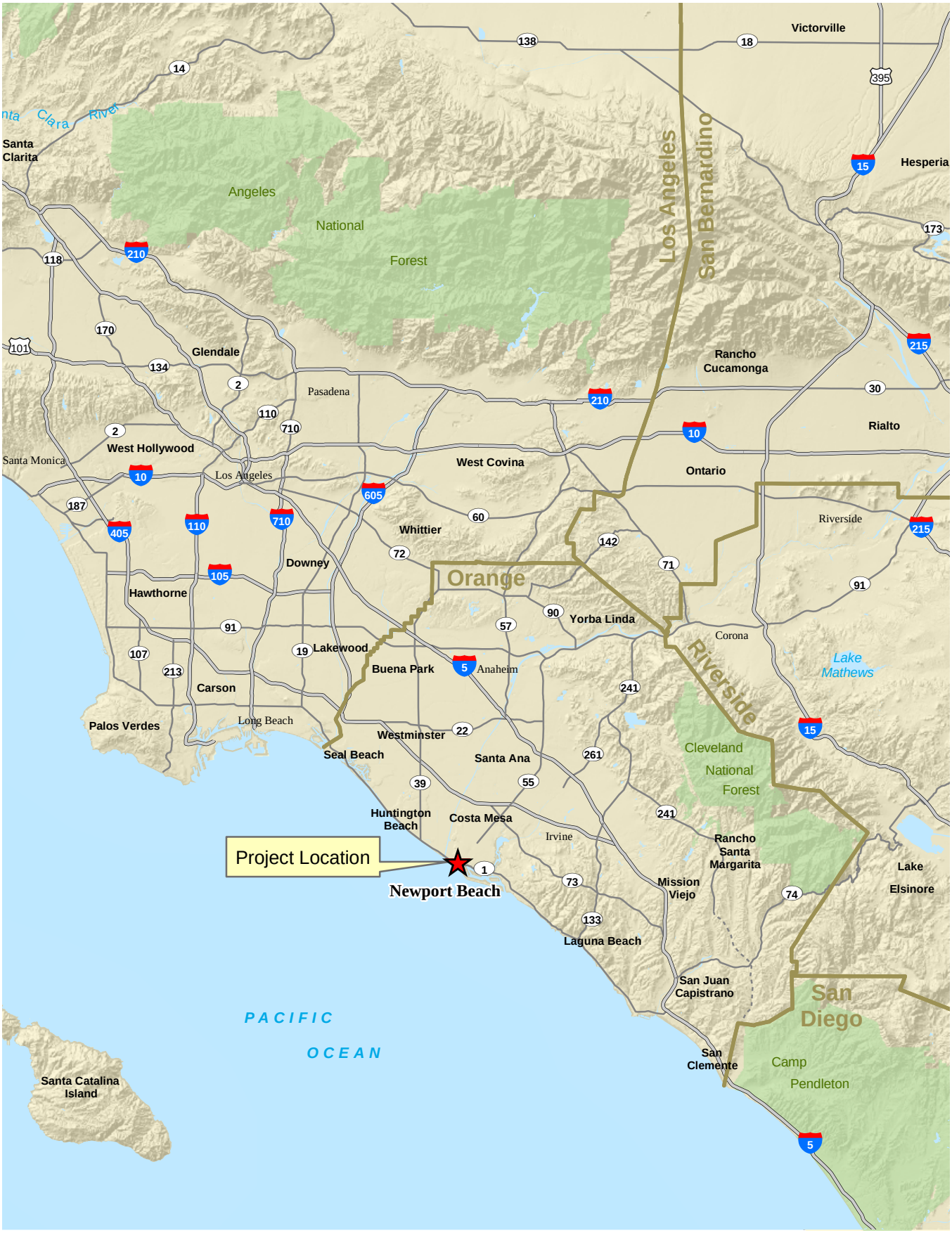

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Regional Location

Exhibit 1

Sunset Ridge Park

N W E S

10 5 0 10 Miles

BonTerra CONSULTING

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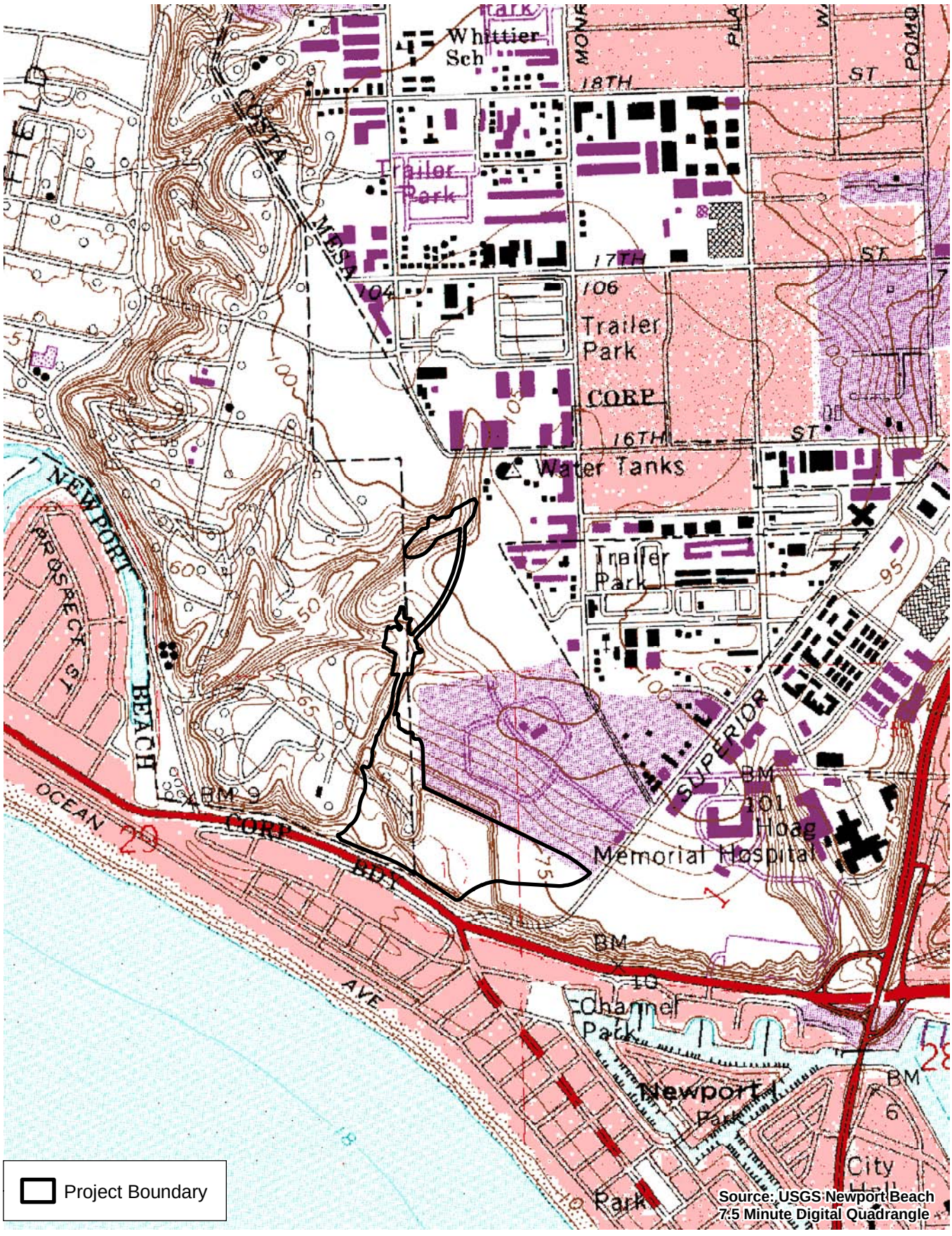

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Local Vicinity

Exhibit 2

Sunset Ridge Park

N W E S

2,000 1,000 0 2,000 Feet

BonTerra CONSULTING

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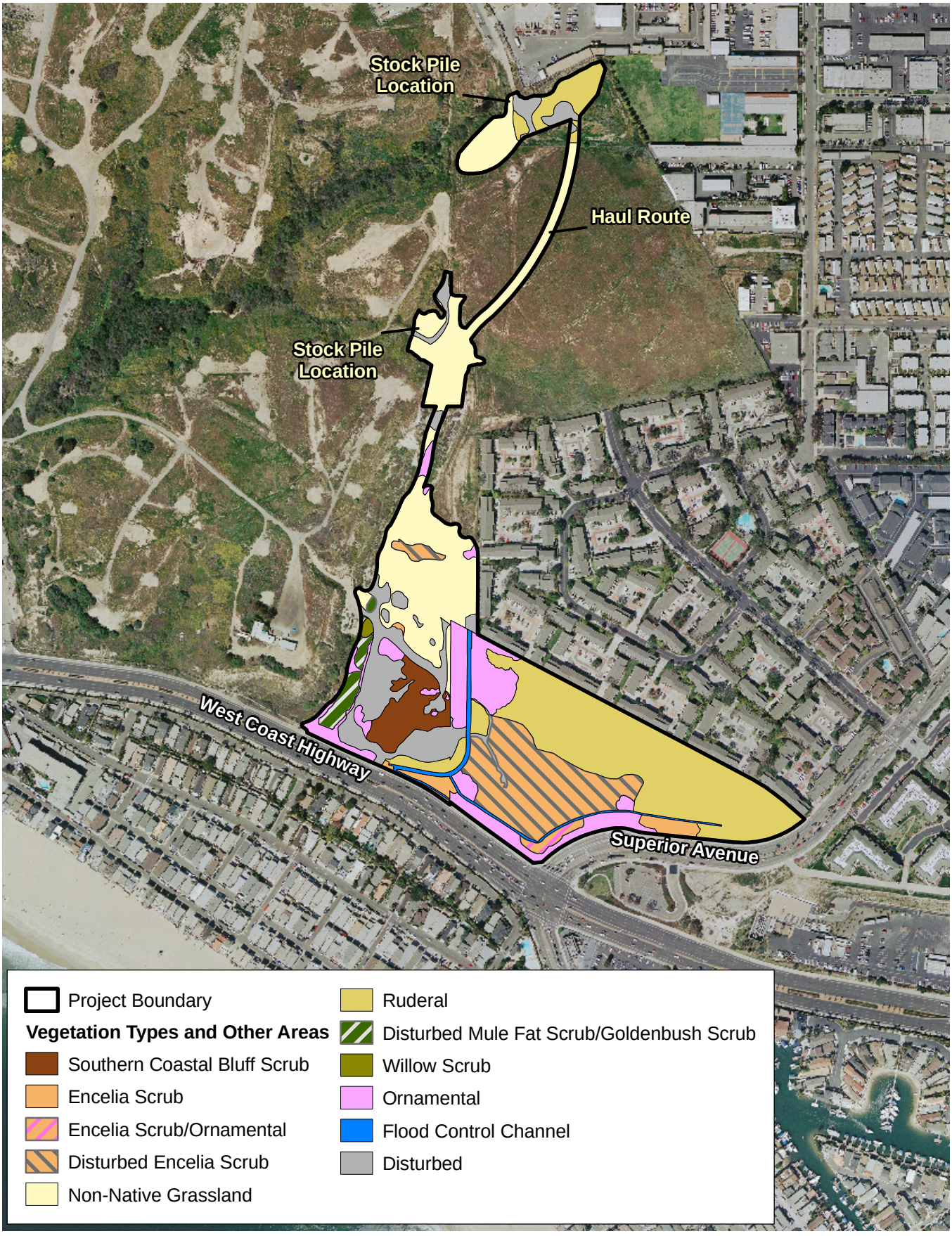

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Biological Resources

Exhibit 3

Sunset Ridge Park

N
W E
S

500 250 0 500 Feet

BonTerra CONSULTING

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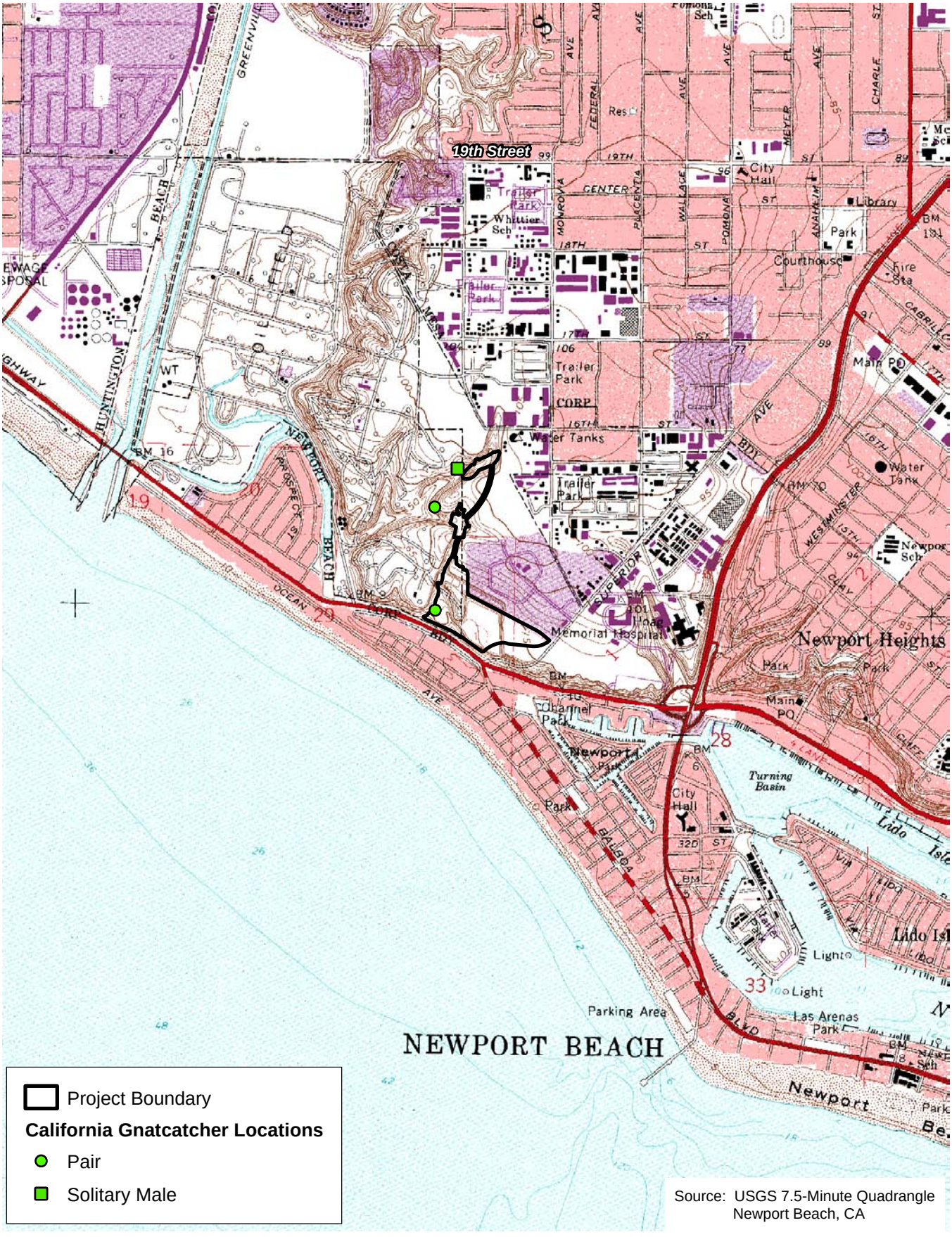

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Survey Results

Exhibit 4a

Sunset Ridge Park

N
W E
S

2,000 1,000 0 2,000
Feet

BonTerra CONSULTING

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Survey Results

Exhibit 4b

Sunset Ridge Park

N
W E
S

400 200 0 400

Feet

BonTerra CONSULTING

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Overview of the park portion of the Project site taken from the west of the park area facing east.

Representative site photograph taken from the center of the Project site, looking south.

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Site Photographs

Exhibit 5

Sunset Ridge Park

BonTerra CONSULTING

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APPENDIX A

WILDILFE COMPENDIUM

WILDILFE COMPENDIUM

Species
Reptiles
PHRYNOSOMATIDAE - ZEBRA-TAILED, FRINGE-TOED, SPINY, TREE, SIDE-BLOTCHED, AND HORNED LIZARDS
Sceloporus occidentalis western fence lizard
Birds
ARDEIDAE - HERONS
Ardea herodias great blue heron
CATHARTIDAE - NEW WORLD VULTURES
Cathartes aura turkey vulture
ACCIPITRIDAE - HAWKS
Buteo lineatus red-shouldered hawk
Buteo jamaicensis red-tailed hawk
FALCONIDAE - FALCONS
Falco sparverius American kestrel
CHARADRIIDAE - PLOVERS
Charadrius vociferus killdeer
LARIDAE - GULLS & TERNS
Larus occidentalis western gull
COLUMBIDAE - PIGEONS & DOVES
Zenaida macroura mourning dove
TROCHILIDAE - HUMMINGBIRDS
Calypte anna Anna's hummingbird
Calypte costae Costa's hummingbird
Selasphorus sasin Allen's hummingbird
TYRANNIDAE - TYRANT FLYCATCHERS
Tyrannus verticalis western kingbird
CORVIDAE - JAYS & CROWS
Corvus brachyrhynchos American crow
Corvus corax common raven
HIRUNDINIDAE - SWALLOWS
Petrochelidon pyrrhonota cliff swallow
AEGITHALIDAE - BUSHTITS
Psaltriparus minimus bushtit

WILDLIFE COMPENDIUM
(Continued)

Species
TROGLODYTIDAE - WRENS
Thryomanes bewickii Bewick's wren
Troglodytes aedon house wren
SYLVIIDAE - GNATCATCHERS
Polioptila californica California gnatcatcher
MIMIDAE - THRASHERS
Mimus polyglottos northern mockingbird
STURNIDAE - STARLINGS
Sturnus vulgaris * European starling
PARULIDAE - WARBLERS
Dendroica coronata yellow-rumped warbler
Geothlypis trichas common yellowthroat
EMBERIZIDAE - SPARROWS & JUNCOS
Pipilo crissalis California towhee
Melospiza melodia song sparrow
Zonotrichia leucophrys white-crowned sparrow
ICTERIDAE - BLACKBIRDS
Sturnella neglecta western meadowlark
FRINGILLIDAE - FINCHES
Carpodacus mexicanus house finch
Carduelis psaltria lesser goldfinch
Mammals
LEPORIDAE - HARES & RABBITS
Sylvilagus audubonii desert cottontail
SCIURIDAE - SQUIRRELS
Spermophilus beecheyi California ground squirrel
CANIDAE - WOLVES & FOXES
Canis latrans coyote
Invertebrates
PIERIDAE - WHITES, SULFURS, & ORANGETIPS
Pontia protodice common (checkered) white
* indicates non-native species

ATTACHMENT E
JURISDICTIONAL DELINEATION

JURISDICTIONAL DELINEATION REPORT

SUNSET RIDGE PARK PROJECT, NEWPORT BEACH, CALIFORNIA

Prepared for

City of Newport Beach
3300 Newport Boulevard
Newport Beach, CA 92663

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September 2009

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SECTION 1.0 INTRODUCTION

This Jurisdictional Delineation Report (report) was prepared for the City of Newport Beach to provide baseline data concerning the type and extent of resources under the jurisdiction of the U.S. Army Corps of Engineers (USACE), the California Department of Fish and Game (CDFG), and the Regional Water Quality Control Board (RWQCB) for the Sunset Ridge Park Project, (hereafter referred to as the "proposed project").

1.1 PROJECT LOCATION AND DESCRIPTION

The proposed project consists of the construction of a community park located at 4850 West Coast Highway, Newport Beach, California in the northwestern corner of West Coast Highway at Superior Avenue. The site is approximately 18.9 acres, approximately 13.7 acres of which are located within the City of Newport Beach in Orange County, California, and approximately 5.2 acres of which are within unincorporated Orange County but within the City's Sphere of Influence. See Attachment E (Conceptual Site Plan).

The project site is located on the Newport U.S. Geological Survey (USGS) 7.5-minute quadrangle of the San Bernardino Meridian (Exhibit 2). Land uses in the immediate vicinity of the project site are high-density residential to the north and commercial and residential to the south and west. Topography on the project site is flat to hillside.

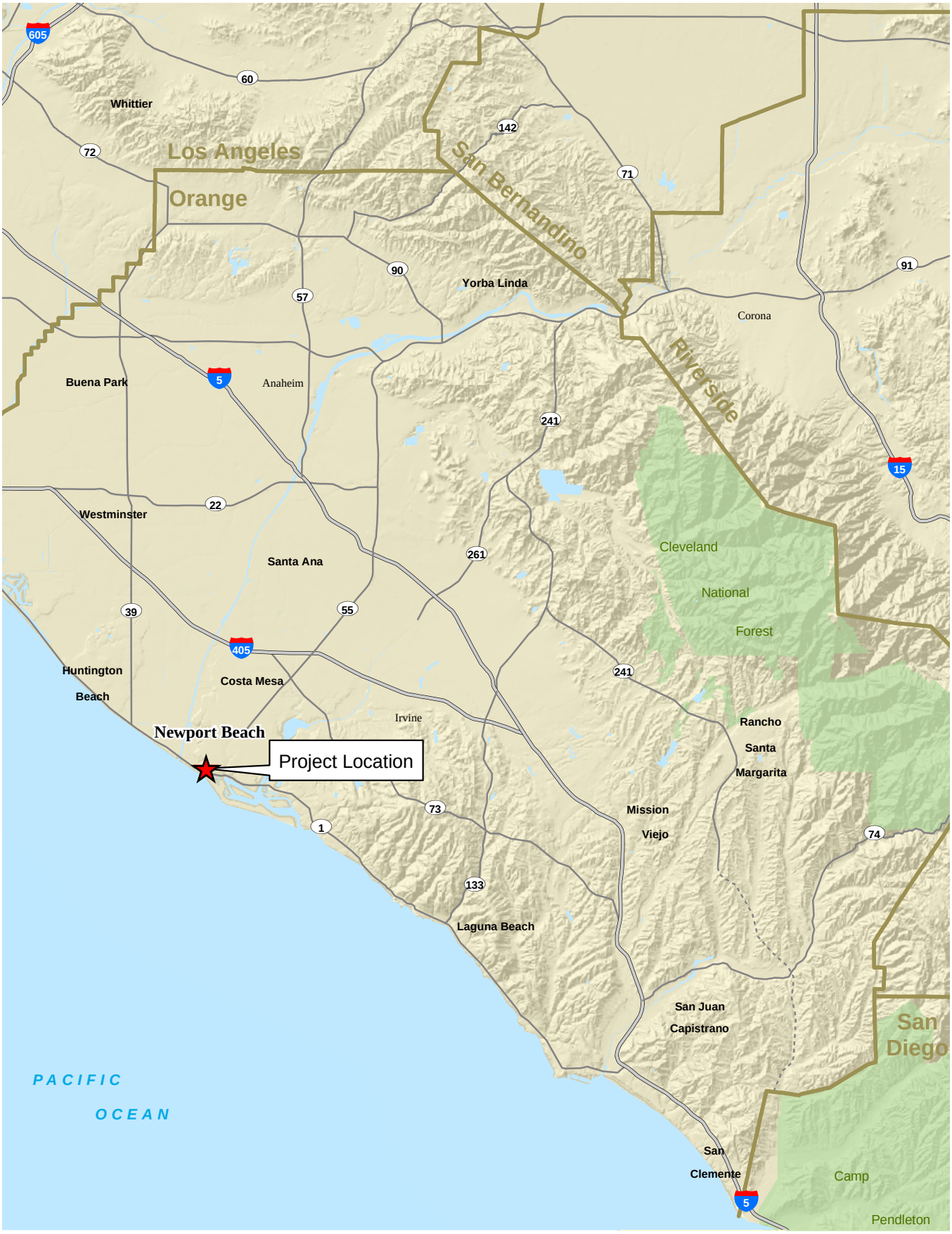
In 2006, the City of Newport Beach (City) authorized the purchase of 15.05 acres owned by the California Department of Transportation (Caltrans) (Exhibits 1 and 2). The acreage includes the proposed 13.7 acres for Sunset Ridge Park and property northeast of the intersection of Coast Highway at Superior Avenue. The site was originally acquired in the 1960s by Caltrans in anticipation of the construction of the Coast Freeway. The Coast Freeway was not constructed and has since been removed from the State Highways and Freeways Master Plan. As such, the property was considered excess right-of-way by Caltrans in 1976, and Caltrans proposed to dispose of the site. In 2001, Senate Bill (SB) 124 directed Caltrans to transfer control of the property to the City. The purchase of the property ultimately occurred in 2006.

As a term of the sale, the property must be used as a park (Sunset Ridge Park). Further, the City agreed to a 197,720-square-foot scenic easement on the site located generally along the property line adjacent to West Coast Highway. This easement restricts development rights to those permitted in City's Open Space (OS-A) zoning.

The City proposes to develop the approximate 18.9-acre site with active and passive recreational uses and an access road to the park through Newport Banning Ranch. The access road would be constructed from West Coast Highway to Sunset Ridge Park through the Newport Banning Ranch site (5.2 of the 18.9 acres). Exhibit 3 is an aerial image of the project site. No nighttime lighting, other than for public safety, is proposed. No nighttime park uses are proposed. Components of the proposed park project would include the following uses and facilities:

Baseball Field

The project would include one baseball field generally located in the northwestern portion of the park site. As proposed, the baseball field backstop and associated safety fencing would be below the height of the top of adjacent condominium balcony walls. Passive park uses and meandering pedestrian paths would surround the baseball field (Attachment E).



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Regional Location

Exhibit 1

Sunset Ridge Park

N
W E
S

5 2.5 0 5 Miles

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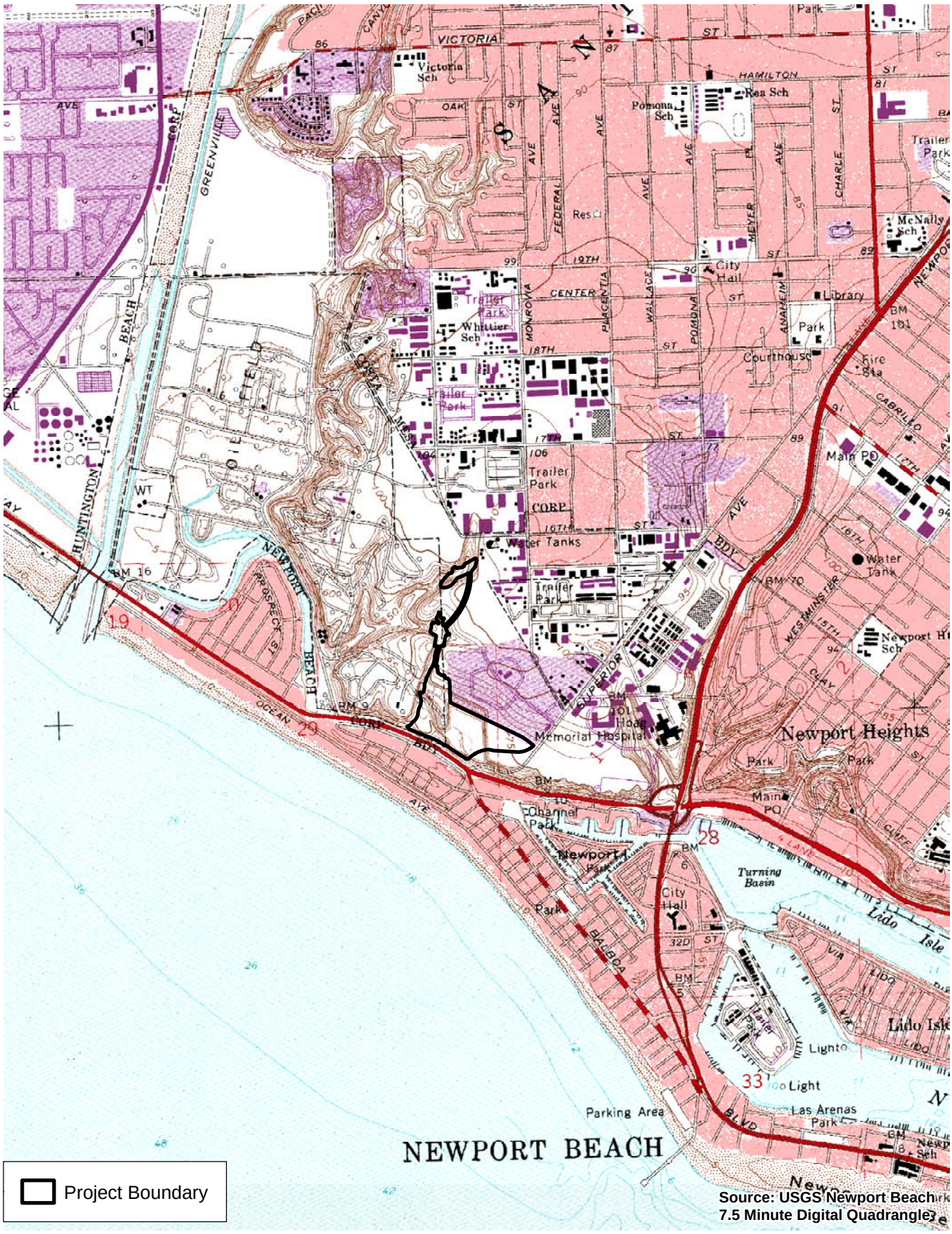

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Local Vicinity

Exhibit 2

Sunset Ridge Park

N
W E
S

2,000 1,000 0 2,000
Feet

BonTerra CONSULTING

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Local Vicinity

Exhibit 3

Sunset Ridge Park

N
W E
S

400 200 0 400

Feet

BonTerra CONSULTING

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Youth Soccer Fields

Two youth soccer fields would be provided in the center of the park area. One soccer field would be located to the east of the baseball field; the second soccer field would be to the south of the baseball field (Attachment E).

Playground Area and Picnic Area

The playground area is proposed on the western portion of the park site directly south of the parking area and southwest of the baseball field. The playground area is proposed to include recreational amenities such as a tot lot. The picnic area would be located to the east of the playground and would include shade structures, picnic tables, and seating areas (Attachment E).

Memorial Garden/Passive Park Area

The memorial garden is a passive park area located on the upper plateau, proposed on the eastern portion of the park site. The memorial garden would be accessed via several points along the meandering pedestrian paths and pedestrian access points along Superior Avenue and West Coast Highway. This area is intended for passive recreational uses (Attachment E).

Overlook Area with Shade Structure

The overlook area is proposed directly west of the memorial garden. This area would have a shade structure and seating with views across the park site and of the ocean, and would be accessed from pedestrian paths located throughout the park (Attachment E).

Pedestrian Access and Walking Paths

The park is proposed to include three pedestrian access areas: one along West Coast Highway and two along Superior Avenue. Within the park, there would be meandering paths with the primary path along the entire perimeter of the park. Paths would lead to the playground, memorial garden, overlook, ball fields, and parking area (refer to Attachment E). Bike racks would also be provided within the park site.

1.2 REGULATORY AUTHORITY

1.2.1 SUMMARY OF REGULATIONS

U.S. Army Corps of Engineers

The USACE Regulatory Branch regulates activities that discharge dredged or fill materials into "Waters of the U.S." under Section 404 of the federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. This permitting authority applies to all "Waters of the U.S." where the material (1) replaces any portion of a "Waters of the U.S." with dry land or (2) changes the bottom elevation of any portion of any "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 the Waters. The selection of disposal sites for dredged or fill material is done in accordance with Section 404(b)(1) guidelines, which were developed by the U.S. Environmental Protection Agency (USEPA).

Waters of the United States

"Waters of the U.S." can be divided into three categories: territorial seas, tidal waters, or non-tidal waters. The term "Waters of the U.S." includes all waters that have, are, or may be used in interstate or foreign commerce (including sightseeing or hunting), including all waters subject to the ebb and flow of the tide, such as:

- Wetlands.
- All other waters such as interstate lakes, rivers, or streams (including intermittent streams); mudflats; sand flats; wetlands; sloughs; prairie potholes; wet meadows; playa lakes; or natural ponds where the use, degradation, or destruction of which could affect interstate or foreign commerce.
- All impoundments of waters otherwise defined as "Waters of the U.S." under the definition.
- All tributaries to navigable waters, interstate waters, and impoundments of "Waters of the U.S.".
- The territorial seas.
- All wetlands adjacent to waters that are not themselves wetlands.

Ordinary High Water Mark

The landward limit of tidal "Waters of the U.S." is the high-tide line. In non-tidal waters where adjacent wetlands are absent, jurisdiction extends to the "ordinary high water mark" (OHWM). In the absence of wetlands in non-tidal waters, the extent of jurisdictional limits is determined by the OHWM. The OHWM is defined as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" (33 CFR §328.3[e]).

Wetlands

A wetland is a subset of jurisdictional waters and is defined by the USACE and the USEPA as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR §328.3[b]). Wetlands generally include swamps, marshes, bogs, and areas containing similar features. The definition and methodology for identifying wetland resources have now been refined in the region that includes the project site by the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008), a supplement to the 1987 Corps Manual. The methodology contained in this supplement was used to identify the type and extent of wetland resources within the boundaries of the survey area.

Supreme Court Rulings/Regulatory Guidance

Guidance for determining the USACE jurisdiction over "Waters of the U.S." was provided following the consolidated cases of *Rapanos v. United States* and *Carabell v. United States* cases (referred to as the "Rapanos" cases). On June 19, 2006, a majority of the U.S. Supreme Court overturned two Sixth Circuit Court of Appeals decisions, finding that certain wetlands constituted "Waters of the U.S." under the CWA. Justice Scalia argued that "Waters of the U.S." should not include channels through which water flows intermittently or ephemerally, or channels that periodically provide drainage for rainfall. He also stated that a wetland may not be

considered "adjacent to" remote "waters of the United States" based on a mere hydrologic connection.

Although Justice Scalia's opinion would have greatly restricted the USACE's jurisdiction, only three other justices shared his point of view. Justice Kennedy, who provided the fifth vote needed to overturn the Court of Appeals' decisions, wrote a separate opinion that would narrow the USACE's jurisdiction but not as much as Justice Scalia desired. Without a clear majority opinion, the legal effect of this decision is uncertain. However, it does provide valuable information about the direction the USACE will consider in defining jurisdiction over certain bodies of water, such as man-made ditches, desert washes, and ephemeral streams.

As noted above, although Justice Kennedy sided with Justice Scalia in overturning the earlier court rulings, Justice Kennedy did so for a different reason. Justice Kennedy indicated that he relied on the Supreme Court's 2001 *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (SWANCC) decision on wetlands features, which states that wetlands are subject to jurisdiction only if there is a "significant nexus" between the wetland and some other navigable water such as a stream or lake. To prove such a "significant nexus", Justice Kennedy stated that the USACE must show that the wetlands in question, either alone or in combination with other similarly situated lands, significantly affect the chemical, physical, and biological integrity of other navigable waters. According to Justice Kennedy, that evidence has not been provided in either the *Rapanos v. United States* or the *Carabell v. United States* cases. Therefore, the case was remanded back to the lower court for reconsideration.

On June 5, 2007, the USACE published a memorandum that provides guidance to both the USEPA regions and the USACE districts that implement the Supreme Court's decision in the Rapanos cases (which address the jurisdiction over "Waters of the U.S." under the CWA). The memorandum includes a chart that summarizes its key points, which is intended to be used as a reference tool along with a complete discussion of issues and guidance furnished throughout the memorandum.

In summary, the USACE and the USEPA will assert jurisdiction over the following waters: (1) traditional navigable waters (TNW); (2) wetlands adjacent to TNWs; (3) non-navigable tributaries of TNWs that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months); and (4) wetlands that directly abut such tributaries.

The USACE and the USEPA will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a TNW: (1) non-navigable tributaries that are not relatively permanent; (2) wetlands adjacent to non-navigable tributaries that are not relatively permanent; and (3) wetlands adjacent to but that do not directly abut a relatively permanent, non-navigable tributary.

The USACE and the USEPA generally will not assert jurisdiction over the following features: (1) swales or erosional features (e.g., gullies or small washes characterized by low volume, infrequent, or short duration flow) and (2) ditches (including roadside ditches) excavated wholly within and draining only uplands and that do not carry a relatively permanent flow of water.

The USACE and the USEPA will apply the significant nexus standard as follows:

1. A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of downstream TNWs.

2. A significant nexus includes consideration of hydrologic and ecological factors.

Regional Water Quality Control Board

The RWQCB is the primary agency responsible for protecting water quality within California through the regulation of discharges to surface waters under the CWA and the California Porter-Cologne Water Quality Control Act (Porter-Cologne Act). The RWQCB's jurisdiction extends to all "Waters of the State" and to all "Waters of the U.S.", including wetlands (isolated and non-isolated).

Section 401 of the CWA provides the RWQCB with the authority to regulate, through a Water Quality Certification, any proposed, federally permitted activity that may affect water quality. Among such activities are discharges of dredged or fill material permitted by the USACE pursuant to Section 404 of the CWA. Section 401 requires the RWQCB to provide "certification that there is reasonable assurance that an activity which may result in the discharge to 'Waters of the U.S.' will not violate water quality standards". Water Quality Certification must be based on a finding that the proposed discharge will comply with water quality standards, which contain numeric and narrative objectives that can be found in each of the nine RWQCBs' Basin Plans.

The Porter-Cologne Act provides the State with very broad authority to regulate "Waters of the State" (which are defined as any surface water or groundwater, including saline waters). The Porter-Cologne Act has become an important tool in the post-SWANCC and Rapanos eras with respect to the State's authority over isolated waters. Generally, any person proposing to discharge waste into a water body that could affect its water quality must file a "Report of Waste Discharge" (WDR) when there is no federal nexus, such as under Section 404(b)(1) of the CWA. Although "waste" is partially defined as any waste substance associated with human habitation, the RWQCB interprets this to include fill discharge into water bodies.

California Department of Fish and Game

Activities of State and local agencies, public utilities and private projects are regulated under *Fish and Game Code* Section 1602. This section regulates any work that will (1) substantially divert or obstruct the natural flow of any river, stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

Because the CDFG includes streamside habitats under its jurisdiction that, under the federal definition, may not qualify as wetlands on a particular project site, its jurisdiction may be broader than that of the USACE. Riparian forests in California often lie outside the plain of ordinary high water regulated under Section 404 of the CWA, and often do not have all three parameters (wetland hydrology, hydrophytic vegetation, and hydric soils) sufficiently present to be regulated as a wetland. However, riparian forests are frequently within CDFG regulatory jurisdiction under §1602 of the *Fish and Game Code*.

The CDFG enters into a Streambed Alteration Agreement (SAA) with a project proponent and can impose conditions on the agreement. The notification process is the completion of the applications, which will serve as the basis for the CDFG's issuance of a Section 1602 SAA. *Fish and Game Code* §1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the State.

The CDFG jurisdictional limits are not as clearly defined by regulation as those of the USACE. While they closely resemble the limits described by USACE regulations, they include riparian habitat supported by a river, stream, or lake regardless of the presence or absence of hydric

and saturated soils conditions. In general, the CDFG takes jurisdiction from the top of a stream bank or from the outer limits of the adjacent riparian vegetation (outer drip line), whichever is greater. Notification is generally required for any project that will take place within, or in the vicinity of, a river, stream, lake, or their tributaries. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish, other aquatic plant and/or wildlife species, and watercourses that have a surface or subsurface flow that support or have supported riparian vegetation.

California Coastal Commission

The California Coastal Commission (CCC) defines wetlands under Section 30121 of the Coastal Act as:

> *"Wetland" means lands within the coastal zone which may be covered periodically or permanently with shallow water and includes salt marshes, freshwater marshes, open and closed brackish water marshes, swamps, mudflats, and fens.*

Wetland's boundaries are determined by the extent of one or more key wetland characteristics: hydrology, hydric soils, and hydrophytic vegetation. The size and extent of CCC wetlands boundaries may also be determined by aerial photographs, national wetland inventory maps, and soil conservation maps. Also, the CCC generally turns to the CDFG for assistance in determining the presence and extent of wetlands subject to regulation in the coastal zone.

In addition, Section 30233 of the Act states that:

(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:

(1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.

(2) Maintaining existing, or restoring 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. For the purposes of this section, "commercial fishing facilities in Bodega Bay" means that not less than 80 percent of all boating facilities proposed to be developed or improved, where the improvement would create additional berths in Bodega Bay, shall be designed and used for commercial fishing activities.

(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.

SECTION 2.0 METHODOLOGY

The three-parameter approach used to identify USACE wetlands is summarized in Sections 2.1 through 2.3; literature reviewed for the preparation of the delineation is outlined in Section 2.4; and the field delineation is outlined in Section 2.5.

2.1 VEGETATION

Hydrophytic vegetation (or hydrophytes) is defined as any macrophytic plant that is typically adapted to and subsequently grows within water or that is on a substrate at least periodically deficient in oxygen; this oxygen deficiency can be a result of excessive saturation conditions that range from open water to periodically saturated soils. Specifically, these plant species are specialized and can survive in permanently saturated to periodically saturated soils where oxygen levels are very low or the soils are anaerobic. The U.S. Fish and Wildlife Service (USFWS) has identified approximately 2,000 plant species of this type within the State of California (i.e., Zone 0) and nearly 5,000 species throughout the U.S. (Reed 1988). The wetland indicator categories reflect the range of estimated probabilities (expressed as a frequency of occurrence) that a species occurs in wetlands versus non-wetlands. Therefore, a frequency of 67 percent to 99 percent means that 67 percent to 99 percent of sample plots containing the species randomly selected across the range of the species would be a wetland. A positive (+) or negative (-) sign was used with the wetland indicator categories to more specifically define the regional frequency of a species' occurrence in wetlands (Reed 1988). The positive sign indicates a frequency toward the higher end of the category (i.e., more frequently found in wetlands), and a negative sign indicates a frequency toward the lower end of the category (less

frequently found in wetlands). The positive and negative modifiers are eliminated from the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* when determining if an area meets the hydrophytic plant criterion for a wetland. Species not listed by Reed (1988) are considered to be upland (UPL).

Plant indicator status categories are as follows:

- ***Obligate Wetland (OBL):*** Plants that occur almost always (estimated probability 99 percent) in wetlands under natural conditions, but which may also occur rarely (estimated probability one percent) in non-wetlands (e.g., cattails [*Typha* spp.] or common water hyacinth [*Eichhornia crassipes*]).

- ***Facultative Wetlands (FACW):*** Plants that occur usually (estimated probability 67-99 percent) in wetlands, but also occur (estimated probability 1–33 percent) in non-wetlands (e.g., mule fat [*Baccharis salicifolia*] or arroyo willow [*Salix lasiolepis*]).

- ***Facultative (FAC):*** Plants with similar likelihood (estimated probability 34–66 percent) of occurring in both wetlands and non-wetlands (e.g., California saltbush [*Atriplex californica*]).

- ***Facultative Upland (FACU):*** Plants that occur sometimes (estimated probability 1-33 percent) in wetlands, but occur more often (estimated probability 67–99 percent) in non-wetlands (e.g., giant wild rye [*Leymus condensatus*]).

- ***Obligate Upland (UPL):*** Plants that occur rarely (estimated probability one percent) in wetlands, but occur almost always (estimated probability 99 percent) in non-wetlands under natural conditions (e.g., coast live oak [*Quercus agrifolia*]).

The following are three procedures for determining hydrophytic vegetation: Indicator 1, "Dominance Test", using the "50/20 Rule"; Indicator 2, "Prevalence Index"; or Indicator 3, "Morphological Adaptation", as identified in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008). Hydrophytic vegetation is present if any indicator is satisfied. If none of the indicators are satisfied, then hydrophytic vegetation is absent unless (1) indicators of hydric soil and wetland hydrology are present and (2) the site meets the requirements for a problematic wetland situation.

Dominance Test: Vegetative cover is estimated and is ranked according to its dominance. Dominant species are the most abundant species for each stratum of the community (i.e., tree, sapling/shrub, herb, or woody vine) that individually or collectively amount to 50 percent of the total coverage of vegetation plus any other species that, by itself, accounts for 20 percent of the total vegetation cover (also known as the "50/20 Rule"). These species are recorded on the "Wetland Determination Data Form – Arid West Region" (see Attachment A). The wetlands indicator status of each species is also recorded on the data forms based on the *National List of Plant Species that Occur in Wetlands* (Reed 1988). If greater than 50 percent of the dominant species across all strata are OBL, FACW or FAC species, the criterion for wetland vegetation is considered to be met.

Prevalence Index: The prevalence index considers all plant species in a community, not just the dominant ones. The prevalence index is the average of the wetland indicator status of all plant species in a sampling plot. Each indicator status category is given a numeric code (OBL=2, FACW=2, FAC=3, FACU=4, and UPL=5) and is weighted by the species' abundance (percent cover). Hydrophytic vegetation is present if the prevalence index is 3.0 or less.

Morphological Adaptation: Morphological adaptations, such as adventitious roots (i.e., roots that take advantage of the wet conditions) and shallow root systems must be observed on more than 50 percent of the individuals of a FACU species for the hydrophytic vegetation wetland criterion to be met.

2.2 SOILS

The National Technical Committee for Hydric Soils (NTCHS) defines a hydric soil as a soil that is formed under conditions of saturation, flooding, or ponding that occurs long enough during the growing season to develop anaerobic conditions (or conditions of limited oxygen) at or near the soil surface and that favor the establishment of hydrophytic vegetation. It should be noted that hydric soils created under artificial conditions of flooding and inundation sufficient for the establishment of hydrophytic vegetation would also meet this hydric soils indicator.

The soil conditions are verified through the digging of test pits along each transect to a depth of at least 20 inches (except where noted because of restrictive layers). It should be noted that at some sites, it may be necessary to make exploratory soil test pits up to 40 inches in depth to more accurately document and understand the variability in soil properties and hydrologic relationships on the site. Soil test pit locations are usually dug within the drainage invert or at the edge of a drainage course within vegetated areas. Soil extracted from each soil test pit is then examined for texture and color using the standard plates within the Munsell Soil Color Chart (1994) and recorded on the Data Form. The Munsell Soil Color Chart aids in designating soils by color labels based on gradations of three simple variables: hue, value, and chroma. Any indicators of hydric soils such as redoximorphic features (i.e., areas where iron is reduced under anaerobic conditions and oxidized following a return to aerobic conditions); buried organic matter; organic streaking; reduced soil conditions; gleyed (i.e., soils having a characteristic bluish-gray or greenish-gray in color) or low-chroma soils; or sulfuric odor are also recorded on the Data Form. If hydric soils are found, progressive pits are dug along the transect moving laterally away from the active channel area until hydric soil features are no longer present within the top 20 inches of the soil.

2.3 HYDROLOGY

Wetlands hydrology is represented by either (1) all of the hydrological elements or characteristics of areas permanently or periodically inundated or (2) areas containing soils that are saturated for a sufficient duration of time to create hydric soils suitable for the establishment of plant species that are typically adapted to anaerobic soil conditions. The presence of wetland hydrology is evaluated at each intersect by recording the extent of observed surface flows, the depth of inundation, the depth to saturated soils, and the depth to free water in soil test pits. In instances where stream flow is divided into multiple channels with intervening sandbars, the entire area between the channels is considered within the OHWM. Therefore, an area containing these features would meet the indicator requirements for wetland hydrology.

2.4 LITERATURE

Prior to conducting the delineation, BonTerra Consulting reviewed the following documents to identify areas that may fall under agency jurisdiction: the USGS Newport Beach 7.5-minute topographic quadrangle; color aerial photography provided by Aerials Express (2008); the Report and General Soil Map, Orange County and Part of Riverside County, California (USDA); the National Hydric Soils List (USDA NRCS 2008); and the National Wetlands Inventory's Wetland Mapper (USFWS 2009). A description of this literature is provided below.

USGS Topographic Quadrangle: USGS quadrangle maps show geological formations and their characteristics; they describe the physical settings of an area through topographic contour

lines and other major surface features. These features include lakes, streams, rivers, buildings, roadways, landmarks, and other features that may fall under the jurisdiction of one or more regulatory agencies. In addition, the USGS maps provide topographic information that is useful in determining elevations, latitude and longitude, and Universal Transverse Mercator Grid coordinates for a project site.

No blueline rivers, streams, or lakes are shown within the project site boundary on the Newport Beach USGS quadrangle.

Color Aerial Photography: BonTerra Consulting reviewed an existing color aerial photograph prior to the January 26, 2009, site visit to identify the extent of any drainages and riparian vegetation occurring within the project site.

Most of the project site is disturbed through past site grading possibly by the previous owner, Caltrans, as part of the construction of West Coast Highway as well as Superior Avenue. There is one drainage feature visible on the aerial photograph: a concrete trapezoidal flood control channel that conveys storm flows from high-density residential development located immediately adjacent to and northeast of the project site. A series of bench drains collects sheet flows that are conveyed to this flood control channel. The flood control channel ultimately conveys storm flows to a storm drain system within West Coast Highway. No low flows or vegetation were present in this channel.

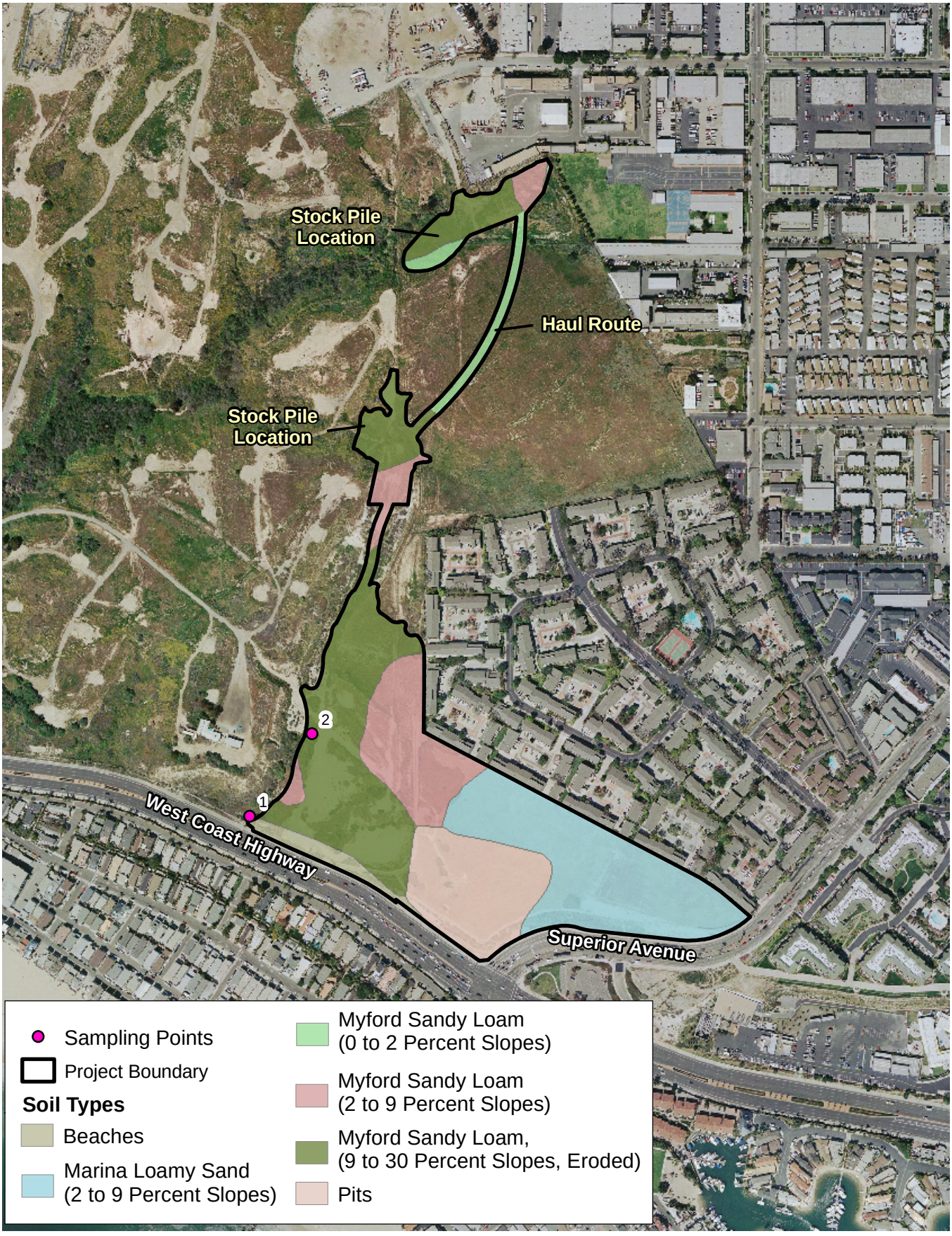
U.S. Department of Agriculture, Natural Resources Conservation Service: The presence of hydric soil is one of the chief indicators of jurisdictional wetlands. BonTerra Consulting reviewed the USDA soil survey data for the survey area and determined that the soils were mapped as beaches; Marina loamy sand, 2–9 percent slopes; Myford sandy loam, 2–9 percent slopes; Myford sandy loam, 9–30 percent slopes, eroded; and pits (Exhibit 4; USDA NRCS 2007). Of these soils, beaches; Myford sandy loam, 2–9 percent slopes; and pits are listed as “hydric” on the National Hydric Soils List for Orange County and Part of Western Riverside County, California (USDA NRCS 2008). A brief description of the soil series mapped in the survey area is provided in Attachment B of this report.

U.S. Fish and Wildlife Service, National Wetlands Inventory: The Wetlands Mapper shows wetland resources available from the Wetlands Spatial Data Layer of the National Spatial Data Infrastructure (USFWS 2009). This resource provides the classification of known wetlands following the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979). This classification system is arranged in a hierarchy of (1) Systems that share the influence of similar hydrologic, geomorphologic, chemical, or biological factors (i.e., Marine, Estuarine, Riverine, Lacustrine, and Palustrine); (2) Subsystems (i.e., Subtidal and Intertidal; Tidal, Lower Perennial, Upper Perennial, and Intermittent; or Littoral and Limnetic); (3) Classes, which are based on substrate material and flooding regime or on vegetative life form; (4) Subclasses; and (5) Dominance Types, which are named for the dominant plant or wildlife form. In addition, there are modifying terms applied to Classes or Subclasses.

The mapped wetlands resources are included in Attachment C. An area in the center of the northern edge of the project site is mapped as PEMA. This area is in the Palustrine (P) System. It is characterized by emergent vegetation (EM) that is present for most of the growing season. This area is also temporarily flooded (A) with surface water present for brief periods during the growing season.

2.5 JURISDICTIONAL DELINEATION

In September 2008, the USACE issued the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region*. This regional supplement is designed for use



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Soil Types

Exhibit 4

Sunset Ridge Park

N W E S

500 250 0 500 Feet

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with the *1987 Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987). 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. A three-parameter approach is used to identify wetlands and requires evidence of wetland hydrology, hydrophytic vegetation, and hydric soils. Wetlands generally include swamps, marshes, bogs, and similar areas. In order to be considered a wetland, an area must exhibit at least minimal hydric characteristics within the three parameters. However, problem areas may periodically or permanently lack certain indicators due to seasonal or annual variability of the nature of the soils or plant species on site. Atypical wetlands lack certain indicators due to recent human activities or natural events. Guidance for determining the presence of wetlands in these situations is presented in the regional supplement. Non-wetland "Waters of the U.S." are delineated based on the limits of the OHWM, which can be determined by a number of factors including erosion, the deposition of vegetation or debris, and changes in vegetation.

It should be noted that the RWQCB shares the USACE jurisdiction 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. The CDFG's jurisdiction is defined as the top of the bank of the stream, channel, or basin or the outer limit of riparian vegetation located within or immediately adjacent to the river, stream, creek, pond, or lake.

The analysis contained in this report uses the results of one field survey conducted by Mr. Gary Medeiros and Ms. Allison Rudalevige on January 26, 2009 and June 25, 2009. The field surveys included the collection of vegetation, soils, and hydrologic data at the project site (Exhibit 5, Site Photos). This information was recorded on a 1 inch equals 200 feet (1″ = 200′) scale aerial photograph and on Wetland Data Sheets (Attachment A). Photographs of the project site are included in Exhibit 5.

SECTION 3.0 RESULTS

3.1 VEGETATION

Vegetation was formally analyzed at two sampling points on the project site. The southwest corner of the project site contains alkali meadow vegetation at sampling point 1. This vegetation type is dominated by salt grass (*Distichlis spicata*) (FACW) with lesser amounts of hottentot fig (*Carpobrotus edulis*), foxtail chess (*Bromus madritensis* ssp. *rubens*), sweet-clover (*Melilotus* sp.), and goldenbush (*Isocoma menziesii*). At sampling point 1, the prevalence index was less than 3.0; therefore, the hydrophytic vegetation criterion for wetlands was met in this area. Mule fat scrub/ornamental vegetation is located along the western edge of the project site. At sampling point 2, the area is dominated by a high cover of arroyo willow (*Salix lasiolepis*) (FACW) with an understory of hottentot fig. The prevalence index was less than 3.0 at sampling point 2; therefore, the hydrophytic vegetation criterion for wetlands was met in this area.

3.2 SOIL

Soil at sampling point 1 consisted of sand and sandy clay. This area had previously been documented to have a depleted matrix (F3) and redox depressions (F8) (GLA 2008); however, during the June 25, 2009 site visit, the redox features were not abundant enough to qualify for indicator F8. This area is a depressional landscape feature that is seasonally ponded. Given that this is a problematic soil situation and that previous surveys had documented indicators of hydric soil, hydric soil may be considered present as long as hydrophytic vegetation and

Sampling Point Number 1.

Mule fat scrub/ornamental vegetation along the western edge of the project site.

Sampling Point Number 2.

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Site Photographs

Exhibit 5

Sunset Ridge Park

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wetland hydrology are also present. No indicators of hydric soil were observed at sampling point 2. Therefore, the hydric soil criterion for wetlands was not met for this area.

3.3 HYDROLOGY

The site contains a concrete trapezoidal flood control channel that conveys storm flows from a high-density residential development located to the north of the project site and surface flows picked up by concrete v-ditches on site. This flood control channel then conveys storm flows to the storm drain system located within West Coast Highway, which ultimately flows to the Pacific Ocean near the Santa Ana River mouth. No surface water was observed within the concrete channel during the January 26, 2009, survey. The depressional landscape feature in the southwestern corner of the project site and the area containing arroyo willows had surface soil cracks (i.e., a primary indicator of wetland hydrology). Surface water was observed in portions of this site during the January 26, 2009, survey but not during the June 25, 2009 survey. Therefore, the wetland hydrology criterion for wetlands has been met in these areas.

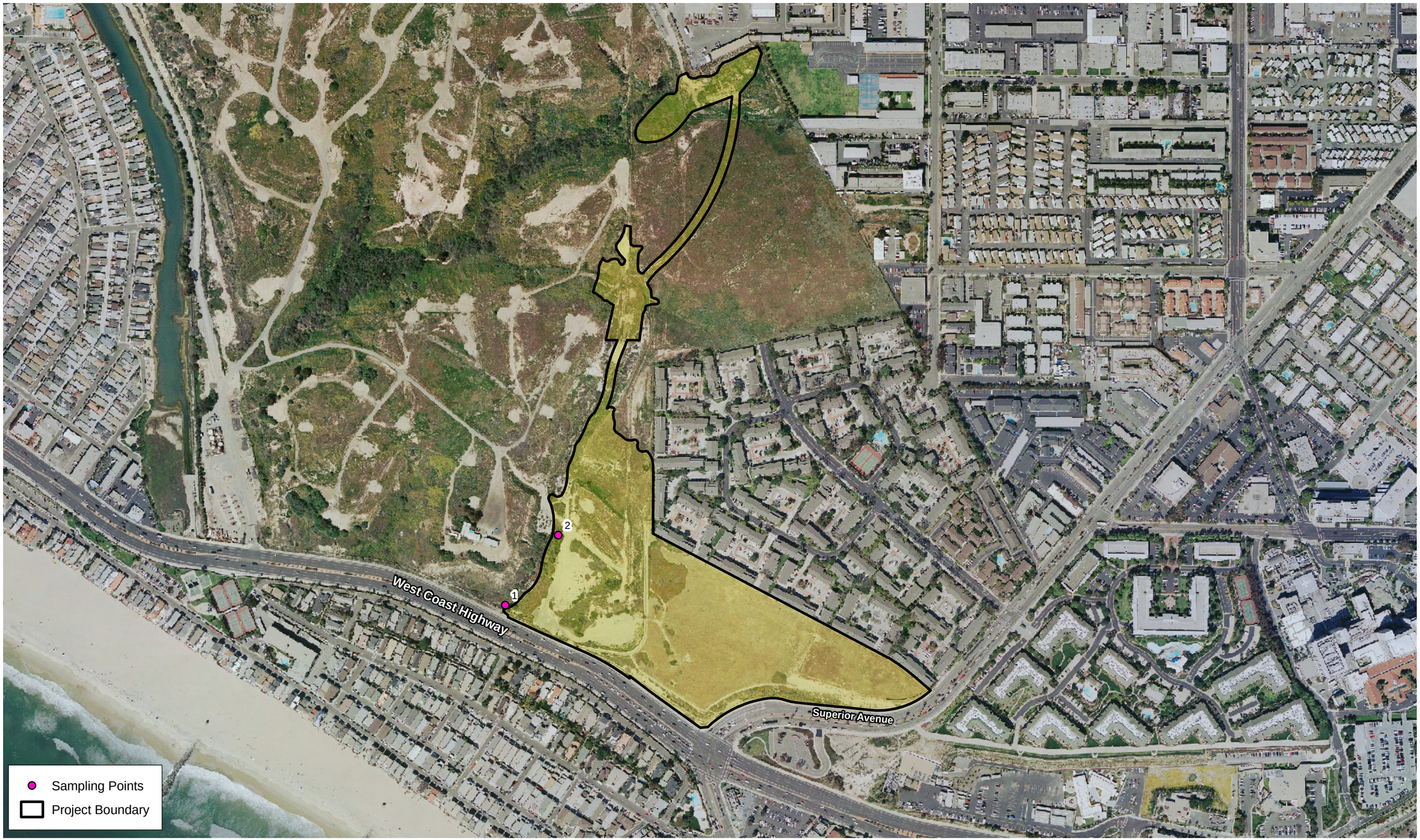
In addition, the site appears to have a physical hydrologic connection to the ocean. Therefore, the significant nexus requirements of adjacency or a hydrologic and ecological relationship to a TNW or a tributary to a TNW was met.

SECTION 4.0 JURISDICTIONAL DELINEATION

4.1 U.S. ARMY CORPS OF ENGINEERS DETERMINATION

Wetlands Determination: As previously described in Section 2.0 of this report, an area must exhibit all three wetland parameters, as described in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008b) and the *1987 Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) in order to be considered a jurisdictional wetland. The southwestern portion of the project site exhibited evidence of hydrophytic vegetation, wetland hydrology, and hydric soils. Therefore, criteria for wetlands were met. A total of approximately 0.023 acre (0.009 hectare) of wetlands is present just outside of the project site (Exhibit 6a; Table 1). Based on the current project design, a total of approximately 0.000acre (0.000 hectare) of wetland would be permanently impacted.

"Waters of the U.S." (Non-Wetland) Determination: During the January 26, 2009, delineation, there was evidence of bed, bank, and OHWM of potential "Waters of the U.S." conditions within the concrete trapezoidal flood control channel. The flood control channel also has hydrologic connection via the storm drain system within West Coast Highway that ultimately connects to a downstream TNW, the Pacific Ocean. Therefore, the site appears to meet the "significant nexus standard". No evidence of OHWM was observed in the area containing arroyo willows; therefore, this area is not considered under the jurisdiction of the USACE. On July 30, 2009, BonTerra Consulting contacted Jae Chung (USACE) to discuss the preliminary findings of the jurisdictional delineation. Mr. Chung stated that he had reviewed the project site during a pre-application meeting with Glenn Lukos and Associates in early 2009, and determined that the USACE would not assert jurisdiction over the concrete drainage facility because it was excavated wholly in and drains only upland areas, and it does not carry a relatively permanent flow of water. Based on the field observations and data collection, no non-wetland "Waters of the U.S." occurs on the project site (Exhibit 6a; Table 1). Based on the current design plans, no non-wetland "Waters of the U.S." will be permanently impacted by grading and/or structural development (Exhibit 6b; Table 2).



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US Army Corps of Engineers Jurisdictional Resources

Exhibit 6a

Sunset Ridge Park

N W E S

400 200 0 400

Feet

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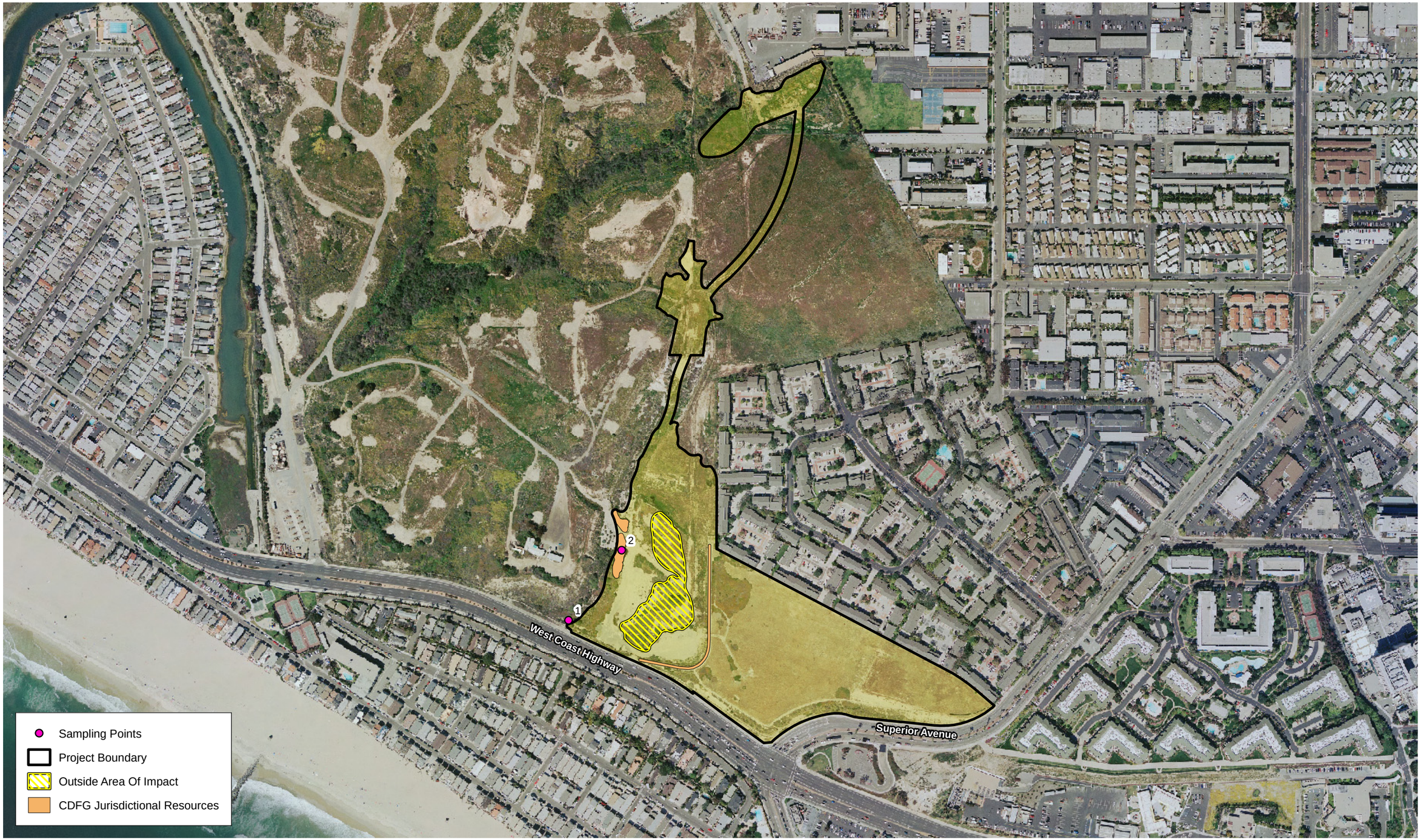

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CDFG Jurisdictional Resources

Exhibit 6b

Sunset Ridge Park

N W E S

400 200 0 400

Feet

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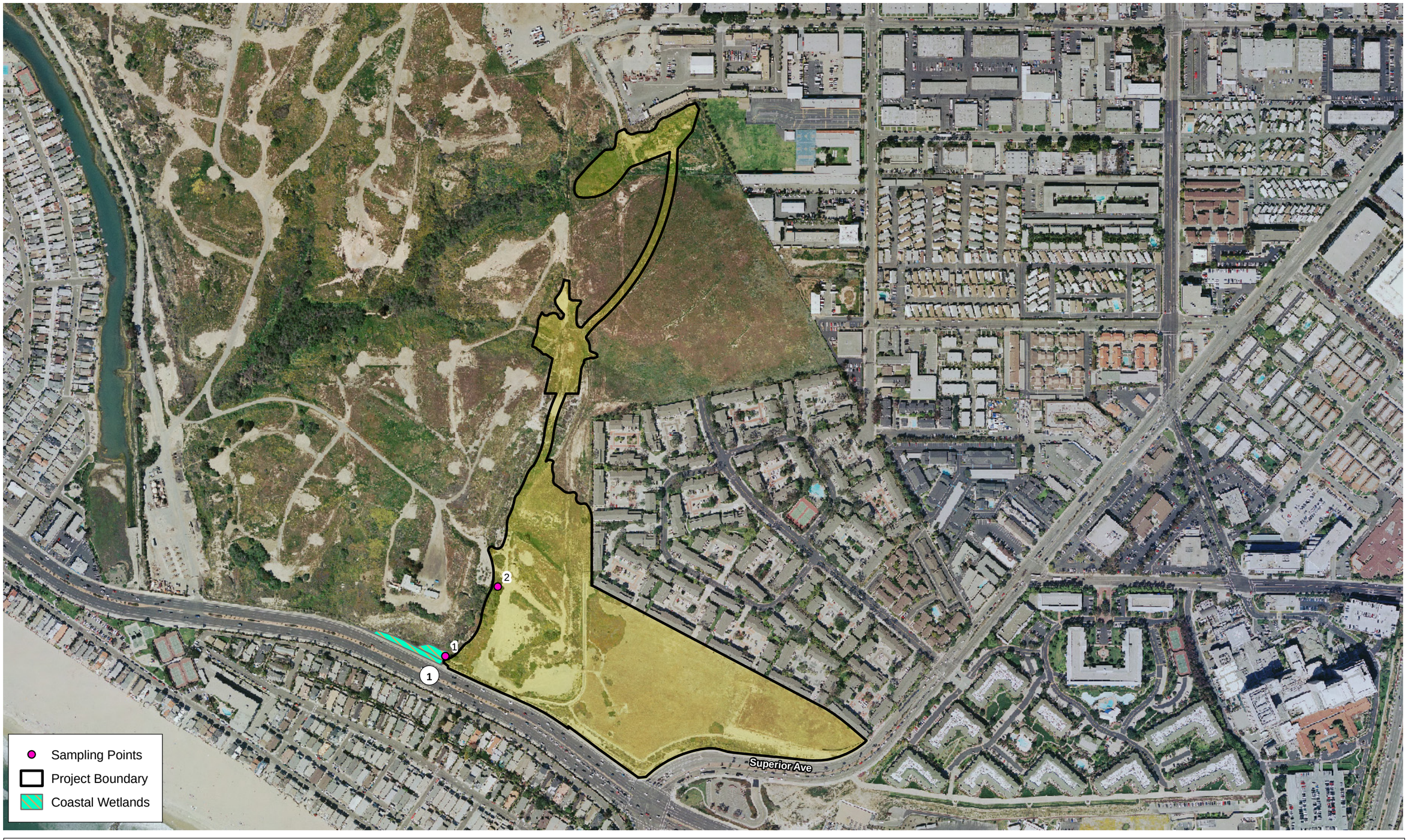

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Coastal Commision Jurisdictional Resources

Exhibit 6c

Sunset Ridge Park

N W E S

400 200 0 400 Feet

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TABLE 1
USACE JURISDICTIONAL WATERS OF THE U.S.

USACE Jurisdiction within Sunset Ridge Park	Existing Jurisdictional Resources Acres [Hectares]	Temporary Jurisdictional Impacts Acres [Hectares]	Permanent Jurisdictional Impacts Acres [Hectares]	Total Jurisdictional Impacts Acres [Hectares]
Wetlands	0.000 [0.000]	0.000 [0.000]	0.000 [0.000]	0.000 [0.000]
Open Water	0.000 [0.000]	0.000 [0.000]	0.000 [0.000]	0.000 [0.000]
Other Non-Wetlands "Waters of the U.S."	0.000 [0.000]	0.000 [0.000]	0.000 [0.00]	0.00 0.00]
Total "Waters of the U.S."	**0.000 [0.000]**	**0.000 [0.000]**	**0.000 [0.000]**	**0.000 [0.000]**

4.2 CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD DETERMINATION

The RWQCB jurisdictional boundaries are defined as those determined for the USACE under "Waters of the U.S.". However, the RWQCB takes jurisdiction over both connected and isolated waters. The concrete trapezoidal flood control channel would be considered jurisdictional "Waters of the U.S." based on the presence of an OHWM, and therefore it would be considered jurisdictional by the RWQCB. No resources under the jurisdiction of the RWQCB occur within the project site.

4.3 CALIFORNIA DEPARTMENT OF FISH AND GAME DETERMINATION

The CDFG jurisdiction within the drainages extends from the top of bank to the top of bank and in to the outer drip line in areas containing riparian vegetation. The concrete trapezoidal flood control channel provides a permanent bed, bank, and channel, which flows at least periodically. In addition, a patch of arroyo willows (*Salix lasiolepis*) occurs along the western boundary of the project site in an area that exhibits bed and bank. Based on the field observations and data collection, a total of approximately 0.443 acre (0.177 hectare) of resources under the jurisdiction of CDFG pursuant to the Section 1602 of the *California Fish and Game Code* are located within the boundaries of the project site (Exhibit 6b; Table 2). Based on the current design plans, a total of approximately 0.443 acre (0.177 hectare) of Waters of the State will be impacted by the proposed project (Exhibit 6b; Table 2).

TABLE 2
CALIFORNIA DEPARTMENT OF FISH AND GAME
JURISDICTIONAL RESOURCES

CDFG Jurisdiction within Sunset Ridge Park	Existing Jurisdictional Resources Acres [Hectares]	Temporary Jurisdictional Impacts Acres [Hectares]	Permanent Jurisdictional Impacts Acres [Hectares]	Total Jurisdictional Impacts Acres [Hectares]
Total Jurisdictional Area	**0.443 [0.177]**	**0.000 [0.000]**	**0.443 [0.177]**	**0.443 [0.177]**

4.4 CALIFORNIA COASTAL COMMISSION DETERMINATION

Based on the project design plans, no wetlands as defined by the Coastal Act are expected to be impacted by the project.

SECTION 5.0 CONCLUSION OF REGULATORY APPROVAL PROCESS

5.1 REGULATORY PERMIT REQUIREMENTS

The following is a general summary of the various permits, agreements, and certifications required prior to initiation of project activities which involve impacts to areas under the jurisdiction of the USACE, the RWQCB, and the CDFG. The project is not expected to impact wetland resources under the jurisdiction of the CCC. A summary of the regulatory permit requirements is as follows:

- CDFG Section 1602 Streambed Alteration Agreement
- Coastal Development Permit

Also, the CDFG and CDP application submittals will not be deemed complete until the application fees have been paid and the agency is provided with a certified California Environmental Quality Act (CEQA) document and a signed copy of the receipt of County Clerk filing fees for the Notice of Determination (NOD). It should also be noted that, effective January 1, 2009, the CDFG's filing fees were increased to $2,768.25 for Environmental Impact Reports for projects approved pursuant to a certified regulatory program. The fees increase annually. In addition, land use jurisdictions can no longer make "de minimis" findings if they determine that the project will not impact resources under the CDFG's jurisdiction. Therefore, the finding of "No Impact" to the CDFG jurisdictional resources must now be made by the CDFG prior to the payment of CDFG fees.

A detailed explanation of the regulatory permitting requirements for impacts to jurisdictional resources is provided in Sections 5.2 through 5.4.

5.2 U.S. ARMY CORPS OF ENGINEERS

As noted in Section 4.1, no non-wetland waters occur within the limits of project disturbance. Therefore, no authorization pursuant to Section 404 of the CWA is required. Regional Water Quality Control Board

As noted above, the USACE has determined that no resources under the jurisdiction of the USACE occur within the limits of disturbance of the proposed project. Also, no isolated resources occur within the project site. Since the RWQCB jurisdictional boundaries are defined as those determined by the USACE under "Waters of the U.S." including isolated waters, no connected or isolated non-wetlands waters occur within the project site or limits of project disturbance. Based on current project design plans, the project will not impact resources under the jurisdiction of the RWQCB.

5.3 CALIFORNIA DEPARTMENT OF FISH AND GAME

The CDFG regulates all work (including initial construction and ongoing operation and maintenance) that may substantially divert or obstruct the natural flow of or substantially change or use any material from the bed, channel, or bank of any river, stream, or lake through its Streambed Alteration Program. An Applicant must enter into an agreement with the CDFG to ensure no net loss of wetland values and acreages.

As previously indicated, the extent of the CDFG jurisdiction in the project study area has been identified. Based on the current design plans, approximately 0.443 acre (0.177 hectare) within the CDFG's jurisdiction will be impacted as a result of the project implementation. Impacts resulting from project implementation will require a Section 1602 SAA. The SAA must address the initial construction and long-term operation and maintenance of any structures within areas

identified as “waters of the State” (such as a culvert or desilting basin) that may require periodic maintenance if these are included in the project design.

Prior to construction, a notification (SAA application) must be submitted to the CDFG that describes any proposed streambed alteration contemplated by the proposed project. In addition to the formal application materials and the fee, a copy of the appropriate environmental document (e.g., MND) should be included in the submittal, consistent with CEQA requirements. The CDFG will prepare a draft SAA, which will include standard measures to protect sensitive plant and wildlife resources during project construction and as during ongoing operation and maintenance of any project element that occurs within a CDFG jurisdictional area.

If an SAA (agreement) is required, the CDFG may want to conduct an on-site inspection. The CDFG then prepares a draft agreement, which will include measures to protect fish and wildlife resources that will be directly or indirectly impacted by project construction. The draft agreement will be transmitted to the Applicant within 60 calendar days of the CDFG’s determination that the notification is complete. It should be noted that the 60-day timeframe may not apply to long-range agreements.

The Applicant has 30 calendar days to notify the CDFG concerning the acceptability of the proposed terms, conditions, and measures. If the Applicant agrees with these terms, conditions, and measures, the agreement must be signed and returned to the CDFG. The agreement becomes final once the CDFG executes it and an SAA is issued. Please note that all application fees must be paid and the final certified CEQA documentation must be provided prior to the CDFG’s execution of the agreement.

If the CDFG does not respond in writing concerning the completeness of the Notification within 30 days of its submittal, the Notification automatically becomes complete. If the CDFG does not submit a draft SAA to the Applicant within 60 days of the determination of a completed Notification package, the CDFG will issue a letter that either (1) identifies the final date to transmit a draft SAA or (2) indicates that an SAA was not required. The CDFG will also indicate that it was unable to meet this date and that by law the Applicant must complete the project without an SAA and must comply with all avoidance, minimization, and mitigation measures described in the submitted Notification package.

5.4 RECOMMENDATIONS

Based on the conclusions of this updated jurisdictional delineation, the following recommendations are identified:

1. Schedule a pre-application meeting with the CDFG and CCC staff to discuss: site conditions, biological resources and jurisdictional resources, the proposed project, impacts to these resources resulting from the proposed project, and proposed minimization measures and the mitigation program to offset these impacts, and (2) to discuss environmental, and permit process.

2. Prepare a regulatory submittal package containing the USACE Section 404 Notification, RWQCB Section 401 Water Quality Certification, and CDFG Section 1602 Notification applications as soon as the CEQA documentation is certified.

SECTION 6.0 REFERENCES

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ATTACHMENT A

WETLAND DATA FORMS

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Sunset Ridge Park (Newport J016) City/County: Newport Beach / Orange Sampling Date: 6/25/09

Applicant/Owner: City of Newport Beach State: CA Sampling Point: 1

Investigator(s): Gary Medeiros, Allison Rudalevige Section, Township, Range: in "Santiago De Santa Ana" land grant

Landform (hillslope, terrace, etc.): Shallow depression Local relief (concave, convex, none): Concave Slope (%): _____

Subregion (LRR): C Lat: 33.62471377 Long: -117.94220318 Datum: NAD 83

Soil Map Unit Name: Beaches NWI classification: –

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil X, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	

Remarks:
Area is a depressional landscape feature

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 20x20)			
1. Isocoma menziesii	5	Y	UPL
2.			
3.			
4.			
5.			
	5 = Total Cover		
Herb Stratum (Plot size: 20x20)			
1. Distichlis spicata	70	Y	FACW
2. Carpobrotus edulis	20	N	UPL
3. Bromus madritensis ssp. rubens	1	N	NI*
4. Melilotus sp **	15	N	FAC
5.			
6.			
7.			
8.			
	106 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species	70	x 2 =	140
FAC species	15	x 3 =	45
FACU species		x 4 =	
UPL species	25	x 5 =	125
Column Totals:	110 (A)		310 (B)

Prevalence Index = B/A = 2.82

Hydrophytic Vegetation Indicators:

_____ Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

_____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

_____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:
* Insufficient information available to determine indicator status in this region. Nationally, tentatively assigned FACU.
** Plants dead and dry; unable to be identified to species. However, Melilotus indica had previously been observed in that area.

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	2.5Y 5/4	100					Sand	
2-16	2.5Y 4/4	99	5YR 5/6	1	C	M	Sandy clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- X Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Cobble

Depth (inches): 16

Hydric Soil Present? Yes X No ___

Remarks:

Area is a depressional landscape feature that is seasonally ponded. This is a problematic soil situation. Ponding was observed during the wet season. This area was previously observed to have soil 10YR 4/2 w/ redox features 10YR 5/6; therefore, meeting indicators F3 & F8 (GLA 2008).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- X Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Water sheet flows from surrounding area and ponds here.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Sunset Ridge Park (Newport J016) City/County: Newport Beach / Orange Sampling Date: 6/25/09

Applicant/Owner: City of Newport Beach State: CA Sampling Point: 2

Investigator(s): Gary Medeiros, Allison Rudalevige Section, Township, Range: in "Santiago De Santa Ana" land grant

Landform (hillslope, terrace, etc.): gully Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): C Lat: 33.625562260 Long: -117.94146071 Datum: NAD83

Soil Map Unit Name: Myford Sandy Loam (9-30% slopes, eroded) NWI classification: –

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____ No X	
Wetland Hydrology Present?	Yes X No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20x30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	90	Y	FACW
2.			
3.			
4.			
	90 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 20x30)			
1. Carpobrotus edulis	20	Y	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	20 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 80 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species _____	x 1 = _____	
FACW species 90	x 2 = 180	
FAC species _____	x 3 = _____	
FACU species _____	x 4 = _____	
UPL species 20	x 5 = 100	
Column Totals: 110 (A)	280 (B)	

Prevalence Index = B/A = 2.55

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-20	10YR 5/3	100					sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- X Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

ATTACHMENT B

SOIL SURVEY

The soil classifications identified below was obtained from the U.S. Department of Agriculture, Natural Resources Conservation Service. The Official Soil Series Descriptions were obtained from the Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture.

Beaches

Beaches consist of sandy, gravelly, or cobbly coastal shores that are washed and rewashed by tidal and wave action. These areas may be partly covered with water during high tides or stormy periods. They support little or no vegetation and have no agricultural value. Some are excellent recreational areas. Runoff is very slow and the erosion hazard is high.

Marina Series

The Marina series is a mixed, thermic Lamellic Xeropsamment. It has a grayish brown and brown, slightly and moderately acidic, loamy sand A horizon; a light brown, moderately and strongly acidic, loamy sand B2 horizon with lamellae; and a light brown and pink, moderately acidic, sand C horizon.

Range in Characteristics:

The mean annual soil temperature is about 59 to 62 degrees Fahrenheit (°F) and the soil temperature usually is not below 47°F at any time. The mean summer soil temperature is about 65 to 70°F and the mean winter soil temperature is about 55 to 60°F. The soil between depths of about 12 and 35 inches is usually dry all of the time from late April or May until November and is moist in some or all parts the rest of the year. Rock fragments are lacking and textures throughout the profile are sand to loamy fine sand. Many pedons are about pH 5.7 to 6.3 and tend to be less acidic in the uppermost and lower most horizons. The full range of reaction is neutral to strongly acid.

The A horizon is pale brown to dark yellowish brown (10YR 6/2, 6/3, 5/2, 5/3, 5/4, 4/3, 4/4). It has less than 1 percent organic matter in all parts or less than 1 percent below a depth of 5 inches. This horizon is massive or single grained or has granular or crumb structure.

The B2 horizon is light brown to strong brown (7.5YR 6/4, 5/4, 4/4, 5/6). It is massive and slightly hard or hard and slightly brittle. This horizon has brown or reddish brown lamellae $^{1}/_{4}$ to $^{3}/_{4}$ inch thick. The lamellae are thinner and more distinct from the matrix in the upper part of the horizon and become generally thicker and less distinct with depth. Clay bridges in the lamellae are moderately thick to thick and the lamellae are hard or very hard when dry and sticky when wet. The aggregate thickness of the lamellae is about 2 to 5 inches and the lamellae are about 2 to 6 inches apart. The matrix has some thin clay bridges.

The C horizon is very pale brown to light brown (10YR 7/3, 7/4, 6/3, 6/4; 7.5YR 7/2, 7/4, 6/4). It is sand or coarse sand and is soft when dry. Lamellae in this horizon become increasingly indistinct and more discontinuous with increasing depth.

Drainage and Permeability:

Marina soils are somewhat excessively drained; have slow to rapid runoff; and have moderate permeability. The soil above the B2 horizon is wet for several days to a week or more after periods of unusually heavy precipitation

Myford Series

The Myford series is a fine-loamy, mixed, superactive, thermic Typic Palexeralf. It consists of deep, moderately well drained soils formed on terraces. The mean annual precipitation is about 16 inches and the mean annual air temperature is about 62°F.

Range in Characteristics:

The solum ranges from 45 to 75 inches thick. Mean annual soil temperature at a depth of 20 inches is 60 to 63°F. The soil between depths of about 5 and 15 inches is usually moist in some part from about November 15 until late May, and is continuously dry the rest of the year.

The A horizon is pinkish gray or light brown, light brownish gray, pale brown, grayish brown or brown in 7.5YR or 10YR hue. It is sandy loam, or fine sandy loam. This horizon has weak structure or is massive and ranges from strongly acid to slightly acid. The A3 horizon is one unit higher in value than the A1 horizon.

The Bt horizon is brown, dark brown, or yellowish brown in 7.5YR or 10YR hue. It is sandy clay or heavy clay loam in the upper part and sandy clay loam or clay loam in the lower part and averages 28 to 30 percent clay in the entire horizon. The upper boundary of the Bt horizon is abrupt and the clay increase from the A horizon to the Bt horizon is 18 to 28 percent. This horizon has prismatic or angular blocky structure. It ranges from medium acidic to moderately alkaline in the upper part and is moderately alkaline in the lower part. Exchangeable sodium is 15 to 35 percent below depth of one meter.

Drainage and Permeability:

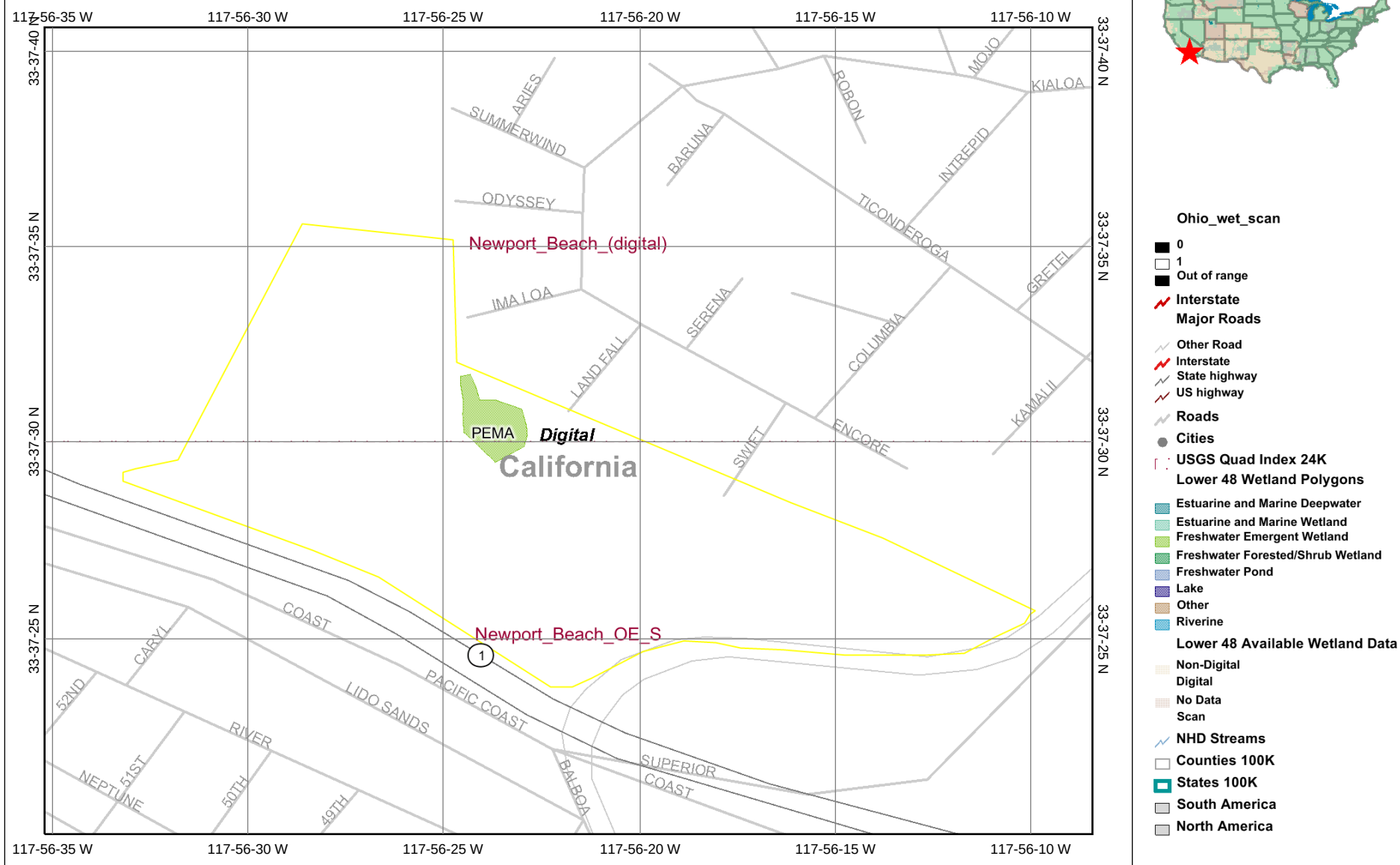
Myford soils are moderately well drained; have medium to rapid runoff; and have very slow permeability.

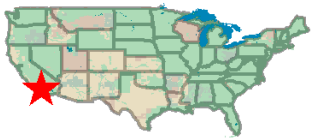
Pits

Pits are open excavations from which soil and underlying material, mostly sand and gravel, have been removed for construction. Present land use is construction material, idle land, or ground water recharge if these areas are in a streambed.

ATTACHMENT C

NATIONAL WETLAND INVENTORY





Ohio_wet_scan
0
1
Out of range
Interstate
Major Roads
Other Road
Interstate
State highway
US highway
Roads
Cities
USGS Quad Index 24K
Lower 48 Wetland Polygons
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland
Freshwater Pond
Lake
Other
Riverine
Lower 48 Available Wetland Data
Non-Digital
Digital
No Data
Scan
NHD Streams
Counties 100K
States 100K
South America
North America

ATTACHMENT D

NATIONWIDE PERMIT SUMMARY

Nationwide Permit 42 (Recreational Facilities)

Discharges of dredged or fill material into non-tidal waters of the United States for the construction or expansion of recreational facilities. Examples of recreational facilities that may be authorized by this NWP include playing fields (e.g., football fields, baseball fields), basketball courts, tennis courts, hiking trails, bike paths, golf courses, ski areas, horse paths, nature centers, and campgrounds (excluding recreational vehicle parks). This NWP also authorizes the construction or expansion of small support facilities, such as maintenance and storage buildings and stables that are directly related to the recreational activity, but it does not authorize the construction of hotels, restaurants, racetracks, stadiums, arenas, or similar facilities.

The discharge must not cause the loss of greater than $^{1}/_{2}$-acre of non-tidal waters of the United States, including the loss of no more than 300 linear feet of stream bed, unless for intermittent and ephemeral stream beds this 300 linear foot limit is waived in writing by the district engineer. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity. (See general condition 27.) (Section 404).

Nationwide Permit General Condition 27 (Pre-Construction Notification)

(a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, as a general rule, will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) Forty-five calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 17 that listed species or critical habitat might affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 18 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that is no effect on listed species or no potential to cause effects on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4[f]) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4[g]) is completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee cannot begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified,

suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed project;

(3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided result in a quicker decision.);

(4) The PCN must include a delineation of special aquatic sites and other waters of the United States on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters of the United States, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, where appropriate;

(5) If the proposed activity will result in the loss of greater than $^{1}/_{10}$ acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and

(7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a

PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

(d) Agency Coordination:

(1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

(2) For all NWP 48 activities requiring pre-construction notification and for other NWP activities requiring pre-construction notification to the district engineer that result in the loss of greater than $^{1}/_{2}$-acre of waters of the United States, the district engineer will immediately provide (e.g., via facsimile transmission, overnight mail, or other expeditious manner) a copy of the PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will then have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame, but will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(4) Applicants are encouraged to provide the Corps multiple copies of pre-construction notifications to expedite agency coordination.

(5) For NWP 48 activities that require reporting, the district engineer will provide a copy of each report within 10 calendar days of receipt to the appropriate regional office of the NMFS.

(e) District Engineer's Decision: In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If the proposed activity requires a PCN and will result in a loss of greater than $^{1}/_{10}$ acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for projects with smaller impacts. The district engineer will consider any proposed compensatory mitigation the applicant has included

in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed work are minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will notify the permittee and include any conditions the district engineer deems necessary. The district engineer must approve any compensatory mitigation proposal before the permittee commences work. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the district engineer to be minimal, the district engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP.

If the district engineer determines that the adverse effects of the proposed work are more than minimal, then the district engineer will notify the applicant either: (1) That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (2) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or (3) that the project is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period. The authorization will include the necessary conceptual or specific mitigation or a requirement that the applicant submit a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan.

ATTACHMENT E

CONCEPTUAL SITE PLAN

Source: EPT Design

D:/Projects/Newport/J016Graphics/exAttE_coetpualSP_050709.ai

Conceptual Site Plan

Attachment E

Sunset Ridge Park

BonTerra CONSULTING

R:/projects/Newport/J016/JD/exAttE_siteplan_050709.pdf