

2.4 Biological Resources

The descriptions and evaluation of biological resources impacts in this section are based on information compiled from the Biological Resources Technical Report (BTR) prepared for the proposed Newland Sierra Project (project) by Dudek (Appendix H). This section of the EIR will (1) describe the existing conditions of biological resources within the project Site in terms of vegetation, jurisdictional resources, flora, wildlife, and wildlife habitats; (2) discuss potential impacts to biological resources that would result from development of the Site and describe those impacts in terms of biological significance in view of federal, state, and local laws and policies; and (3) recommend mitigation measures for potential impacts to sensitive biological resources, if necessary. Recommendations will follow federal, state, and local rules and regulations, including the California Environmental Quality Act (CEQA), the County of San Diego's (County) *Guidelines for Determining Significance and Report Format and Contents Requirements: Biological Resources* (County of San Diego 2010a, 2010b), and the County's Resource Protection Ordinance (RPO) (County of San Diego 2007).

Comments received in response to the Notice of Preparation (NOP) included concerns regarding listed and other sensitive species, wildlife corridor/movement areas, conflicts between human and wildlife interface, fuel modification zones, nesting birds, and the creation of a sub-regional preserve system. These concerns are addressed and summarized in this section. A copy of the NOP and comment letters received in response to the NOP are included in Appendix A of this EIR.

2.4.1 **Proposed Open Space Design**

On-Site Open Space

The biological open space for the proposed project would include three large, interconnected, open space blocks within the project Site, as well as a large off-site biological open space parcel. The design of the proposed biological open space is described below.

The proposed on-site open space design consists of two large, continuous blocks of key biological resources (approximately 1,025 acres) situated within the northern half and along the eastern boundary of the project Site, and a third large block of open space in the center of the Site that connects the abovementioned blocks of open space to open space located east and south of the project Site (Figure 2.4-1, Proposed Open Space Design and MSCP Preserves). These connected blocks of habitat create an on-site biological open space preserve of approximately 1,209.1 acres, which has been designated as a proposed hardline area in the draft North County Plan of the County of San Diego MSCP (North County Plan; County of San Diego 2016).

The majority of the proposed open space design would be located within the northern half of the project Site to form a contiguous block of habitat that is roughly 10,600 feet by 4,300 feet (870.2

acres, Block 1). The northern half of the Site has previously been described as having the greatest potential to support wildlife due to the east/west connection with the San Marcos Mountains (PSBS 2003). In addition, the northern half of the project Site is positioned to take maximum advantage of interconnected blocks of habitat. The northern portion of the proposed open space design provides a diverse representation of the natural and environmental conditions that occur within the larger project vicinity. The northern portion of the Site also contains existing dirt trails, an abandoned airstrip, and the old rock quarry. To protect the open space, and control human encroachment, designated public access trails will need to be established using signage and designated trail routes. It is also important to protect large patches of habitat that do not currently contain trails. The proposed trails, are located along pre-existing dirt roads and trails. The use of these trails would be monitored and reinforced by a preserve manager who would visit the Site on a semi-weekly basis to document and subsequently reinforce these efforts. Draft North County Plan pre-approved mitigation area (PAMA)-designated lands are located to the west and north of the proposed on-site biological open space, which signifies that the lands adjacent to the proposed biological open space also support biological conservation value. As described in the draft North County Plan, “[t]he PAMA represents areas that the County and the Wildlife Agencies recognize as important to preserve in order to meet the Plan’s conservation goals.” The PAMA area has been “pre-approved for mitigation because [it] had (1) high composite habitat value, (2) critical core and linkages, or (3) helped meet the conservation goals.”

Biological open space is also proposed along the eastern boundary of the project Site adjacent to Interstate (I) 15, which serves as important habitat for coastal California gnatcatcher (*Polioptila californica californica*) and many other wildlife species, as further described under “Environmental Setting,” below. This provides a contiguous on-site block of habitat that is roughly 7,000 feet by 1,000 feet (153.9 acres) (Block 2). This block of habitat facilitates wildlife movement through the project Site to open space to the north and south as well as providing cover for wildlife crossing I-15 and live-in habitat for many species. Block 3 open space would be located in the south-central portion of the Site. Segments of proposed development would occur to the east, west, and north, and natural habitat and avocado groves occur to the south. This block of habitat is approximately 7,000 feet by 1,200 feet (185.0 acres) and serves as live-in habitat for smaller species and some birds, and movement habitat for larger wildlife species. The area links the northern and eastern blocks to undeveloped lands south and east of the project Site through three corridors (Figure 2.4-1).

The proposed on-site open space design includes an array of environmental features, including ridgetops, hill tops, and rocky outcrops, which allow for a variety of potential nest, roost, and other resources for raptors, bats, and granite-associated reptiles such as granite spiny lizard (*Sceloporus orcuttii*) and granite night lizard (*Xantusia henshawi*). The majority of this area primarily consists of dense chaparral, and contains a diverse representation of the vegetation

communities that occur on Site and in the vicinity, including riparian forest and scrub, coastal sage scrub, non-native grassland, and oak woodland. The two largest riparian areas located within the project Site would be included in the open space: the South Fork of Gopher Canyon and the South Fork of Moosa Canyon (Figure 2.4-1). The South Fork of Gopher Canyon, which is located along Twin Oaks Valley Road, holds water part of the year. The topography in this area of the open space is highly diverse and includes elevations from approximately 700 feet above mean sea level (AMSL) to 1,750 feet AMSL.

Overall, the entire proposed on-site biological open space contains a diversity of environmental characteristics that are present in the vicinity, including representative populations of special-status plant and animal species observed on Site; existing dirt trails and canyon bottoms currently used by wildlife for movement across the Site; and the north/south-trending tributary to Gopher Canyon along Twin Oaks Valley Road, which provides linkage opportunities to the San Marcos Mountains.

A portion of Twin Oaks Valley Road currently crosses the northwestern section of the project Site. Twin Oaks Valley Road serves as a major roadway used by the public, and would serve as secondary access to the Community through the extension of Camino Mayor. The proposed project would provide access to Twin Oaks Valley Road off of Camino Mayor. As designated public roadways, these road segments would not be included within designated open space (Figure 2.4-2, Proposed Project).

Although FMZs would not be counted as mitigation or open space, they do contribute to wildlife movement and live-in habitat for many species, particularly when the surrounding habitat is very dense and when the areas are thinned 50 percent or less. These areas would add an additional 63 acres to Block 1, 52 acres to Block 2, and 100 acres to Block 3. These additional acres are not included in the approximately 1,209 acres of open space preserve.

Block 3 would be situated in the southern portion of the project Site, which includes coastal sage scrub at the northern end, but is predominantly composed of chaparral. This block includes four peaks, boulders, steep slopes, valleys, and moderate slopes. At its narrowest, the southern slope portion of Block 3 is approximately 295 feet wide, but averages approximately 650 to 700 feet wide. This portion of Block 3 abuts other PAMA lands that are composed of coastal sage scrub, chaparral, and general agriculture. Orchards have been shown to convey larger wildlife (Nogeire et al. 2013), and, as a result, all wildlife movement for all classes of wildlife (e.g., mammalian, avian, reptilian, air-based, ground-based, generalists, sage scrub specialists) are expected to use the connection and habitats present.

Off-Site Open Space

In addition to the network of on-site biological open space designated as a proposed hardline area within the proposed project Site, the proposed project would permanently preserve a 212-acre off-site parcel located in Ramona, which has been identified as a conservation priority and is designated as a PAMA in the draft North County Plan. The 212-acre block of continuous habitat is situated between segments of the Cleveland National Forest and San Diego County Parks land and is located adjacent to SR-78. The parcel includes a variety of upland and wetland vegetation communities and is situated in a key natural gap in the adjacent agricultural (ranches, poultry farms) landscape amid cattle ranch lands and open space (Figure 2.4-3, Biological Resources Map).

2.4.2 Existing Conditions

The project Site is located within the northern portion of the Merriam Mountains, a narrow chain of low mountains generally running north/south with a variety of east/west-trending ridgelines and scattered peaks. These mountains originate near the northern end of the urban parts of the City of Escondido and are bordered by Gopher Canyon Road to the north, I-15 to the east, and Twin Oaks Valley Road to the west. The Merriam Mountains are approximately 8.5 miles long, and the project Site is situated on approximately 3 miles of the northern portion of the Merriam Mountains. The Site is in a dry climate, with monthly average temperatures near Vista ranging from approximately 44°F–83°F. The City of Vista generally receives an average annual rainfall of less than 13.10 inches per year (Western Regional Climate Center 2014).

The undeveloped Site contains natural features of scenic and biological value, including rugged topography and rock outcroppings. Much of the vegetation covering the existing Site is mature and well-developed. Elevation of the Site ranges widely, from approximately 660 feet AMSL along Twin Oaks Valley Road traversing the northwestern portion of the Site to 1,750 feet AMSL directly northeast of Twin Oaks Crest Drive. The perimeter of the project Site has an overall gentle sloping topography. Within the project Site, the topography is more varied. Overall, there are approximately five locations where elevation is higher than 1,500 feet AMSL (one in the southern and four in the north-central areas of the project Site). Toward the center of the Site are a number of ridgelines and some prominent rock outcrops. In some locations, the gentle sloping perimeter gradually rises to higher elevations, and in other areas the slopes are more acute.

Eighteen soils types in 10 soil series occur on Site, including 78 acres of Los Posas soils. Las Posas soils often support endemic plants that have either evolved to do well on these nutrient-poor soils or can outcompete other plants and thrive on such soils. The Las Posas soils series is the only soil type mapped on Site that is known to support mafic conditions, and these soils occur in the northwestern and southeastern corners of the project Site. In the northwest, the soil

occurs west of and immediately adjacent to Twin Oaks Valley Road. In the southeast, this soil occurs in two small locations directly adjacent to and north of Mesa Rock Road along I-15. However, no mafic soil indicators, or mafic endemic plant species, were observed at the two southeastern locations. Therefore, this area is not considered to support mafic conditions or soils. To date, only one special-status plant species typically associated with mafic conditions, Ramona horkelia (*Horkelia truncata*), has been identified on Site, but it was not mapped in Las Posas soils (Appendix H).

Land use within the project Site and in the surrounding areas is a mixture of undeveloped lands and rural residential areas. Portions of the Site have been and continue to be used for various unauthorized uses, including horseback riding, hiking, mountain biking, off-roading, motorcycling, shooting, and illegal dumping. The northwest portion of the Site contains an abandoned quarry, fronting Twin Oaks Valley Road, and an abandoned private landing strip in the north-central portion of the Site.

2.4.3 Regional Context

In San Diego County, several resource conservation-planning efforts have been completed or are currently in progress with the long-term goal of establishing a regional conservation program to protect native habitat lands and their associated biota. These efforts are intended to establish biological preserves and long-term management and monitoring consistent with the State Natural Community Conservation Planning Act, and to contribute to the County's Multiple Species Conservation Plan (MSCP) which began in 1998 when the County approved the South County Plan of the MSCP.

In the current County of San Diego Draft North County Plan of the MSCP, the proposed project is identified as a proposed hardline area, which are project areas where the development impact areas and the preserved open space areas have been predetermined and hardlined for the purposes of the conservation plan (County of San Diego 2016). Additionally, the proposed project would implement the relevant portions of the County of San Diego's North County Metropolitan Subregional Plan and Bonsall Community Plan, which identifies and coordinates land use patterns, objectives, and goals for the Newland Sierra Community. The draft North County Plan of the MSCP is a comprehensive habitat conservation planning program and development take permit that attempts to preserve native habitat for a multitude of sensitive species and guides development for which the County, USFWS, and CDFW entered into a Planning Agreement (County of San Diego 2008a and 2014). The proposed project is a proposed hardline area in the draft North County Plan; however, until the North County Plan is approved, the Planning Agreement between the County and the Agencies (County of San Diego 2008a and 2014) remains in place and applies to the project.

The proposed project has been identified as a proposed hardline area in the draft North County Plan (County of San Diego 2016) (see Figure 2.4-4, Regional Context), which means that the proposed development areas and proposed biological open space areas have been incorporated into the overall conservation strategy of the County's draft North County Plan. In order for the proposed project to obtain approval for the loss of coastal sage scrub and any associated incidental take of California gnatcatcher through the County's Section 4(d) habitat loss permit (HLP) process, the proposed project must demonstrate conformance with overall programmatic goals and policies established for the San Diego County Natural Community Conservation Planning (NCCP) subregion and make the specific findings applicable to issuance an HLP. A Draft HLP including 4(d) findings is included as Appendix H. The proposed project may also obtain take authorization through Section 7 consultation with the USFWS.

The draft North County Plan anticipates the following conservation goals for the San Marcos-Merriam Mountains Core Area (Planning Unit 9):

- a) Conserve oak woodlands, coastal sage scrub (particularly in Twin Oaks) to maintain populations and connectivity of coastal California gnatcatcher and other coastal sage scrub-dependent species, and chaparral on mafic or gabbro soils that support sensitive plant species, such as chaparral beargrass and Parry's tetradlea, San Diego thornmint (particularly in San Marcos Mountains), or California adolphia;
- b) Ensure that a core community of coastal California gnatcatcher and other coastal sage scrub-dependent species remains in the coastal sage scrub block in Twin Oaks;
- c) Conserve the north-south connectivity of coastal California gnatcatcher habitat along I-15 between the Riverside County line and the City of Escondido. Maintain the east-west connectivity of natural habitats on either side of I-15 for dispersal of coastal sage scrub community birds;
- d) Conserve the riparian and upland habitats of Gopher Canyon Creek for water quality and sensitive species, such as southwestern pond turtle and least Bell's vireo; and
- e) Ensure the San Diego thornmint population in the Palisades open space preserve is maintained and enhanced, if practicable.

Consistent with generally accepted preserve design principles, the project would preserve a large block of open space, including the northern and northwestern portions of the Site, and provide off-site regional linkages between off-site lands in the San Marcos Mountains to the west and north along Gopher Canyon and to the San Luis Rey River. Figure 2.4-2 depicts the areas that would be preserved as open space, development areas, and LBZs and FMZs. Focused planning areas for the San Diego Association of Governments North County Multiple Habitat Conservation Program, which abuts the North County Plan to the south and west, (SANDAG

2003) and the planning maps for the County of San Diego North County Metropolitan Subregional Plan: San Diego County General Plan, which was adopted August 3, 2011 (North County Plan; County of San Diego 2011) indicate that most existing connectivity is in the northern and northwestern portions of the Site, with connectivity to the south and east being limited by I-15 and existing urban development.

The Merriam Mountains and Gopher Canyon are recognized in the North County Plan as Resource Conservation Areas. Resource Conservation Areas are lands requiring special attention in order to conserve resources in a manner best satisfying public and private objectives. The appropriate implementation actions will vary depending upon the conservation objectives of each resource but may include: public acquisition, establishment of open space easements, application of special land use controls, such as cluster zoning, large lot zoning, scenic or natural resource preservation overlay zones, or by incorporating special design considerations into subdivision maps or special use permits. Resource Conservation Areas shall include but are not limited to groundwater problem areas, coastal wetlands, native wildlife habitats, construction quality sand areas, littoral sand areas, astronomical dark sky areas, unique geological formations, and significant archaeological and historical sites. Within Resource Conservation Areas, County departments and other public agencies shall give careful consideration and special environmental analysis to all projects that they intend to carry out, propose, or approve; and shall select those conservation actions most appropriate to the project and consistent with the intent of this overlay designation.

The following criteria were used in selecting resources worthy of conservation:

1. Areas necessary for the protection of wildlife and representative strands of native vegetation.
2. Areas containing rare and/or endangered plants.
3. Wildlife habitats which are:
 - a. in large blocks, if possible;
 - b. wide, rather than long and narrow, to minimize adverse effects along their margins; and
 - c. in contact with other wild areas and floodplains to provide migration corridors.
4. Areas containing mineral resources. Conservation measures should ensure future availability.
5. Areas that provide the scenic mountainous backdrop to development within the community.

The Merriam Mountain Resource Conservation Area is characterized as having “Resources in this area similar to the San Marcos Mountains, including the same species of rare plants plus *Comarostaphylis diversifolia*” (County of San Diego 2011). Concerning the San Marcos Resource Conservation Area, the definition states as follows, “ These mountains are especially significant because they have rare and endangered plant species such as Cleveland sage (*Salvia clevelandii*),

Parry's tetracoccus (*Tetracoccus dioicus*) and southern mountain misery (*Chamaebatia australis*). These mountains are also valuable as visual landmarks of great scenic beauty" (County of San Diego 2011)¹. Gopher Canyon was also "delineated to include the scenic oak woodlands along Gopher Canyon."

The project must also be in conformance with the County's RPO². However, the project footprint is not strictly in conformance with RPO; therefore, the project includes a proposed amendment to the RPO that would exempt the project from the requirements of the ordinance through implementation of superior regional resource protection. The project's Resource Protection Plan (RPP) serves as the functional equivalent of the County RPO for the proposed project (Appendix H). The RPP is a comprehensive planning document addressing the preservation, enhancement, and management of sensitive resources (habitat, wetlands, slopes, cultural) within the 1,985-acre project Site. It was designed specifically for the proposed project as it relates to biological resources. The RPP provides assurances and funding for long-term resource protection, management, restoration, and enhancement of the proposed biological open space. As part of the proposed project, the on-site preserve would consist of 1,209.1 acres of habitat into three cohesive, contiguous blocks, and protect the biological open space from future encroachment through organized habitat management and land stewardship in perpetuity. An analysis of the project with application of the RPO is included in the RPP (Appendix H).

The proposed off-site biological open space is located entirely within a PAMA in the Eastern Ramona area of the draft North County Plan.

2.4.4 Habitat Types/Vegetation Communities

Twenty-two vegetation communities and non-native communities or land cover types were mapped by Dudek within the project Site. Native vegetation communities within the project Site include coast live oak woodland, Diegan coastal sage scrub (including disturbed), coastal sage scrub Baccharis-dominated (including disturbed), coastal sage scrub-chaparral transition, flat-topped buckwheat scrub (disturbed), granitic southern mixed chaparral (including disturbed), mafic southern mixed chaparral, scrub oak chaparral, freshwater marsh, mulefat scrub, southern coast live oak riparian forest, southern willow scrub, and southern willow scrub/tamarisk scrub. Four non-native vegetation communities—disturbed wetlands, eucalyptus woodland, non-native woodland, and non-native grassland—occur within the project Site. Five land cover types (non-vegetated area) occur within the project Site: intensive and extensive agriculture, orchards and vineyards, urban/developed, and disturbed habitat. The vegetation communities and land cover

¹ Based on multiple rare plant surveys, Cleveland sage, Parry's tetracoccus (*Tetracoccus dioicus*), and southern mountain misery have not been detected on the Site.

² The RPO protects the County's wetlands, floodplains, steep slopes, sensitive biological habitats, and prehistoric and historic sites.

types listed above are described below, their acreages are presented in Table 2.4-1, On-Site Vegetation Communities and Land Cover Types, and their spatial distributions are presented in Figures 2.4-5A through 2.4-5E, Biological Resources.

The Site is largely dominated by undisturbed chaparral, which covers 91 percent of the project Site. Pockets of coastal sage scrub habitat are scattered throughout the chaparral and cover approximately 4 percent of the project Site. In general, riparian habitats (mulefat scrub, oak riparian forest, southern willow scrub, and southern willow scrub/tamarisk scrub) are located along Twin Oaks Valley Road in the northwest, scattered within the old airplane landing strip in the north, directly north of the junction of Gist Road and Sarver Lane and adjacent to I-15, with a few additional scattered locations throughout the Site. The project Site is composed of approximately 3 percent of developed and disturbed habitat. Disturbed habitat on Site is mainly associated with the old quarry located in the northwestern section of the project Site, and also includes numerous dirt roads that traverse the Site. Developed areas are primarily located in the southern portion of the project Site, and include paved roads and residential areas.

In September 2010, the California Department of Fish and Wildlife (CDFW) published the *List of California Vegetation Alliances and Associations* (CDFG 2010), which uses the scientific name of the dominant species in that alliance as the alliance name and includes a global and state rarity rank based on the NatureServe Standard Heritage Program methodology (NatureServe 2014).

The conservation status of a vegetation community is designated by a number from 1 to 5, preceded by a letter reflecting the appropriate geographic scale of the assessment (G = global, N = national, and S = subnational). The numbers have the following meaning (NatureServe 2014):

- 1 = critically imperiled
- 2 = imperiled
- 3 = vulnerable to extirpation or extinction
- 4 = apparently secure
- 5 = demonstrably widespread, abundant, and secure

For example, G1 would indicate that a vegetation community is critically imperiled across its entire range (i.e., globally). A rank of S3 would indicate the vegetation community is vulnerable and at moderate risk within a particular state or province, although it may be more secure elsewhere (NatureServe 2014). Because NatureServe ranks vegetation communities at the global level, few rankings at the state or province level are available. However, the *List of California Vegetation Alliances and Associations* (CDFG 2010) includes state-level rarity rankings (i.e., the subnational (S) rank) for vegetation communities. The *List of California Vegetation Alliances*

and Associations (CDFG 2010) is considered the authority for ranking the conservation status of vegetation communities in California.

CDFW's guidelines for determining high-priority vegetation types include considering any communities listed with a ranking of S1 to S3, and ascertaining whether the specific stands of the community type within a site are "considered as high-quality occurrences of a given community." The consideration of stand quality includes cover of non-native invasive species, human-caused disturbance, reproductive viability, and insect or disease damage (CDFG 2012).

In addition, the County requires mitigation at varying ratios for many vegetation communities (County of San Diego 2010b). These vegetation communities follow the *Draft Vegetation Communities of San Diego County* (Oberbauer et al. 2008). Vegetation communities considered special-status are those with an "S" ranking of 1, 2, or 3 (CDFG 2010), as well as communities that require mitigation by the County (Table 5 in County of San Diego 2010a). These communities are denoted in Table 2.4-1 with an asterisk (*). Vegetation communities mapped in the off-site improvement areas are quantified in Tables 2.4-2 and 2.4-3. The Deer Springs Road improvements includes an Option A and an Option B. Table 2.4-2 includes the off-site acreage for the Deer Springs Road Option A, Table 2.4-3 includes the off-site acreage for the Deer Springs Road Option B, and Table 2.4-4 includes the off-site acreage for the remaining road and sewer improvements.

2.4.4.1 Diegan Coastal Sage Scrub

Diegan coastal sage scrub is a wide-spread coastal sage scrub in coastal Southern California, from Los Angeles into Baja California. The community mostly consists of drought deciduous species such as California sagebrush (*Artemisia californica*), Eastern Mojave buckwheat (*Eriogonum fasciculatum*), white sage (*Salvia apiana*), laurel sumac (*Malosma laurina*), and black sage (*Salvia mellifera*). Diegan coastal sage scrub is typical on low-moisture-available sites such as steep, xeric lopes or clay-rich soils that release stored water slowly. This community integrates with types of chaparral at higher elevations (Appendix H). Within the project Site, there are five main locations along the length of the Site: north and adjacent to Mesa Road, along Gist Road (with a small patch occurring at the intersection of Gist Road and Country Garden Lane), along North Twin Oaks Valley Road, and two patches of habitat west of I-15 and east of the abandoned airstrip (Figures 2.4-5A through 2.4-5E). Coastal sage scrub that contains 20 percent to 50 percent native species by percent cover were mapped as "disturbed" associations. Disturbed Diegan coastal sage scrub occurs in small patches along Mesa Rock Road, Gist Road, and within the old rock quarry (Figures 2.4-5A through 2.4-5E).

Areas mapped as Diegan coastal sage scrub within the project Site are dominated by California sagebrush. The *Artemisia californica* (California sagebrush scrub) alliance has a rank of G5S5 by

CDFW (CDFG 2010), meaning it is secure globally and secure in the state. Most Diegan coastal sage scrub within the NCCP area is - considered sensitive - by CDFW; ; impacts must be considered per CEQA Section 15065 (CDFG 1993). It is considered sensitive by the County and requires mitigation per the County Report Format and Content Requirements for Biological Resources (County of San Diego 2010b).

The Diegan coastal sage scrub on Site consists of five main patches of dense habitat, with several smaller areas around them mapped as disturbed coastal sage scrub; a small amount is mapped in the off-site improvement areas (see Tables 2.4-2, 2.4-3, and 2.4-4). As described above, the proposed project would incorporate approximately 1,209.1 acres of on-site open space that would largely be established in the northern portion of the Site, with additional open space dedicated adjacent to and within developed areas. Mitigation for Diegan coastal sage scrub is subject to the NCCP flowchart based on the quality of the Diegan coastal sage scrub for long-term conservation. Diegan coastal sage scrub is considered “Intermediate” by the NCCP flowchart, and a 2:1 mitigation ratio is applied (CDFG and CRA 1993a, 1993b).

2.4.4.2 Coastal Sage Scrub – *Baccharis*

Diegan coastal sage scrub – *Baccharis* dominated is similar to Diegan coastal sage scrub but is dominated by *Baccharis* species (desert broom [*B. sarothroides*] and/or coyote brush [*B. pilularis*]). This community typically occurs on disturbed sites or those with nutrient-poor soils, and often found within other forms of Diegan coastal sage scrub and on upper terraces of river valleys. This community is distributed along coastal and foothills areas in San Diego County (Oberbauer et al. 2008). Within the project Site, this community is mapped directly north of Mesa Rock Road adjacent to I-15 and within the old rock quarry (Figures 2.4-5A through 2.4-5E).

Areas mapped as coastal sage scrub – *Baccharis* within the project Site are dominated by California sagebrush and coyote brush. The *Artemisia californica* (California sagebrush scrub) alliance and *Baccharis pilularis* (coyote brush scrub) alliance have a rank of G5S5 by CDFW (CDFG 2010), meaning it is secure globally and secure in the state. Diegan coastal sage scrub – *Baccharis* dominated is - considered sensitive special status by CDFW and USFWS as coastal sage scrub is the vegetation classification used in the NCCP/HCP, it has foraging value for gnatcatchers and would fit the description for gnatcatcher critical habitat. The Planning Agreement for the North and East County NCCPs requires all coastal sage scrub forms to be mitigated consistent with the NCCP Planning Guidelines. Although this vegetation community is not considered sensitive by the County (County of San Diego 2010c), it is similar to Diegan coastal sage scrub, and would therefore require a 2:1 mitigation ratio.

2.4.4.3 Flat-Topped Buckwheat

Flat-topped buckwheat is a nearly monoculture community usually resulting from disturbance and transitioning to coastal sage scrub or chaparral. Species characteristic of this community, Eastern Mojave buckwheat and common deerweed (*Acmispon glaber*), appear over time. This community often occurs in disturbed areas in the coastal and foothill areas of San Diego County, and often intergrades with Diegan coastal sage scrub (Oberbauer et al. 2008). Within the project Site, this community is mapped within the old rock quarry (Figures 2.4-5A through 2.4-5E).

The area mapped as disturbed flat-topped buckwheat within the project Site is dominated by Eastern Mojave buckwheat (*Eriogonum fasciculatum*), but also is composed of 20 to 50 percent non-native herbs and grasses. The *Eriogonum fasciculatum* (California buckwheat scrub) alliance has a rank of G5S5 in CDFW (CDFG 2010), meaning it is secure globally and secure in the state. Flat-topped buckwheat is not considered special status by CDFW (CDFG 2010); it is considered sensitive by the County and mitigation is required (County of San Diego 2010c).

2.4.4.4 Granitic Southern Mixed Chaparral, Mafic Southern Mixed Chaparral

Granitic southern mixed chaparral is characterized by broad-leaved sclerophyll shrubs ranging from 5 to 10 feet in height. Granitic southern mixed chaparral is characterized by chamise (*Adenostoma fasciculatum*), manzanita (*Arctostaphylos* spp.), white fairy-lantern (*Calochortus albus*), ceanothus (*Ceanothus* spp.), and other species with patches of bare soil. This habitat often occurs on dry, rocky, often steep slopes with little soil and moderate temperatures (Appendix H).

Mafic southern mixed chaparral is similar to granitic southern mixed chaparral, but it occurs on mafic (gabbro), metavolcanic, or metasedimentary derived soils (Los Posas and Boomer Soils) in the coastal region. These soils can have a very red or dark brown appearance with an affiliation for sensitive plant species and are rarer than granitic types of chaparral (Appendix H).

Southern mixed chaparral occurs throughout the majority of the project Site, including mafic southern mixed chaparral where it occurs on Las Posas series soils within the northeastern-most portion of the project Site, and adjacent to North Twin Oaks Valley Road (Figures 2.4-5A through 2.4-5E). Disturbed granitic southern mixed chaparral occurs east of Gist Road, along the abandoned airstrip, and within the old rock quarry (Figures 2.4-5A through 2.4-5E). Southern mixed chaparral, including mafic southern mixed chaparral, also occurs in some of the off-site improvement areas (see Tables 2.4-2, 2.4-3, and 2.4-4).

Areas mapped as southern mixed chaparral are dominated by chamise with several other chaparral species present. The *Adenostoma fasciculatum* (chamise) alliance has a rank of G5S5 by CDFW (CDFG 2010), meaning it is secure globally and secure in the state. Southern mixed chaparral

(including disturbed) is not considered special status by CDFW; it is considered sensitive by the County and southern mixed chaparral requires mitigation (County of San Diego 2010c).

2.4.4.5 Coastal Sage – Chaparral Transition

Coastal sage – chaparral transition habitats include a mix of sclerophyllous, woody chaparral species and drought-deciduous, malacophyllous sage scrub species. Chamise and California sagebrush are dominant in equal cover. Generally, laurel sumac, black sage, and lemonade sumac (*Rhus integrifolia*) are more common in coastal sage scrub, and *Ceanothus* spp. and mission manzanita (*Xylococcus bicolor*) are more common in chaparrals (Appendix H). Areas mapped as coastal sage – chaparral transition within the project Site are dominated by California sagebrush with some chamise. Within the project Site, this is mapped east of Gist Road and in some of the off-site improvement areas (see Tables 2.4-2, 2.4-3, and 2.4-4) (Figures 2.4-5A through 2.4-5E). This community type is considered a coastal sage habitat type by the County of San Diego (HLP Ordinance – Code of Regulatory Ordinances Section 86.100), consistent with the NCCP Act Conservation Guidelines and Process Guidelines.

The *Artemisia californica* (California sagebrush scrub) alliance has a rank of G5S5 by CDFW (CDFG 2010), meaning it is secure globally and secure in the state. Coastal sage-chaparral transition is not considered special status by CDFW (CDFG 2010), but requires mitigation per the County (County of San Diego 2010c).

2.4.4.6 Scrub Oak Chaparral

Scrub oak chaparral habitats are composed of a dense, evergreen chaparral that is typically dominated by scrub oak (*Quercus* spp.) with birchleaf mountain mahogany (*Cercocarpus betuloides*). In San Diego, scrub oak (*Quercus berberidifolia*) is usually the dominant species, with over 50 percent vegetation cover usually occurring in small patches within a variety of other vegetation communities (Oberbauer et al. 2008). Within the project Site, this is mapped directly west of Mesa Rock Road, surrounding Gist Road, and directly north of the water tower southeast of Camino Mayor (Figures 2.4-5A through 2.4-5E).

Areas mapped as scrub oak chaparral within the project Site are dominated by scrub oak. The *Quercus berberidifolia* (Scrub oak chaparral) alliance has a rank of G4S4 by CDFW (CDFG 2010), meaning it is apparently secure globally and in the state. Scrub oak chaparral is not considered special status by CDFW; however, it is considered sensitive by the County and requires mitigation (County of San Diego 2010c).

2.4.4.7 Coast Live Oak Woodland

Coast live oak woodland is dominated by a single evergreen species, coast live oak (*Quercus agrifolia*), with a canopy height reaching 33 to 82 feet in height. The shrub layer is poorly developed, but may include toyon (*Heteromeles arbutifolia*), gooseberry (*Ribes* spp.), laurel sumac, or dominated blue elderberry (*Sambucus nigra* ssp. *caerulea*) (Appendix H). Coast live oak woodland occurs throughout the project Site and off-site areas, including west along Sarver Lane, along and east of Gist Road, east of the water tower located southeast of Camino Mayor, west along North Twin Oaks Valley Road, and along Deer Springs Road (Figures 2.4-5A through 2.4-5E). A portion of coast live oak woodland is mapped as riparian habitat under the jurisdiction of CDFW. These areas were located adjacent to stream channels, but did not have hydrophytic vegetation in the canopy cover or understory; therefore, it did not qualify as County RPO wetlands, which are defined as areas supporting a predominance of hydrophytes (Appendix H).

Areas mapped as coast live oak woodland within the project Site are dominated by coast live oak. The *Quercus agrifolia* (coast live oak woodland) alliance has a rank of G5S4 by CDFW (CDFG 2010), meaning it is secure globally and apparently secure in the state. Coast live oak woodland is not considered special status by CDFW; it is considered sensitive by the County and it requires mitigation (County of San Diego 2010c).

2.4.4.8 Freshwater Marsh

Freshwater marshes are typically dominated by perennial, emergent monocots to 13 to 16 feet tall, often forming completely closed canopies. Characteristic species include sedges (*Carex* spp.), flatsedges (*Cyperus* spp.), bulrush (*Scirpus* spp.), cattail (*Typha* spp.), and rushes (*Juncus* spp.) (Appendix H). Within the project Site, there is one small area mapped west of North Twin Oaks Valley Road (Figures 2.4-5A through 2.4-5E).

Areas mapped as freshwater marsh within the project Site are dominated by cattails. The *Typha* (*angustifolia*, *domingensis*, *latifolia*) (cattail marshes) alliance has a rank of G5S5 by CDFW (CDFG 2010), meaning it is secure globally and secure in the state. Freshwater marsh is not considered special status by CDFW; it is considered sensitive by the County and it requires mitigation (County of San Diego 2010c). In addition, the freshwater marsh within the project Site is considered an RPO wetland under the jurisdiction of the County.

2.4.4.9 Southern Coast Live Oak Riparian Forest

Southern coast live oak riparian forests consists of dense riparian forests dominated by evergreen sclerophyllous trees (e.g., coast live oak) with a closed, or nearly closed, canopy. This community appears to be richer in herbs and poorer in understory scrubs than other riparian communities, and is a homogenous mixture of coast live oak woodland and southern riparian

woodland. Southern coast live oak riparian forest includes coast live oak communities found along rivers, creeks, and drainages throughout the County (Appendix H). Southern coast live oak riparian forest is mapped in four locations: west along North Twin Oaks Valley Road, along the northwestern portion of the project Site and west of I-15, along Gist Road, and north of Mesa Rock Road (Figures 2.4-5A through 2.4-5E). It is also mapped along the off-site improvement portion of Deer Springs Road.

Areas mapped as oak riparian forest within the project Site are dominated by coast live oak. The *Quercus agrifolia* (Coast live oak woodland) alliance has a rank of G5S4 by CDFW (CDFG 2010), meaning it is secure globally and apparently secure in the state. Southern coast live oak riparian forest is not considered special status by CDFW; it is considered sensitive by the County it requires mitigation (County of San Diego 2010c). In addition, the southern coast live oak riparian forests within the project Site is considered an RPO wetland under the jurisdiction of the County.

2.4.4.10 Mulefat Scrub

Mulefat scrub is a depauperate, tall, herbaceous riparian scrub strongly dominated by mulefat (*Baccharis salicifolia*). This early seral community is maintained by frequent flooding. Site factors include intermittent stream channels with fairly coarse substrate and moderate depth to the water table. This community type is widely scattered along intermittent streams and near larger rivers (Appendix H). Within the project Site, small patches occur along the abandoned airstrip and directly adjacent to Gist Road (Figures 2.4-5A through 2.4-5E).

Areas mapped as mulefat scrub within the project Site are dominated by mulefat. The *Baccharis salicifolia* (mulefat thickets) alliance has a rank of G5S4 by CDFW (CDFG 2010), meaning it is secure globally and apparently secure in the state. Mulefat scrub is not considered special status by CDFW; it is considered sensitive by the County and mitigation is required (County of San Diego 2010c). In addition, the mulefat scrub within the project Site is considered an RPO wetland under the jurisdiction of the County.

2.4.4.11 Southern Willow Scrub

Southern willow scrub is a dense, broad-leaved, winter-deciduous riparian thicket dominated by several willow species (*Salix* spp.), with scattered emergent Fremont's cottonwood (*Populus fremontii*) and western sycamore (*Platanus racemosa*). This community was formerly extensive along the major rivers of coastal Southern California, but is now much reduced (Appendix H). Southern willow scrub is mapped throughout the project Site along North Twin Oaks Valley Road, the abandoned airstrip, and east of Gist Road (Figures 2.4-5A through 2.4-5E). There is also a small patch of southern willow scrub mapped adjacent to Camino Mayor in the off-site improvement area.

Areas mapped as southern willow scrub within the project Site are dominated by red willow (*Salix laevigata*). The *Salix laevigata* (red willow thickets) alliance has a rank of G3S3 by CDFW (CDFG 2010), meaning it is vulnerable to extirpation or extinction globally and in the state. Southern willow scrub is considered special status by CDFW; it is considered sensitive by the County and mitigation is required (County of San Diego 2010c). In addition, the southern willow scrub within the project Site is considered an RPO wetland under the jurisdiction of the County.

2.4.4.12 Southern Willow Scrub/Tamarisk Scrub

Southern willow scrub/tamarisk scrub contains characteristics of both southern willow scrub (described above) and tamarisk scrub communities. Tamarisk scrub is a weedy, virtual monoculture of any of several tamarisk species, usually supplanting native vegetation following major disturbance. This community type typically occurs on sandy or gravelly braided washes or intermittent streams, often in areas where high evaporation increases a stream's saltiness. Tamarisk is a strong phreatophyte and a prolific seeder, which predispose the species to be aggressive competitors in disturbed riparian corridors. This community type is widely scattered and increases its range throughout the drier parts of California (Appendix H). Within the project Site, this community is mapped within the abandoned airstrip (Figures 2.4-5A through 2.4-5E).

The area mapped as southern willow scrub/tamarisk scrub within the project Site is dominated by both red willow and tamarisk sp. In addition to the southern willow scrub description above, the *Tamarix* sp. (tamarisk thickets) semi-natural stands do not have a global or state rank and are not considered special status by CDFW (CDFG 2010); however, both southern willow scrub and tamarisk scrub are considered sensitive by the County and require mitigation (County of San Diego 2010c). In addition, this vegetation community is considered an RPO wetland under the jurisdiction of the County.

2.4.4.13 Eucalyptus Woodland

Eucalyptus habitats range from single-species thickets with little or no shrubby understory to scattered trees over a well-developed herbaceous and shrubby understory. In most cases, eucalyptus forms a dense stand with a closed canopy. Eucalyptus species produce a large amount of leaf and bark litter, and the chemical and physical characteristics limit the growth of other species in the understory (Appendix H). Within the project Site, one area is mapped along the northwestern boundary of the project Site, west of North Twin Oaks Valley Road and east of Satin Doll Lane (Figures 2.4-5A through 2.4-5E). Additionally, eucalyptus is mapped along the off-site improvement portion of Deer Springs Road.

The areas mapped as Eucalyptus woodlands within the project Site is dominated by *Eucalyptus* spp. The *Eucalyptus* (*globulus*, *camaldulensis*) (eucalyptus groves) semi-natural stands do not

have a global or state rank and are not considered special status by CDFW (CDFG 2010); no mitigation is required per the County (County of San Diego 2010c).

2.4.4.14 *Agriculture, Intensive Agriculture, Extensive Agriculture*

Agriculture lands support an active agricultural operation. Areas mapped as intensive agriculture include dairies, nurseries, and chicken ranches. Open spaces for intensive agriculture are used for livestock, and there is usually no vegetation present except between animal holding areas. Within the project Site, there is a small avocado grove at the intersection of Deer Springs Road and Deer Springs Place (Figures 2.4-5A through 2.4-5E). Additional areas are mapped as agriculture, and extensive agriculture in the off-site improvement areas.

Agriculture, intensive agriculture, and extensive agriculture are not considered special status by CDFW, and mitigation is required per the County for extensive agriculture only if the area is categorized as field and pasture (County of San Diego 2010c). The extensive agriculture mapped within the off-site areas is considered row crops and therefore does not require mitigation.

2.4.4.15 *Orchard and Vineyards*

Orchards and vineyards are usually composed of artificially irrigated habitat dominated by one (or sometimes several) tree or shrub species. The trees are typically low and bushy with an open understory. Vineyards include single-species crops planted in rows that are usually supported by wood and wire trellises. Understory growth of orchard and vineyard crops often include short grasses and other herbaceous plants between rows (Appendix H). Within the project Site, apparently non-commercial orchard crops are mapped in five locations directly along the boundary of the project Site (east and west of Gist Road, north of Camino Califia, east of Camino Mayor, and west of North Twin Oaks Valley Road) (Figures 2.4-5A through 2.4-5E). Additional orchards and vineyards are mapped along the off-site improvement areas of Deer Springs Road and Camino Mayor.

Orchard and vineyards are not considered special status by CDFW, and no mitigation is required per the County (County of San Diego 2010c).

2.4.4.16 *Urban/Developed*

Urban/developed refers to areas that have been constructed upon or disturbed so severely that native vegetation is no longer supported. Developed land includes areas with permanent or semi-permanent structures, pavement or hardscape, landscaped areas, and areas with a large amount of debris or other materials (Appendix H). Within the project Site, developed areas include paved roads and residential areas along North Twin Oaks Valley Road, a small portion of Joni Lane, land west of Deer Springs Place, a portion of Deer Springs Road by I-15, and Mesa Rock Road

(Figures 2.4-5A through 2.4-5E). Additional developed areas are mapped in the off-site improvement areas and mainly consist of Deer Springs Road; Twin Oaks Valley Road; Camino Mayor; Mesa Rock Road; Sarver Lane; and residential, commercial, or industrial areas.

Developed areas are not considered special status by CDFW (CDFG 2010), and no mitigation is required per the County (County of San Diego 2010c).

2.4.4.17 Disturbed Habitat

Disturbed habitats are areas that have been physically disturbed and are no longer recognizable as native or naturalized vegetation associations. These areas may continue to retain soil substrate. If vegetation is present, it is almost entirely composed of non-native vegetation, such as ornamentals or ruderal exotic species. Examples of these areas may include graded landscapes or areas, graded firebreaks, graded construction pads, construction staging areas, off-road-vehicle trails, areas repeatedly cleared for fuel management, or areas repeatedly used that prevents revegetation (e.g., parking lots, trails that have persisted for years) (Appendix H). There is disturbed habitat mapped throughout the project Site, including dirt trails, an abandoned airstrip, the old rock quarry, and other disturbed areas (Figures 2.4-5A through 2.4-5E). Additional disturbed habitat is mapped within the off-site improvement areas.

Disturbed habitat is not considered special status by CDFW (CDFG 2010), and no mitigation is required per the County (County of San Diego 2010c).

2.4.4.18 Non-Native Grasslands

Non-native grasslands consists of dense to sparse cover of annual grasses with flowering culms between 0.5 to 3 feet in height. In San Diego County, the presence of (*Avena* spp.), bromes (*Bromus* spp.), stork's bill (*Erodium* spp.), and mustard (*Brassica* spp.) are common indicators (Appendix H). Within the project Site, non-native grasslands are mapped along Gist Road and along North Twin Oaks Valley Road (Figures 2.4-5A through 2.4-5E). Additional non-native grassland is mapped within the off-site improvement areas.

Non-native grassland has a rank of G4S4 by CDFW (CDFG 2010), meaning it is apparently secure globally and in the state. Because non-native grassland can provide habitat for a variety of species the County requires mitigation for impacts; therefore, it is considered sensitive by the County (County of San Diego 2010c).

2.4.4.19 Non-Native Woodland

Non-native woodland is described by Oberbauer et al. (2008) as a woodland of exotic trees, usually intentionally planted, that are not maintained or artificially irrigated. Non-native woodland is

recognized as an upland vegetation community (i.e., not dominated by hydrophytic vegetation and not associated with any wetlands or waters of the U.S.). Non-native woodland differs from the eucalyptus woodland vegetation community in that non-native woodland is not dominated by eucalyptus species. It is mapped in the off-site improvement areas along Sarver Lane.

Non-native woodland does not have a global or state rank, and is not considered special status by CDFW (CDFG 2010); no mitigation is required per the County (County of San Diego 2010c).

2.4.4.20 *Arundo-Dominated Riparian*

Arundo-dominated riparian is described in Oberbauer et al. (2008) as densely vegetated riparian thickets dominated almost exclusively by giant reed (*Arundo donax*). The arundo-dominated riparian observed within the project Site is associated with the off-site wastewater upgrade.

Arundo-dominated riparian does not have a global or state rank, and is not considered special status by CDFW (CDFG 2010); however, as it is a disturbed wetland, mitigation is required per the County (County of San Diego 2010c). This species may require mitigation per the resource agencies. In addition, this vegetation community is considered an RPO wetland under the jurisdiction of the County.

2.4.4.21 *Disturbed Wetland (11200)*

Disturbed wetland is a land cover described by Oberbauer (2008) for areas that are inundated by water, but have been altered by human activity. These areas can hold water permanently or periodically, and include artificial structures such as concrete-lined channels, rip-rap, Arizona crossings, detention basins, and culverts.

This land cover is mapped along Sycamore Drive in a rip-rap lined channel within the Deer Springs Road Off-site Improvement area, as well as within the 100-foot survey buffer of the Twin Oaks Valley Road improvements at the southern end of the proposed improvement area. The disturbed wetland mapped is the City of San Marcos' detention basin, which contained some ponding and occasional mulefat and eucalyptus trees.

Disturbed wetland does not have a global or state rank, and is not considered special status by CDFW (CDFG 2010); however, as it is a disturbed wetland, mitigation is required per the County (County of San Diego 2010c). This vegetation community may require mitigation per the resource agencies. Since the area mapped as disturbed wetland is a rip-rap lined channel, it is not considered an RPO wetland under the jurisdiction of the County.

2.4.5 Flora

A total of 230 vascular plant species, consisting of 159 native species (69 percent) and 71 non-native species (31 percent), were recorded on Site during 2013 surveys (Appendix A of the BTR (Appendix H)).

2.4.6 Fauna

The project Site supports habitat for common upland and riparian species. Chaparral, coastal scrub, woodland, riparian, and non-native habitats (e.g., eucalyptus and non-native grassland) within the project Site provide foraging and nesting habitat for migratory and resident bird species and other wildlife species. Riparian streams or puddles within the rock quarry may provide refuge for amphibian species. Rock outcroppings, chaparral, coastal scrub, and woodlands within the project Site provide cover and foraging opportunities for wildlife species, including reptiles and mammals.

A list of the wildlife species observed within and adjacent to the project Site during focused burrowing owl (*Athene cunicularia*), surveys, jurisdictional delineations, raptor surveys, rare plant surveys, riparian bird surveys, and vegetation mapping is provided in Appendix B of the BTR. There were 133 wildlife species observed on the project Site. Species richness in the project Site is moderate due to the property size and amount of undeveloped native land. Species richness is generally increased with the presence of more habitat types and ecotones, but the project Site is primarily one habitat type (91 percent chaparral). Although species richness is moderate, the number of species and the wildlife population levels (i.e., number of individuals) is typical for undeveloped areas in this region, particularly those areas that support the habitat types found on Site.

2.4.6.1 Reptiles and Amphibians

Nine reptile species were observed within and adjacent to the project Site during surveys: Blainville's horned lizard (*Phrynosoma blainvillii*; SSC/Group II), western fence lizard (*Sceloporus occidentalis*), common side-blotched lizard (*Uta stansburiana*), southern alligator lizard (*Elgaria multicarinata*), coastal whiptail (*Aspidoscelis tigris stejnegeri*; Group II), California kingsnake (*Lampropeltis californiae*), western patch-nosed snake (*Salvadora hexalepis*; SSC/Group II), ringneck snake (*Diadophis punctatus*), and gophersnake (*Pituophis catenifer*). Four amphibian species were documented within the project Site during surveys: Baja California treefrog (*Pseudacris hypochondriaca*), Northern Pacific treefrog (*Pseudacris regilla*), western toad (*Anaxyrus boreas*), and western spadefoot toad (*Spea [=Scaphiopus] hammondi*; SSC/Group II).

2.4.6.2 Birds

Eighty-six bird species were detected during surveys: red-winged blackbird (*Agelaius phoeniceus*), Brewer's blackbird (*Euphagus cyanocephalus*), Bullock's oriole (*Icterus bullockii*), great-tailed grackle (*Quiscalus mexicanus*), western meadowlark (*Sturnella neglecta*), brown-headed cowbird (*Molothrus ater*), hooded oriole (*Icterus cucullatus*), double-crested cormorant (*Phalacrocorax auritus*), bushtit (*Psaltiriparus minimus*), western tanager (*Piranga ludoviciana*), blue grosbeak (*Passerina caerulea*), black-headed grosbeak (*Pheucticus melanocephalus*), song sparrow (*Melospiza melodia*), California towhee (*Melospiza crissalis*), spotted towhee (*Pipilo maculatus*), black-chinned sparrow (*Spizella atrogularis*), white-crowned sparrow (*Zonotrichia leucophrys*), Bell's sparrow (*Artemisiospiza belli*; WL/Group I), sagebrush sparrow (*Artemisiospiza nevadensis*), American kestrel (*Falco sparverius*), house finch (*Carpodacus mexicanus*), lesser goldfinch (*Spinus psaltria*), American goldfinch (*Spinus tristis*), ash-throated flycatcher (*Myiarchus cinerascens*), black phoebe (*Sayornis nigricans*), western kingbird (*Tyrannus verticalis*), Say's phoebe (*Sayornis saya*), Cassin's kingbird (*Tyrannus vociferans*), pacific-slope flycatcher (*Empidonax difficilis*), Cooper's hawk (*Accipiter cooperii*; WL/Group I), sharp-shinned hawk (*Accipiter striatus*; WL/Group I), red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*; Group I), Anna's hummingbird (*Calypte anna*), Costa's hummingbird (*Calypte costae*), rufous hummingbird (*Selasphorus rufus*), Allen's hummingbird (*Selasphorus sasin*), western scrub-jay (*Aphelocoma californica*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), ruby-crowned kinglet (*Regulus calendula*), white-breasted nuthatch (*Sitta carolinensis*), northern mockingbird (*Mimus polyglottos*), California thrasher (*Toxostoma redivivum*), California quail (*Callipepla californica*), turkey vulture (*Cathartes aura*; Group I), blue-gray gnatcatcher (*Poliophtila caerulea*), California gnatcatcher (*Poliophtila californica*; FT/SSC/Group I), barn owl (*Tyto alba*; Group II), great horned owl (*Bubo virginianus*), band-tailed pigeon (*Patagioenas fasciata*), mourning dove (*Zenaida macroura*), rock pigeon (*Columbia livia*), greater roadrunner (*Geococcyx californianus*), phainopepla (*Phainopepla nitens*), European starling (*Sturnus vulgaris*), barn swallow (*Hirundo rustica*), cliff swallow (*Petrochelidon pyrrhonota*), white-throated swift (*Aeronautes saxatalis*), Swainson's thrush (*Catharus ustulatus*), western bluebird (*Sialia Mexicana*; Group II), American robin (*Turdus migratorius*), cedar waxwing (*Bombycilla cedrorum*), oak titmouse (*Baeolophus inornatus*), common yellowthroat (*Geothlypis trichas*), orange-crowned warbler (*Oreothlypis celata*), Wilson's warbler (*Cardellina pusilla*), yellow-rumped warbler (*Setophaga coronata*), yellow warbler (*Setophaga petechial*; BCC/SSC/ Group II), Townsend's warbler (*Setophaga townsendi*), acorn woodpecker (*Melanerpes formicivorus*), Nuttall's woodpecker (*Picoides nuttallii*; BCC), red-naped sapsucker (*Sphyrapicus nuchalis*), northern flicker (*Colaptes auratus*), canyon wren (*Catherpes mexicanus*), rock wren (*Salpinctes obsoletus*), Bewick's wren (*Thryomanes bewickii*), house wren (*Troglodytes aedon*), wrentit (*Chamaea fasciata*), mallard (*Anas platyrhynchos*), Canada goose (*Branta canadensis*),

great egret (*Ardea alba*), great blue heron (*Ardea herodias*), snowy egret (*Egretta thula*), killdeer (*Charadrius vociferus*), and white-faced ibis (*Plegadis chihi*).

2.4.6.3 Mammals

Thirteen mammal species were detected (directly or indirectly) within the project Site during surveys: kangaroo rat (*Dipodomys* sp.), coyote (*Canis latrans*), gray fox (*Urocyon cinereoargenteus*), bobcat (*Lynx rufus*), brush rabbit (*Sylvilagus bachmani*), long-tailed weasel (*Mustela frenata*), striped skunk (*Mephitis mephitis*), Botta's pocket gopher (*Thomomys bottae*), raccoon (*Procyon lotor*), San Diego desert woodrat (*Neotoma lepida intermedia*), California ground squirrel (*Spermophilus* [*Otospermophilus*] *beecheyi*), striped skunk (*Mephitis mephitis*), and mule deer (*Odocoileus hemionus*).

Bats occur throughout most of Southern California, and may use any portion of the project Site as foraging habitat. There is a moderate potential for special-status bat species to occur on Site. Additionally, there is a low potential for additional bat species to forage or roost within trees within the project Site. No bat species were detected within the project Site because the majority of the surveys were conducted during daylight hours and, due to low potential, did not include focused efforts to locate roosting bats.

2.4.6.4 Invertebrates

Twenty-one invertebrate species were observed on the project Site during surveys: brown elfin (*Callophrys augustinus*), Sonoran blue (*Philotes sonorensis*), acmon blue (*Plebejus acmon*), western pygmy-blue (*Brephidium exile*), California sister (*Adelpha bredowii*), queen (*Danaus gilippus*), monarch (*Danaus plexippus*; Group II), Chalcedon variable checkerspot (*Euphydryas chalcedona chalcedona*), common buckeye (*Junonia coenia*), Lorquin's admiral (*Limenitis lorquini*), mourning cloak (*Nymphalis antiopa*), red admiral (*Vanessa atalanta*), painted lady (*Vanessa cardui*), Behr's metalmark (*Apodemia mormo virgulti*), funereal duskywing (*Erynnis funeralis*), pale swallowtail (*Papilio eurymedon*), western tiger swallowtail (*Papilio rutulus*), anise swallowtail (*Papilio zelicaon*), Pacific sara orangetip (*Anthocharis sara sara*), cabbage white (*Pieris rapae*), and checkered white (*Pontia protodice*).

2.4.6.5 Fish

No fish species were documented in the project Site during biological surveys or are expected to occur on Site. In addition, no open waters exist within the project Site. The two largest riparian areas located within the project Site, the South Fork of Gopher Canyon and the South Fork of Moosa Canyon, do not support perennial water sources or native fish populations.

2.4.7 Sensitive Plant Species

Endangered, rare, or threatened plant species, as defined in CEQA Guidelines Section 15380(b) (14 California Code of Regulations (CCR) 15000 et seq.), are referred to as “special-status plant species” in this section and include (1) endangered or threatened plant species recognized in the context of the California Endangered Species Act (CESA) and the federal Endangered Species Act (FESA) (CDFW 2014a), (2) plant species with a California Rare Plant Rank (CRPR) of 1 through 4 (CDFW 2014b; CNPS 2014), and (3) plant species considered “sensitive” by the County (Table 2 in County of San Diego 2010a).

Special-status plant surveys were conducted on the project Site to determine the presence or absence of plant species that are considered endangered, rare, or threatened under CEQA Guidelines Section 15380 (14 CCR 15000 et seq.). Each of these special-status species is described in Sections 2.4.7.2 (County List A and B Species) and 2.4.7.3 (County List C and D Species). Special-status plant species known to occur in the surrounding region and their potential to occur on Site are described in Table 2.4-5 and Appendix A of the BTR (Appendix H). Species that were observed or have moderate potential to occur are provided in Table 2.4-5; plants that are not expected to occur or have low potential to occur are included in Appendix F of the BTR (Appendix H). These tables include all species on Lists A–D from the County (County of San Diego 2010a). Plant species’ CRPRs are also included where applicable (CNPS 2014). Their potential to occur is based on an evaluation of known records in the San Marcos quadrangle and the surrounding eight quadrangles (CDFW 2014c; CNPS 2014; SDNHM 2014a; USFWS 2014), as well as elevation, habitat, and soils present on Site and Dudek’s knowledge of biological resources in the area and regional distribution of each species.

2.4.7.1 USFWS- Designated Critical Habitat

There is USFWS-designated critical habitat for San Diego ambrosia (*Ambrosia pumila*), thread-leaved brodiaea (*Brodiaea filifolia*), and spreading navarretia (*Navarretia fossalis*), within 5 miles of the project Site (USFWS 2014), as shown in Figure 2.4-6, Critical Habitat. None of the critical habitats are located within or in proximity to the project Site. Based on the habitat, soils, known distribution of these species, and lack of observations during focused plant surveys in 2007 (PSBS 2007) and 2013, these species are not expected or have low potential to occur on the Site (Appendix H)).

2.4.7.2 County List A and B Species

Plants categorized as County List A species are plants that are rare, threatened, or endangered in California and elsewhere. Plants categorized as County List B are rare, threatened, or endangered in California, but more common elsewhere (County of San Diego 2010a). County List A and B

species that have been observed on the project Site or have moderate potential to occur based on their life history are described below and included in Table 2.4-5.

Rainbow Manzanita (*Arctostaphylos rainbowensis*), List A

Rainbow manzanita is a CRPR 1B.1 species (CNPS 2014) and a County List A species (County of San Diego 2010a). This evergreen shrub occurs within chaparral at elevations between 740 and 1,770 feet. This species blooms from December to March (CNPS 2014). Rainbow manzanita was not detected during the 2013 focused surveys; however, according to County records, a handful of shrubs have been recorded on chaparral slopes of the Merriam Mountains, west of I-15 near Windsong Lane south of Mesa Rock Road (CDFW 2015), which is south of all other reported sites.

Encinitas Baccharis (*Baccharis vanessae*), List A

Encinitas baccharis is a CRPR 1B.1 (CNPS 2014) and County List A species (County of San Diego 2010a). This deciduous shrub blooms from August to November. It occurs on sandstone soils in chaparral (maritime) and cismontane woodlands at elevations of 200 to 2,400 feet (CNPS 2014). Previously this species was assumed to only occur on sandstone soils, but has since been confirmed on Cienega soils, which occurs on Site and has also been found growing under dense scrub oak (USFWS 2011). Encinitas baccharis was not detected during the 2007, ~~or~~ 2013, or 2017 focused surveys; however, suitable vegetation and soils are present. This species may occur within dense chaparral that could not be 100 percent surveyed.

Orcutt's Brodiaea (*Brodiaea orcuttii*), List A

Orcutt's brodiaea is a CRPR 1B.1 (CNPS 2014) and County List A species (County of San Diego 2010a). This bulbiferous herb blooms from May to July and is usually restricted to clay soils. Typical habitats for this species include closed-cone conifer forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, and/or vernal pools. Elevations in which the species is generally found ranges from 100 to 5,550 feet. Two isolated populations totaling 50 plants were observed in the open space, just northeast of the abandoned airstrip on Site.

Delicate Clarkia (*Clarkia delicata*), List A

Delicate clarkia is a CRPR 1B.2 (CNPS 2014) and County List A species (County of San Diego 2010a). This annual herb blooms from April to June. It occurs on gabbroic soils in chaparral and cismontane woodlands at elevations of 770 to 3,300 feet (CNPS 2014). Delicate clarkia was not detected during the 2007 or 2013 focused surveys; however, suitable vegetation is present and gabbroic soils are present within the area west of Twin Oaks Valley Road. This species may occur within dense chaparral that could not be 100 percent surveyed.

Summer Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*), List A

Summer holly is a CRPR 1B.2 (CNPS 2014) and County List A species (County of San Diego 2010a). This evergreen shrub blooms from April to June. It occurs in chaparral and cismontane woodlands at elevations of 100 to 1,800 feet (CNPS 2014). 1,356 individuals of summer holly detected throughout the Site within southern mixed chaparral and two occurrences in scrub oak chaparral (Figures 2.4-5A through 2.4-5E).

Sticky Dudleya (*Dudleya viscida*), List A

Sticky dudleya is a CRPR 1B.2 (CNPS 2014) and County List A species (County of San Diego 2010a). This perennial herb blooms from May to June. It occurs on rocky soils in coastal bluff scrub, chaparral, and coastal scrub at elevations of 30 to 1,800 feet (CNPS 2014). Sticky dudleya was not detected during previous surveys, and was not detected during the 2007 or 2013 focused surveys; however, suitable vegetation (e.g., chaparral and coastal scrub) is present on Site. This species may occur within dense chaparral that could not be 100 percent surveyed.

Ramona Horkelia (*Horkelia truncata*), List A

Ramona horkelia is a CRPR 1B.3 (CNPS 2014) and County List A species (County of San Diego 2010a). This perennial herb blooms from May to June. It occurs in chaparral and cismontane woodlands on clay soils at elevations of 1,312 to 4,265 feet (CNPS 2014). Three populations, two evidenced by single individuals and a third population of approximately 60 individuals, were detected on Site within southern mixed chaparral (Figures 2.4-5A through 2.4-5E). This species was found along two existing roads in the northeastern portion of the Site, and most occurrences are found on exposed open slopes or in rock crevasses, which would have likely been observed. However, additional locations in inaccessible areas are possible.

Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*), List A

Robinson's pepper-grass is a CRPR 1B.2 (CNPS 2014) and County List A species (County of San Diego 2010a). This annual herb blooms from January to July. It occurs in chaparral and coastal scrub at elevations below 2,900 feet (CNPS 2014). Robinson's pepper-grass was not detected during previous surveys, and was not detected during the 2007 or 2013 focused surveys; however, suitable vegetation is present on Site. This species may occur within dense chaparral that could not be 100 percent surveyed.

Parry's Tetracoccus (*Tetracoccus dioicus*), List A

Parry's tetracoccus is a CRPR 1B.2 and County List A species. This deciduous shrub blooms from April to May. It occurs in chaparral and coastal scrub at elevations of 500 to 3,300 feet (CNPS

2014). Parry's tetracoccus was not detected during previous surveys and was not detected during the 2007 or 2013 focused surveys; however, suitable vegetation is present, and the species is known to occur within the San Marcos quadrangle. Specifically, the species has been recorded at three locations just to the west of the project Site approximately 1 to 1.25 miles from the project boundary. Three additional observations were recorded from 1.5 to 2 miles south of the project Site. This species may occur within dense chaparral that could not be 100 percent surveyed.

Wart Stemmed Ceanothus (*Ceanothus verrucosus*), List B

Wart stemmed ceanothus is a CRPR 2.2 (CNPS 2014) and County List B species (County of San Diego 2010a). This shrub blooms December through April. It occurs in chaparral at elevations of 3 to 1,247 feet (CNPS 2014). Wart stemmed ceanothus was not detected during the 2007 or 2013 focused surveys; however, the species is known to occur within the mountains south of San Marcos. This species may occur within dense chaparral that could not be 100 percent surveyed on Site.

Munz's Sage (*Salvia munzii*), List B

Munz's sage is a CRPR 2.3 and County List B species. This perennial evergreen shrub typically blooms February through April. It occurs in chaparral and coastal scrub habitat types at elevations of 394 to 3,494 feet (CNPS 2014). One population, consisting of four individuals, was detected in southern mixed chaparral, but it likely occurs throughout other suitable habitat on Site (Figures 2.4-5A through 2.4-5E). In addition, a similar non-sensitive species, fragrant sage (*Salvia clevelandii*) was observed throughout the project Site but is not considered special status and, therefore, was not mapped during the 2013 focused surveys.

2.4.7.3 County List C and D Species; Other

Plants categorized as County List C species are plants that may be rare, but more information is needed to determine their true rarity status. Plants categorized as County List D are of limited distribution and are uncommon, but not presently rare or endangered (County of San Diego 2010a). County List C and D species that have been observed on the project Site, or have moderate potential to occur on Site, are described below and included in Table 2.4-5.

Western Spleenwort (*Asplenium vespertinum*), List D

Western spleenwort is a CRPR 4.2 and County List D species. This perennial rhizmatous herb blooms February through June. It occurs in chaparral, cismontane woodland, and coastal scrub at elevations of 591 to 3,281 feet (CNPS 2014). Western spleenwort was not detected during the 2007 or 2013 focused surveys; however, the species is known to occur within the San Marcos quadrangle, and suitable vegetation is present on Site. This species may occur within dense chaparral that could not be 100 percent surveyed.

Payson's Jewel-Flower (*Caulanthus simulans*), List D

Payson's jewel-flower is a CRPR 4.2 and County List D species. This annual herb blooms March through May. It occurs on sandy and granitic soils in chaparral and coastal scrub at elevations of 300 to 7,200 feet (CNPS 2014). Payson's jewel-flower was not detected during the 2007 or 2013 focused surveys; however, suitable vegetation is present on Site. This species may occur within dense chaparral that could not be 100 percent surveyed.

Western Dichondra (*Dichondra occidentalis*), List D

Western dichondra is a CRPR 4.2 and County List D species. This rhizomatous herb blooms March through May. It occurs in chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland at elevations of 160 to 1,650 feet (CNPS 2014). Western dichondra was not detected during the 2007 or 2013 focused surveys; however, suitable vegetation is present on Site. This species may occur within dense chaparral that could not be 100 percent surveyed.

Golden-Rayed Pentachaeta (*Pentachaeta aurea* ssp. *aurea*), List D

Golden-rayed pentachaeta is a CRPR 4.2 and County List D species. This annual herb blooms March through July. It occurs in chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland, and valley and foothill grassland at elevations of 260 to 6,070 feet (CNPS 2014). Golden-rayed pentachaeta was not detected during the 2007 or 2013 focused surveys, and its distribution in San Diego County appears to be limited (Jepson Online Interchange 2014); however, the species may occur within dense chaparral that could not be 100 percent surveyed.

Chaparral Rein Orchid (*Piperia cooperi*), List D

Chaparral rein orchid is a CRPR 4.2 and County List D species. This perennial herb blooms from March to June. It occurs in chaparral, cismontane woodland, and valley and foothill grasslands at elevations of 50 to 5,200 feet (CNPS 2014). This species had one occurrence (five individuals) in the east-central portion of the Site within southern mixed chaparral (Figures 2.4-5A through 2.4-5E), but likely also occurs throughout other suitable habitat types.

Engelmann Oak (*Quercus engelmannii*), List D

Engelmann oak is a CRPR 4.2 and County List D species. This deciduous tree blooms from March to June. It occurs in chaparral, cismontane, woodland, riparian woodland, and valley and foothill grasslands at elevations of 394 to 4,265 feet. During 2013 surveys, this species had one occurrence in the northwestern corner and several occurrences throughout the north-central portion of the Site within southern mixed chaparral (approximately 29 individuals). Several

additional individuals occur in coast live oak woodlands in the southeastern corner of the Site (includes PSBS 2007 observations) (Figures 2.4-5A through 2.4-5E).

Ashy Spike-Moss (*Selaginella cinerascens*), List D

Ashy spike-moss is a CRPR 4.1 and County List D species. This perennial rhizomatous herb occurs in chaparral and coastal scrub at elevations of 66 to 2,100 feet. This species two occurrences in the north-central portion and one occurrence in the central portion of the Site (Figures 2.4-5A through 2.4-5E). All occurred within southern mixed chaparral.

2.4.8 Sensitive Animal Species

Endangered, rare, or threatened wildlife species, as defined in the CEQA Guidelines, Section 15380(b) (14 CCR 15000 et seq.), are referred to as “special-status wildlife species” and, as used in this report, include (1) endangered or threatened wildlife species recognized in the context of the CESA and FESA; (2) California Species of Special Concern (SSC) and Watch List (WL) species, as designated by CDFW (2014d); (3) mammals and birds that are fully protected species, as described in Fish and Game Code, Sections 4700 and 3511; (4) Birds of Conservation Concern (BCC) as designated by USFWS (2008); and (5) wildlife species considered “sensitive” by the County of San Diego (Table 3 in County of San Diego 2010a).

Special-status wildlife species known to occur in the surrounding region and their potential to occur on Site are listed in Table 2.4-6 and Appendix B of the BTR (Appendix H). Species that were observed or have high or moderate potential to occur are provided in Table 2.4-6; species that are not expected to occur or have low potential to occur are included in Appendix G of the BTR (Appendix H). These tables include all Group I and II species from the County (2010a). Their potential to occur is based on an evaluation of known records in the San Marcos quadrangle and the surrounding eight quadrangles (CDFW 2014c; SDNHM 2014b; USFWS 2014), as well as range, elevation, habitat, and soils present on Site and Dudek’s knowledge of biological resources in the area and regional distribution of each species.

2.4.8.1 USFWS-Designated Critical Habitat

There are 706 acres of critical habitat for California gnatcatcher within the project Site (Figure 2.4-6). The majority of the critical habitat (99 percent) is mapped as chaparral, woodland, or grassland and is not considered typically suitable for California gnatcatcher nesting

There is critical habitat within 5 miles for the following species: arroyo toad (*Anaxyrus californicus*), least Bell’s vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), and San Diego fairy shrimp (*Branchinecta sandiegonensis*) (Figure 2.4-6). Critical habitat for arroyo toad, least Bell’s vireo, and southwestern willow

flycatcher is located along the San Luis Rey River corridor, located approximately 4 miles north of the project Site. There is no suitable habitat for arroyo toad on Site, and surveys for least Bell's vireo and southwestern willow flycatcher were negative.

There is a small area designated as critical habitat for San Diego fairy shrimp approximately 4 miles southwest of the project Site (San Marcos Northeast, Southeast, and Southwest units) (Figure 2.4-6); however, due to the lack of vernal pools on the project Site, this species has low potential to occur (see Appendix G of the BTR (Appendix H)). Previously, no features were found within the project Site that might support San Diego fairy shrimp. The significant rain events in January caused low areas within existing dirt roads to pond with enough water to be sustained beyond the 7-day threshold which would trigger protocol surveys (USFWS 2015). The Site does not support vernal pool habitat and all features mapped within the project Site have been categorized as puddles. The Site includes steep hills with dirt roads that exhibit significant off-road vehicle use and erosion. Soils on Site are predominately sandy loam and there are no areas of clay soils which would support the typical vernal pool habitat. The closest known location of occupied pools are approximately 5 miles southwest of the project Site in San Marcos, with other occurrences 15 miles to the southeast in Ramona and 16 miles northwest within Camp Pendleton (USFWS 2017). These sites contain the typical vernal pool habitat that support San Diego fairy shrimp (i.e., open areas with clay soils, mima mounds, and generally flat topography). None of the puddles surveyed contained San Diego fairy shrimp, only versatile fairy shrimp have been collected (see Appendix H for more information).

2.4.8.2 County Group I Species and/or SSC Species

County Group 1 and/or CDFW SSC species that have been observed in the project Site or have high potential to occur are described below and included in Table 2.4-6.

Amphibians

Western spadefoot (*Spea [=Scaphiopus] hammondi*) – SSC/Group II

Western spadefoot toad is a CDFW SSC and County Group 2 species. It is endemic to California and northern Baja California, Mexico. Spadefoot toad ranges from the north end of California's Central Valley near Redding, south, west of the Sierra Nevadas and the deserts, and into northwest Baja California, Mexico (Jennings and Hayes 1994; Stebbins 2003). Although the species primarily occurs in lowlands, it also occupies foothill and mountain habitats. Within its range, western spadefoot toad occurs from sea level to 4,000 feet AMSL, but mostly at elevations below 3,000 feet (Stebbins 2003).

Western spadefoot toad is almost completely terrestrial, entering water only to breed. The species aestivates in upland habitats near potential breeding sites in burrows approximately 1

meter (3 feet) in depth (Stebbins 2003). The species prefers open areas with sandy or gravelly soils in a variety of habitats, including mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, river floodplains, alluvial fans, playas, and alkali flats (Holland and Goodman 1998; Stebbins 2003). However, the species is most common in grasslands with vernal pools or mixed grassland/coastal sage scrub areas (Holland and Goodman 1998).

Western spadefoot was detected during a Site visit in a large puddle at the quarry on March 27, 2014 located in the north western section of the project Site, along North Twin Oaks Valley Drive. In February 2017, two puddles within the quarry were observed supporting this species. There are no impacts expected to occur within the quarry.

Reptiles

Coastal Whiptail (*Aspidoscelis tigris stejnegeri*) – SSC/Group II

Coastal whiptail is a CDFW SSC and County Group 2 species. It is found in coastal Southern California, mostly west of the Peninsular Ranges and south of the Transverse Ranges, north into Ventura County, and south into Baja California, Mexico (Lowe et al. 1970; Stebbins 2003). The western whiptail (*A. tigris*) is found in a variety of habitats, primarily in areas where plants are sparse and there are open areas for running. According to Stebbins (2003), the species ranges from deserts to montane pine forests where it prefers warmer and drier areas. The species is also found in woodland and streamside growth, and it avoids dense grassland and thick shrub growth.

Coastal whiptail was detected on Site in 2007 (PSBS 2007) but according to the PSBS technical reports, the location was not mapped; one individual was observed in 2014 (Figures 2.4-7A through 2.4-7E, Jurisdictional Resources). This species is also recorded approximately 0.7 mile northeast and 1 mile southeast of the project Site (CDFW 2014a). Suitable habitat is assumed to occur throughout the project Site where openings occur.

Suitable habitat within the project Site includes chaparral (southern mixed chaparral, scrub oak chaparral), coastal scrub (Diegan coastal sage scrub, coastal sage scrub – *Baccharis*, flat-topped buckwheat, coastal sage – chaparral transition), woodland (coast live oak woodland), riparian (southern coast live oak riparian forest, mulefat scrub, southern willow scrub, southern willow scrub/tamarisk scrub), and disturbed habitat.

Red-Diamond Rattlesnake (*Crotalus ruber*) – SSC/Group II

Red-diamond rattlesnake is a CDFW SSC and County Group 2 species. It is found in a variety of habitats from the coast to the deserts, from San Bernardino County into Baja California, Mexico (below 5,000 feet in elevation). It commonly occurs in rocky areas within coastal sage scrub, chaparral, juniper woodlands, and desert habitats, but can also be found in areas devoid of rocks (Lemm 2006).

Red-diamond rattlesnake was detected within rocky or boulder areas in the northeastern portion of the Site (PSBS 2007) (Figures 2.4-5A through 2.4-5E). This species is also recorded approximately 1 mile northeast of the project Site (CDFW 2014c). It is assumed to occur throughout the project Site.

Within the project Site, suitable habitat includes chaparral (southern mixed chaparral, scrub oak chaparral), coastal scrub (Diegan coastal sage scrub, coastal sage scrub – *Baccharis*, flat-topped buckwheat, coastal sage – chaparral transition), woodland (coast live oak woodland), non-native grasslands, and disturbed habitat.

Blainville's Horned Lizard (*Phrynosoma blainvillii*) – SSC/Group II

Blainville's horned lizard (previously coast horned lizard) is a CDFW SSC and a County Group 2 species. It is found from the Sierra Nevada foothills and central California to coastal Southern California. It is often associated with coastal sage scrub, especially areas of level to gently sloping ground with well-drained loose or sandy soil, but it can also be found in annual grasslands, chaparral, oak woodland, riparian woodland, and coniferous forest between 30 and 7,030 feet AMSL (Jennings and Hayes 1994). This reptile typically avoids dense vegetation, preferring 20 percent to 40 percent bare ground in its habitat. Blainville's horned lizard can be locally abundant in areas where it occurs, with densities near 20 adults per acre. Adults are active from late March through late August, and young are active from August through November or December. Up to 90 percent of the diet of Blainville's horned lizard consists of native harvester ants (*Pogonomyrmex* spp.) (Jennings and Hayes 1994).

This species was detected on Site during previous (PSBS 2007) and 2013–2014 surveys. During recent surveys, the species was detected in two locations: in the southeastern corner of the project Site (directly northwest of the end of Mesa Rock Road) and southeast of the abandoned landing strip (directly west of the water tower). Horned lizard scat was also mapped in two areas (Figures 2.4-5A through 2.4-5E). CNDDDB records show that it also occurs throughout the immediate vicinity of the project Site (CDFW 2014c).

Suitable habitat on Site includes most upland vegetation communities and undeveloped land cover (i.e., chaparral [southern mixed chaparral, scrub oak chaparral], coastal scrub [Diegan coastal sage scrub, coastal sage scrub – *Baccharis*, flat-topped buckwheat, coastal sage – chaparral transition], woodland [coast live oak woodland], and non-native communities and land covers [disturbed habitat and non-native grasslands]).

Coast Patch-Nosed Snake (*Salvadora hexalepis virgultea*) – SSC/Group II

Coast patch-nosed snake is a CDFW SSC and County Group 2 species. It ranges from west-central Nevada south to the tip of Baja California and northwestern Sonora, and from coastal

Southern California to southwestern Utah and central Arizona. Coast patch-nosed snake is found at elevations from below sea level to approximately 6,988 feet AMSL (Goldberg 1995).

Coast patch-nosed snake is diurnal (Stebbins 2003) and can be found throughout the day during the milder months of spring. Activity is restricted to the mornings and late afternoons during the summer months. As an active, diurnal snake, it will occasionally take refuge in rock crevices, in small mammal burrows, and under vegetation. May and June are the typical months of peak activity; however, in the southern part of its range, activity may extend all year during mild to warm weather. Coast patch-nosed snake was observed on Site in 2013 in the southeastern portion of the Site (Figures 2.4-5A through 2.4-5E). There are no CNDDB points within the project Site; the closest location is approximately 15 miles from the Site (CDFW 2014c).

Suitable habitat occurs on Site and includes chaparral (southern mixed chaparral, scrub oak chaparral) and coastal scrub (Diegan coastal sage scrub, coastal sage scrub – *Baccharis*, flat-topped buckwheat, coastal sage – chaparral transition).

Birds

Cooper's Hawk (*Accipiter cooperii*) – CDFW WL/Group I

Cooper's hawk is a CDFW WL and a County Group 1 species. It is found throughout California in wooded areas. It inhabits live oak, riparian, deciduous, or other forest habitats near water. Nesting and foraging usually occur near open water or riparian vegetation. Nests are built in dense stands with moderate crown depths, usually in second-growth conifer or deciduous riparian areas. Cooper's hawk uses patchy woodlands and edges with snags for perching while they are hunting for prey such as small birds, small mammals, reptiles, and amphibians within broken woodland and habitat edges (Zeiner et al. 1990a).

Cooper's hawk was observed on Site during biological surveys in 2007 (PSBS 2007) and in 2013, but locations were not mapped. There are no CNDDB records for this species within the project Site; however, this species has been recorded breeding both within and adjacent to the Merriam Mountains (Unitt 2004). Additional nesting occurrences are approximately 4 miles northwest of the Site (in 2003), and additional detections occur approximately 6 and 11 miles north and northeast, respectively, of the Site (CDFW 2014c).

Within the proposed project Site, there are no permanent water sources; however, ephemeral and intermittent sources are present. The project Site supports nesting opportunities within habitats supporting large trees (i.e., coast live oak woodland, scrub oak chaparral, oak riparian forest, or eucalyptus woodland). Suitable foraging habitat includes most vegetation communities and undeveloped land cover on Site (i.e., chaparral [southern mixed chaparral, scrub oak chaparral], coastal scrub [Diegan coastal sage scrub, coastal sage scrub – *Baccharis*,

flat-topped buckwheat, coastal sage – chaparral transition], woodland [coast live oak woodland], riparian [freshwater marsh, southern coast live oak riparian forest, mulefat scrub, southern willow scrub, southern willow scrub/tamarisk scrub], and non-native communities and land covers [eucalyptus woodland, intensive agriculture, orchards and vineyards, disturbed habitat, and non-native grasslands]).

Sharp-Shinned Hawk (*Accipiter striatus*) – CDFW WL/Group 1

Sharp-shinned hawk is a CDFW WL and County Group 1 species. It is a common migrant and winter resident throughout California, and likely breeds south in the Coast Ranges and at scattered locations in the Transverse and Peninsular Ranges. This species is not known to breed on the coastal slope in Southern California. Sharp-shinned hawk breeds in coniferous forests, ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine, and winters in lowland woodlands and other habitat. North-facing slopes with plucking perches are critical requirements for this species. This species often forages in openings at edges of woodlands, hedgerows, brushy pastures, and shorelines hunting for prey such as small birds, small mammals, insects, reptiles, and amphibians (Zeiner et al. 1990a).

Sharp-shinned hawk was detected on Site soaring overhead after a red-tailed hawk at the abandoned landing strip in the northern portion of the project Site (Figures 2.4-5A through 2.4-5E). This species was not observed during previous surveys (PSBS 2007). There is a low potential for this species to nest on the coastal slope in Southern California, and nesting species were not detected in the vicinity (CDFW 2014c). There are no CNDDDB records (CDFW 2014c) or breeding records (Unitt 2004) for this species within the project Site.

The project Site supports suitable foraging habitat, including most vegetation communities and land covers on Site (i.e., chaparral [southern mixed chaparral, scrub oak chaparral], coastal scrub [Diegan coastal sage scrub, coastal sage scrub – *Baccharis*, flat-topped buckwheat, coastal sage – chaparral transition], woodland [coast live oak woodland], riparian [freshwater marsh, southern coast live oak riparian forest, mulefat scrub, southern willow scrub, southern willow scrub/tamarisk scrub], and non-native communities and land covers [eucalyptus woodland, agriculture/intensive agriculture, orchards and vineyards, disturbed habitat, and non-native grasslands]).

Bell's Sage Sparrow (*Artemisiospiza belli belli*) – BCC/CDFW WL/Group 1

Bell's sage sparrow is a USFWS BCC, CDFW WL species, and County Group 1 species. The recently designated Bell's sparrow (*Artemisiospiza belli*) consists of *A. b. belli* and *A. b. canescens*, both formerly considered subspecies of the sage sparrow (*Amphispiza belli*) and now split from sagebrush sparrow (*A. nevadensis*) (Chesser et al. 2013). The nominate form of Bell's

sparrow, as Bell's sage sparrow, is designated as a special-status species. This species occurs in chaparral and coastal scrub communities along the Coast Ranges of central California and in the Transverse Ranges of Southern California. This species occurs as a non-migratory resident on the western slope of the central Sierra Nevada Range, and in the coastal ranges of California, southward from Marin County and Trinity County, extending into north-central Baja California, Mexico (County of Riverside 2008). The range of this species overlaps with that of at least one other subspecies of sage sparrow (County of Riverside 2008). This species occupies semi-open habitats with evenly spaced shrubs that are 3.3 to 6.6 feet high (County of Riverside 2008). The species is uncommon to fairly common in dry chaparral and coastal sage scrub along the coastal lowlands, inland valleys, and lower foothills of the mountains within its range.

This species was detected on Site during biological surveys in 2013 in the northeastern portion of the Site but was not mapped. Based on the range of the *A. belli* subspecies, it is assumed the special-status subspecies (*A. b. belli*) occurs on Site. There are no CNDDDB records for this species within the project Site, and no breeding or wintering records have been documented for the Merriam Mountains since 1997 (Unitt 2004). Additionally, the closest CNDDDB occurrence was documented approximately 2.5 miles northeast of project Site in 2000 (CDFW 2014c). Additional occurrences were documented 6 and 11 miles southwest and southeast, respectively, of the Site (CDFW 2014c).

Within the project Site, suitable habitat includes chaparral (southern mixed chaparral, scrub oak chaparral) and coastal scrub (Diegan coastal sage scrub, coastal sage scrub – *Baccharis*, and flat-topped buckwheat, coastal sage – chaparral transition).

Red-Shouldered Hawk (*Buteo lineatus*) – Group 1

Red-shouldered hawk is a County Group 1 species. Red-shouldered hawk inhabits a broad range of North American forests, but favor mature, mixed deciduous–coniferous woodlands, especially bottomland hardwood, riparian areas, flooded deciduous swamps, oak woodlands, eucalyptus groves, and suburban areas with nearby woodlots (Dykstra et al. 2008). This species nests in riparian habitats near permanent water and forages along edges of wet meadows, swamps, and emergent wetlands (Zeiner et al. 1990a).

Red-shouldered hawk was detected on Site soaring overhead throughout various locations in 2007 (PSBS 2007) and in 2013 (Figures 2.4-5A through 2.4-5E). Breeding was confirmed within and adjacent to the Merriam Mountains (Unitt 2004).

Within the project Site, there are no permanent water sources; however, ephemeral and intermittent sources are present. The project Site supports nesting opportunities within habitats with large trees (i.e., coast live oak woodland, scrub oak chaparral, oak riparian forest, or

eucalyptus woodland). Suitable foraging habitat includes most vegetation communities on Site (i.e., southern mixed chaparral, scrub oak chaparral, Diegan coastal sage scrub, coastal sage scrub – Baccharis, flat-topped buckwheat, coastal sage – chaparral transition, coast live oak woodland, freshwater marsh, southern coast live oak riparian forest, mulefat scrub, southern willow scrub, southern willow scrub/tamarisk scrub, eucalyptus woodland, intensive agriculture, orchards and vineyards, disturbed habitat, and non-native grasslands).

Turkey Vulture (*Cathartes aura*) – Group 1

Turkey vulture is not considered special status by any state or federal agency; however, it is considered a County Group 1 species where breeding occurs. In California, it is common during the breeding season and is a yearlong resident west of the Sierra Nevada, especially in coastal areas. Summer and yearlong ranges also include the southeastern United States; portions of Texas, Mexico, Central America, and South America; and some islands in the Caribbean (Kirk and Mossman 1998).

Turkey vultures use a variety of habitats while foraging on wild and domestic carrion. They prefer open stages of most habitats. In the western United States, they tend to occur regularly in areas of hilly pastured rangeland, non-intensive agriculture, and areas with rock outcrops suitable for nesting, although they are not generally found in high-elevation mountain areas (Kirk and Mossman 1998; Zeiner et al. 1990a). Nest locations tend to be difficult to find and are usually located in a crevice among granite boulders (Unitt 2004). The species prefers hilly areas that provide deflective updrafts for flight, and generally avoids extensive areas of row-crop farmland (Kirk and Mossman 1998).

Turkey vultures were observed foraging over the Site in 2007 (PSBS 2007) and in 2013/2014, but the observations were not mapped. One turkey vulture nest was located within the Merriam Mountains during surveys occurring between 1993 and 1996 (Unitt 2004). The project Site may support nesting opportunities within crevices within the quarry or granite boulders on Site, but no nests or nesting behavior was observed. Suitable foraging habitat includes most vegetation communities and land covers on Site (i.e., chaparral [southern mixed chaparral, scrub oak chaparral], coastal scrub [Diegan coastal sage scrub, coastal sage scrub – Baccharis, flat-topped buckwheat, coastal sage – chaparral transition], woodland [coast live oak woodland], riparian [freshwater marsh, southern coast live oak riparian forest, mulefat scrub, southern willow scrub, southern willow scrub/tamarisk scrub], and non-native communities and land covers [eucalyptus woodland, agriculture/intensive agriculture, orchards and vineyards, disturbed habitat, and non-native grasslands]).

Northern Harrier (*Circus cyaneus*) – SSC/Group 1

Northern harrier is a CDFW SSC and County Group 1 species. Northern harriers use a wide variety of open habitats in California, including deserts, coastal sand dunes, pasturelands,

croplands, dry plains, grasslands, estuaries, floodplains, and marshes (Macwhirter and Bildstein 2011). The species can also forage over coastal sage scrub or other open scrub communities. Nesting areas are associated with marshes, pastures, grasslands, prairies, croplands, desert shrub-steppe, and riparian woodland (Macwhirter and Bildstein 2011). Winter habitats similarly include a variety of open habitats dominated by herbaceous cover. Northern harrier populations are most concentrated in areas with low vegetation.

This species has not been detected on Site during any of the biological surveys conducted by PSBS in 2007 or Dudek in 2009, 2013, and 2014 (Appendix H). There are no CNDDDB records for this species within the project Site, and no breeding or wintering records have been documented for the Merriam Mountains (Unitt 2004). The closest nesting occurrence for this species is approximately 10.5 miles east of project Site on Camp Pendleton, where it is reported to have two to three pairs nesting every year (CDFW 2014c). Suitable foraging habitat includes riparian (freshwater marsh, mulefat scrub, southern willow scrub, southern willow scrub/tamarisk scrub) and non-native communities and land covers (disturbed habitat and non-native grasslands).

Coastal California Gnatcatcher (*Poliophtila californica californica*) – Federally Threatened/SSC/Group I

The coastal California gnatcatcher is a federally threatened, CDFW SSC, and County Group 1 species. This species occurs in coastal Southern California and Baja California year-round, where it depends on a variety of arid scrub habitats. California gnatcatcher occurs mainly on cismontane slopes (coastal side of the mountains) in Southern California, ranging from Ventura and northern Los Angeles Counties south through the Palos Verdes Peninsula to Orange, Riverside, San Bernardino, and San Diego Counties. The species' range continues south to El Rosario, Mexico. Initially it was reported that 99 percent of all California gnatcatcher locality records occurred at or below an elevation of 984 feet AMSL (Atwood 1990; Atwood and Bolsinger 1992). Since that time, data collected at higher elevations show that the species may occur as high as 3,000 feet AMSL, but that more than 99 percent of the known California gnatcatcher locations occurred below 2,500 feet AMSL (65 Federal Register 63680). Because of the natural topography of the Southern California hills and mountain ranges, most of the higher-elevation locations are more inland, where population densities tend to be much lower than coastal populations.

California gnatcatcher typically occurs in or near coastal scrub vegetation composed of relatively low-growing, dry-season deciduous and succulent plants. Characteristic plants of this community include California sagebrush, various species of sage (*Salvia* spp.), California buckwheat, lemonade sumac, California bush sunflower (*Encelia californica*), and cactus (e.g., *Opuntia* spp.). California gnatcatcher also occurs in chaparral, grassland, and riparian vegetation communities

where the coastal scrub community is close by (Bontrager 1991). Use of these vegetation communities appears to be most frequent during late summer, autumn, and winter, with smaller numbers of birds using such areas during the breeding season. California gnatcatcher tends to occur most frequently within the California sagebrush-dominated stands on mesas, gently sloping areas, and along the lower slopes of the Coast Ranges (Atwood 1990). California gnatcatcher occurs in high frequencies and densities in coastal scrub communities with an open or broken canopy, and is absent from coastal scrub dominated by tall shrubs, and occurs in low frequencies and densities in low coastal scrub with a closed canopy (Weaver 1998).

California gnatcatcher gleans insects and spiders from foliage of shrubs, primarily California buckwheat and coastal sagebrush (Atwood 1993). Their diet is primarily composed of spiders, but is also composed of wasps, bees, and ants (Burger et al. 1999). California gnatcatcher habitat use has been positively associated with insect abundance and diversity (Redak et al. 1996, as cited in Diffendorfer et al. 2002).

California gnatcatcher nests usually are located in a small shrub or cactus 1 to 3 feet above the ground. Territory size varies and is influenced by season and locale (Preston et al. 1998), but is unrelated to vegetation structure (Braden et al. 1997). During the breeding season, territories in coastal areas are often smaller—averaging 5.7 acres (Atwood et al. 1998)—than those in more inland regions, which average 8.4 acres (Braden et al. 1997).

Focused surveys for California gnatcatcher on the project Site resulted in the detection of two pairs and various individuals. The originally detected pair was located within the planned development footprint near the terminus of the cul de sac on Mesa Rock Road (PSBS 2007). During the 2013 surveys, no California gnatcatchers were detected within previous locations, but were instead located adjacent to I-15 within a mix of sage scrub communities, north of the 2007 observation and planned development area. ~~Individuals have variously been anecdotally detected within other patches of sage scrub on Site.~~ Calls of this species were also detected by an experienced and permitted biologist within the matrix of southern mixed chaparral and disturbed habitat in the western section of the abandoned landing strip (Figures 2.4-5A through 2.4-5E). Occurrences for this species were recorded in the southeastern portion of the Site in 2002–2003 (CDFW 2014c; USFWS 2014), with numerous occurrences documented throughout the vicinity in surrounding areas. The closest occurrence outside of the Site is located approximately 0.5 to 1.0 mile northeast of project Site in 1996 and 2007 (CDFW 2014c; USFWS 2014).

The project Site supports foraging and nesting opportunities within the coastal scrub habitats (i.e., Diegan coastal sage scrub, coastal sage scrub – *Baccharis*, and flat-topped buckwheat) and foraging opportunities in the remaining vegetation communities. It also provides for movement and dispersal opportunities within and through the Site.

Yellow Warbler (*Setophaga [Dendroica] petechia*) – BCC/SSC/Group II

Yellow warbler is a USFWS BCC, CDFW SSC, and County Group 2 species. Yellow warbler is widely distributed, with a breeding range from northern Alaska eastward to Newfoundland and southward to northern Baja California and Georgia. This species is a migrant throughout much of North America and winters from Southern California, Arizona, and the Gulf Coast southward to central South America (AOU 1998). In California, it is a migrant and summer resident (Heath 2008). It breeds in riparian woodlands southward from the northern border of California, generally west of the Sierra Nevada to the coastal slopes of Southern California, and from coastal and desert lowlands up to 8,860 feet AMSL in the Sierra Nevada and other montane chaparral and forest habitats (Grinnell and Miller 1944; Lowther et al. 1999).

Yellow warbler usually nests in wet, deciduous thickets, especially those dominated by willows (*Salix* spp.), and in disturbed and early successional habitats (Lowther et al. 1999). In Southern California, it nests in lowland and foothill riparian woodlands dominated by cottonwoods (*Populus* spp.), alders (*Alnus* spp.), or willows and other small trees and shrubs typical of low, open-canopy riparian woodland (Garrett and Dunn 1981). Nest trees most often are willows, hawthorns (*Crataegus* spp.), raspberry (*Rubus* spp.), northern white cedar (*Thuja occidentalis*), honeysuckle (*Lonicera* spp.), and Spiraea (*Spiraea* spp.) (Lowther et al. 1999). It also nests in montane chaparral, open ponderosa pine, and mixed conifer habitats with substantial amounts of brush, but nesting in these habitats is perhaps relatively recent (Gaines 1977). During migration, yellow warbler occurs in lowland and foothill woodland habitats such as desert oases, riparian woodlands, oak woodlands, mixed deciduous–coniferous woodlands, shrublands, forests, suburban and urban gardens and parks, groves of exotic trees, farmyard windbreaks, and orchards (Small 1994).

Yellow warbler was detected on Site during biological surveys in 2013 (Figures 2.4-5A through 2.4-5E). This species may also occur in preserved eastern or western riparian habitats during spring and summer. Several of the closest occurrences are documented from approximately 5 to 8 miles north, northeast, and east of project Site near or on the San Luis Rey River (CDFW 2014c). Possible breeding occurs in the southern half of the Merriam Mountains, with confirmed breeding northwest of the project Site (Unitt 2004). Suitable nesting and foraging habitat includes riparian habitats on Site (i.e., southern coast live oak riparian forest, mulefat scrub, southern willow scrub, and southern willow scrub/tamarisk scrub).

Mammals

Northwestern San Diego Pocket Mouse (*Chaetodipus fallax fallax*) – SSC/Group II

Northwestern San Diego pocket mouse is a CDFW SSC and County Group 2 species. It occurs in coastal scrub, chaparral, grasslands, sagebrush, and similar habitats in western San Diego County. Microhabitat includes sandy, herbaceous areas, usually in association with rocks or coarse gravel (CDFW 2014c).

This species was not detected on Site, and no focused surveys were conducted, but it has a high potential to occur. Suitable vegetation occurs on Site, as does loam and sandy loam soil types. The closest species occurrence is approximately 2.5 miles northeast of the Site (in 1993), and additional detections are scattered approximately 8.5 to 13 miles in all directions from the Site (CDFW 2014c).

Suitable habitat on Site includes chaparral (southern mixed chaparral, scrub oak chaparral), coastal scrub (Diegan coastal sage scrub, coastal sage scrub – *Baccharis*, flat-topped buckwheat, coastal sage – chaparral transition), disturbed habitat, and non-native grasslands.

San Diego Desert Woodrat (*Neotoma lepida intermedia*) – SSC/Group II

San Diego desert woodrat is a CDFW SSC and County Group 2 species. This species is found in coastal Southern California into Baja California, Mexico (Reid 2006). Marginal eastern records for San Diego desert woodrat in the United States include San Luis Obispo, San Fernando in Los Angeles County, the San Bernardino Mountains and Redlands in San Bernardino County, and Julian in San Diego County (Hall 1981). Desert woodrat is found in a variety of shrub and desert habitats, and are primarily associated with rock outcroppings, boulders, cacti, and areas of dense undergrowth.

Sign of this species (i.e., middens) was detected throughout the Site in 2007 (PSBS 2007) and in 2013, but the majority of the middens were not mapped. Suitable habitat within the project Site includes chaparral (southern mixed chaparral, scrub oak chaparral), coastal scrub (Diegan coastal sage scrub, coastal sage scrub – *Baccharis*, flat-topped buckwheat, coastal sage – chaparral transition), coast live oak woodland, and disturbed habitat.

2.4.8.3 County Group II Species

County Group II species that have been observed on the project Site or have high potential to occur (Table 2.4-6) are described below.

Reptiles

Belding's Orange-Throated Whiptail (*Aspidoscelis hyperythra beldingi*) – WL/Group II

The Belding's orange-throated whiptail is a CDFW WL and County Group 2 species. Its current range includes southwestern California and Baja California, Mexico, from the southern edges of Orange County (Corona del Mar) and San Bernardino County (near Colton), southward to the Mexican border. This species is located on the coastal slope of the Peninsular Ranges and extends from near sea level to 3,412 feet AMSL (northeast of Aguanga, Riverside County) (Jennings and Hayes 1994). It commonly occurs in coastal sage scrub, chaparral, grassland, juniper, and oak woodland.

This species was detected on Site in 2007, where it “was often found in openings or along trails in coastal sage scrub or chaparral, and was occasionally observed on the site” (PSBS 2007). The location was not mapped. In addition, there is one CNDDDB occurrence record within the north-central portion of the project Site for this species (CDFW 2014a).

Within the project Site suitable habitat includes chaparral (southern mixed chaparral, scrub oak chaparral), coastal scrub (Diegan coastal sage scrub, coastal sage scrub – *Baccharis*, flat-topped buckwheat, coastal sage – chaparral transition), woodland (coast live oak woodland), non-native grasslands, and disturbed habitat.

San Diego Ringneck Snake (*Diadophis punctatus similis*) – Group II

San Diego ringneck snake is a County Group 2 species. The full species is widely distributed in North America, with 12 currently recognized subspecies occurring from southern Washington and Idaho to northern Baja California, Mexico, and from the Atlantic coast to the Pacific coast (Crother 2012; Hinojosa 1998; Stebbins 2003; Stoltz 1993). Ringneck snake is widespread in California, and is absent only from large portions of the Central Valley, high mountains, desert, and areas east of the Sierra-Cascade crest (Zeiner et al. 1988). Currently there are seven recognized subspecies in California occurring at elevations ranging from sea level to 7,050 feet AMSL (Crother 2012; Nafis 2014; Zeiner et al. 1988). Specifically, the San Diego ringneck snake subspecies is found along the Southern California coast from northern San Diego County south to Baja California, Mexico (Stebbins 2003). However, the genus *Diadophis* is in need of taxonomic study, and the seven recognized subspecies in California are nearly genetically indistinguishable (Nafis 2014).

Ringneck snake is found in moist habitats, including woodlands, hardwood and conifer forest, grassland, sage scrub, chaparral, croplands/hedgerows, and gardens (NatureServe 2014; Stebbins 2003). In arid regions, ringneck snake occurs in forests, woodlands, sage scrub, chaparral, and riparian corridors (Stebbins 2003). Zeiner et al. (1988) state that ringneck snake is most common

in open, relatively rocky areas within valley–foothill, mixed chaparral, and annual grassland habitats. Holland and Goodman (1998) observed that the species is more common in grasslands and more scarce in riparian areas where sandy soils are extensive or not bordered by areas with heavier soils. Ringneck snake uses a wide variety of habitats, but is usually found under bark, beneath and inside rotting logs, and under stones and boards (Stebbins 2003).

San Diego ringneck snake was detected on Site (PSBS 2007) but according to the PSBS technical reports, the location was not mapped. Suitable habitat on Site includes most vegetation communities and undeveloped land cover (i.e., chaparral [southern mixed chaparral, scrub oak chaparral], coastal scrub [Diegan coastal sage scrub, coastal sage scrub – *Baccharis*, flat-topped buckwheat, coastal sage – chaparral transition], woodland [coast live oak woodland], riparian [freshwater marsh, southern coast live oak riparian forest, mulefat scrub, southern willow scrub, southern willow scrub/tamarisk scrub], and non-native communities and land covers [eucalyptus woodland, orchards and vineyards, disturbed habitat, and non-native grasslands]) where moist microhabitats occur.

Coronado Skink (*Plestiodon skiltonianus interparietalis*) –SSC/Group II

Coronado skink is a CDFW SSC and County Group 2 species. This species is common within grassland, woodlands, pine forests, chaparral, especially open sunny areas (e.g., clearings, edges of creeks), and rocky areas near streams with lots of vegetation. However, this species may also be found in areas away from water. Coronado skink is found in inland Southern California south through the north Pacific coast region of northern Baja California (Nafis 2014).

Although Coronado skink was not detected during surveys, this species probably occurs on Site. This species was detected approximately 0.5 mile northeast (in 1995) and approximately 4.5 miles southwest of the Site (in 2006) (CDFW 2014c).

In addition, suitable habitat occurs on Site and includes chaparral (southern mixed chaparral, scrub oak chaparral), coastal scrub (Diegan coastal sage scrub, coastal sage scrub – *Baccharis*, flat-topped buckwheat, coastal sage – chaparral transition), woodland (coast live oak woodland), riparian (freshwater marsh, southern coast live oak riparian forest, mulefat scrub, southern willow scrub, southern willow scrub/tamarisk scrub), disturbed habitat, and non-native grasslands.

Birds

Western Bluebird (*Sialia mexicana*) – Group II

Western bluebird is a County Group 2 species. It is a common resident in San Diego County, where it prefers montane coniferous and oak woodlands (Unitt 2004). It also occurs in open forests of deciduous, coniferous, or mixed trees; savanna; and the edges of riparian woodland

(Zeiner et al. 1990a). Since this species is not considered special status by state or federal agencies, it is not tracked in the CNDDDB. However, western bluebird was observed during surveys (no locations were mapped), and breeding has been confirmed within and surrounding the Merriam Mountains (Unitt 2004).

Suitable nesting habitat on Site includes locations with trees or snags such as coast live oak woodland, southern coast live oak riparian forest, and individual trees within disturbed habitat. Suitable foraging habitat on Site includes coastal scrub (Diegan coastal sage scrub, coastal sage scrub – *Baccharis*, flat-topped buckwheat), woodland (coast live oak woodland), riparian (freshwater marsh, southern coast live oak riparian forest, mulefat scrub, southern willow scrub, southern willow scrub/tamarisk scrub), and non-native communities and land covers (orchards and vineyards, disturbed habitat, and non-native grasslands).

Barn Owl (*Tyto alba*) – Group II

Barn owl is a County Group 2 species. It occurs in a variety of habitats, including grassland, chaparral, riparian, and other wetlands throughout the state, avoiding dense forests and open desert habitats (Zeiner et al. 1990a). This species usually nests on ledges, crevices, or other sheltered areas of cliffs or human-made structures. Nests may also be constructed in cavities in trees or snags, burrows, culverts, or nest boxes. Barn owl feeds mainly on small rodents, and may also eat crustaceans, reptiles, and amphibians. Small birds, such as blackbirds, serve as an important food source in the winter (Zeiner et al. 1990a).

Barn owl was detected during 2013 surveys, but it was not mapped. Breeding is confirmed to occur within the Merriam Mountains (Unitt 2004).

Suitable nesting habitat on Site includes ledges/crevices/cliffs within the quarry and cavities within large trees on Site within coast live oak woodland, southern coast live oak riparian forest, and eucalyptus woodland. Suitable foraging habitat on Site includes most vegetation communities and undeveloped land cover (i.e., chaparral [southern mixed chaparral, scrub oak chaparral], coastal scrub [Diegan coastal sage scrub, coastal sage scrub – *Baccharis*, flat-topped buckwheat, coastal sage – chaparral transition], woodland [coast live oak woodland], riparian [freshwater marsh, southern coast live oak riparian forest, mulefat scrub, southern willow scrub, southern willow scrub/tamarisk scrub], and non-native communities and land covers [orchards and vineyards, disturbed habitat, and non-native grasslands]).

Mammals

Mule Deer (*Odocoileus hemionus*) – Group II

Mule deer is a County Group 2 species. It is a common to abundant, yearlong resident or elevation migrant with a widespread distribution throughout most of California (Zeiner et al. 1990b). It occurs throughout most of California except in deserts and intensively farmed areas without cover (Zeiner et al. 1990b). Throughout its range, mule deer uses coniferous and deciduous forests, riparian habitats, desert shrub, coastal scrub, chaparral, and grasslands with shrubs. It is often associated with successional vegetation, especially near agricultural lands (NatureServe 2014). It prefers a mosaic of various aged vegetation that provides woody cover, meadow and shrub openings, and free water (Zeiner et al. 1990b). Southern mule deer fawn in a variety of habitats that have available water and abundant forage, including moderately dense shrubs and forests, dense herbaceous stands, and higher-elevation riparian and mountain shrub vegetation.

This species was detected on Site during surveys (PSBS 2007), where sign (e.g., scat) was observed infrequently throughout the Site. However, according to the PSBS technical reports, the locations were not recorded. Because this species is not considered special status by state or federal agencies, it is not tracked in the CNDDDB. This species is thought to only occasionally move through the Site, as very little sign was observed during recent surveys, but could be expected to be more prevalent because of the extensive network of dirt roads and trails that meander through the dense chaparral.

Suitable habitat in the project Site includes most vegetation communities and undeveloped land cover (i.e., chaparral [southern mixed chaparral, scrub oak chaparral], coastal scrub [Diegan coastal sage scrub, coastal sage scrub – Baccharis, flat-topped buckwheat, coastal sage – chaparral transition], woodland [coast live oak woodland], riparian [southern coast live oak riparian forest, mulefat scrub, southern willow scrub, southern willow scrub/tamarisk scrub], and non-native communities and land covers [non-native grasslands]).

Invertebrates

Monarch Butterfly (*Danaus plexippus*) – Group II

Monarch butterfly is a County Group 2 species. It follows a pattern of seasonal migration. In the summer, this species is found in New England, the Great Lakes region, and the northern Rocky Mountains. These areas are occupied from May through late August to mid-September (Urquhart 1987). The New England and Great Lakes populations migrate southwest to wintering grounds in the Sierra Madre mountain range of Mexico. The Rocky Mountains population migrates southwest to wintering grounds along the California coast.

The species' distribution is controlled by its larval host plant (i.e., various milkweeds, genus *Asclepias*). Eggs are deposited and hatch on the underside of leaves of the milkweed plant. Upon hatching, the larvae feed on the fine hairs on the leaves of the plant, and stay on the same plant throughout its molting stages. After molting, the larvae leave the milkweed and construct their chrysalis elsewhere. Once an adult, monarch butterfly emerges from the chrysalis and soon returns to a milkweed plant for foraging and shelter (Urquhart 1987).

Monarch butterfly wintering sites are considered special status by CDFW (2014d). Wintering sites in California are associated with wind-protected groves of large trees (primarily eucalyptus or pine) with nectar and water sources nearby, generally near the coast. A few California sites (e.g., Pacific Grove and Natural Bridges) support concentrated numbers of overwintering adults, but adults often winter as scattered individuals or in small clusters (Emmel and Emmel 1973). Sexually mature monarch butterflies mate along their northern migratory route (while returning to their summer grounds) and deposit eggs on milkweed plants. Adults die shortly after mating and laying eggs, leaving the completion of the northern migration to their offspring.

This species was detected on Site during 2013 surveys, but was not mapped because it was not a wintering roost. Suitable habitat on Site includes eucalyptus woodlands and habitat supporting larval host plants (i.e., non-native grasslands), but no winter roosts have been detected on Site.

2.4.9 Wetlands/Jurisdictional Waters

A wetland delineation and waters mapping was conducted on the project Site in 2013 and in the off-site impact areas in 2015, with the exception of the off-site wastewater upgrade. Waters, including wetlands, were mapped on Site and are quantified in Table 2.4-7. Off-site impacts to wetlands/jurisdictional waters are quantified in Tables 2.4-8 and 2.4-9. The Deer Springs Road improvements includes an Option A and an Option B (Table 2.4-8). Additional road and off-site improvements are shown in Table 2.4-9.

Wetland determinations were made at 10 data station sampling points (Appendix H to the BTR (Appendix H)) to determine the status of three wetland criteria (vegetation, soils, and hydrology) within representative potential wetlands on Site. Six of these data stations are within the project Site, two are located within the off-site impact areas, and two are located outside the project Site. The extent of wetland and riparian areas was determined by mapping the areas with similar vegetation and topography to sampled locations. The data station sampling point results are summarized in Table 2.4-10. Data station locations are shown in Figures 2.4-7A through 2.4-7E, Jurisdictional Resources.

U.S. Army Corps of Engineers Wetland Determination

Vegetation communities mapped as wetlands were determined to support all three U.S. Army Corps of Engineers (ACOE) parameters that define wetlands (i.e., hydrophytic vegetation, hydric soils, evidence of hydrology). Results of the vegetation mapping and jurisdictional delineation determined that there are two areas considered ACOE wetlands: freshwater marsh³ and southern willow scrub (Figures 2.4-7A through 2.4-7E). For the southern willow scrub, a representative data station pit was completed to evaluate the specific conditions of this area, and Data Station 5 characterizes southern willow scrub as dominated by hydrophytic vegetation (i.e., willows), supports hydric soil conditions (i.e., depleted matrix), and contains evidence of hydrology (i.e., drainage patterns and sediment deposits). No other areas were determined to be wetlands defined by ACOE. Wetlands under the jurisdiction of ACOE are also considered wetlands by the Regional Water Quality Control Board (RWQCB) and the County, and riparian habitat under CDFW jurisdiction. Wetland areas are shown in Figures 2.4-7A through 2.4-7E.

Potential Non-Wetland Waters

Non-wetland waters on Site consist of ephemeral and intermittent channels. Steeply vegetated hillsides traverse the Site and many contain drainages that direct flow into the five subwatersheds, as described in the Hydrology/Hydraulic Report for the proposed project (Fusco Engineering 2014). These features did not meet all of the three-parameter criteria for ACOE wetlands during the on-site evaluation (i.e., did not support hydrophytic vegetation and/or hydric soil conditions); however, they did support evidence of hydrology in the form of a bed and bank or ordinary high water mark. Therefore, these areas were determined to be non-wetland waters of the United States under the joint jurisdiction of ACOE, RWQCB, and CDFW. Areas mapped as non-wetland waters of the United States and state are shown in Figures 2.4-7A through 2.4-7E.

RPO Wetland Determination (On Site)

According to the definition of County RPO wetlands, areas supporting a predominance of hydrophytes qualifies as County RPO wetlands. Five vegetation communities were mapped as County RPO wetlands: freshwater marsh, southern willow scrub, mulefat scrub, southern coast live oak riparian forest, southern willow scrub/tamarisk, and arundo-dominated riparian. These riparian habitats support hydrophytic vegetation and have indicators of hydrology; therefore, these habitats meet the definition of an RPO wetland (County of San Diego 2007). RPO wetlands occur sporadically throughout the Site, and are associated with ephemeral or intermittent stream channels.

³ The ACOE wetland determination of freshwater marsh was provided in the Merriam Mountains Specific Plan Biological Technical Report (PSBS 2007).

The RPO determination for southern willow scrub/tamarisk scrub consists of areas co-dominated by tamarisk and willows, which are both listed as hydrophytic vegetation, and, therefore, meet the definition of an RPO wetland.

The vegetation communities mapped as coast live oak woodland are not dominated by hydrophytes, do not contain a wetland subshrub community, do not support hydric soils, and therefore, do not meet the definition of an RPO wetland. County RPO wetlands determinations are shown in Figures 2.4-7A through 2.4-7E.

RPO wetlands occur sporadically within the project Site and are associated with ephemeral or intermittent stream channels. The individual RPO wetlands are relatively small and together total 8.2 acres (0.4 percent of the Site). The RPO wetlands on Site occur in areas where slopes do not exceed 25 percent and where soils are generally not highly erosive. The overall function and value of the RPO wetlands on Site would be low to moderate due to the general lack of regular water resources, and narrow riparian vegetation areas.

RPO Wetland Determination (Off Site)

RPO wetlands associated with off-site road improvements for Camino Mayor include 0.05 acre of southern willow scrub. Along Deer Springs Road the RPO wetlands include 1.36 acres of southern coast live oak riparian forest, 0.03 acre of mulefat scrub and 0.1 acre of southern willow scrub. In addition, within the sewer improvement area there are 3.32 acres of southern willow scrub, and 0.26 acre of arundo-dominated riparian. Improvements to Mar Vista Road include less than 0.01 acre of County RPO coast live oak woodland.

The following analysis addresses the biological resource impacts of the Caltrans I-15/Deer Springs Road interchange improvements, which constitutes an off-site mitigation measure improvement for the project. Anticipated improvements associated with the I-15 Interchange include 0.14 acres of coast live oak woodland which, for purposes of this analysis, is assumed to be County RPO wetlands. Caltrans' selection of the final "build" project or alternative may have the potential to impact or remove biological resources, including RPO wetlands. If so, Caltrans can and should prepare, or cause to be prepared, a biological resources study to evaluate these potential impacts. Remaining potentially significant biological impacts of the interchange improvements require further detail as to the Caltrans-selected "build" project or alternative, along with its size, configuration, and disturbance zones.

County RPO wetlands determinations are shown in Figures 2.4-7A through 2.4-7E.

2.4.9.1 RPO Wetland Buffer

County Guidelines for Determining Significance provide the following examples for the establishment of appropriate RPO wetland buffers, to be based on the best available science (County of San Diego 2010a):

- A 50-foot wetland buffer would be appropriate for lower quality RPO wetlands where the wetland has been assessed to have low physical and chemical functions, vegetation is not dominated by hydrophytes, soils are not highly erosive, and slopes do not exceed 25 percent.
- A wetland buffer of 50 to 100 feet is appropriate for moderate- to high-quality RPO wetlands that support a predominance of hydrophytic vegetation or wetlands within steep slope areas (greater than 25 percent) with highly erosive soils. Within the 50- to 100-foot range, wider buffers are appropriate where wetlands connect upstream and downstream, where the wetlands serve as a local wildlife corridor, or where the adjacent land use(s) would result in substantial edge effects that cannot be mitigated.
- Wetland buffers of 100 to 200 feet are appropriate for RPO wetlands within regional wildlife corridors or wetlands that support significant populations of wetland-associated sensitive species or where stream meander, erosion, or other physical factors indicate a wider buffer is necessary to preserve wildlife habitat.
- Buffering of greater than 200 feet may be necessary when an RPO wetland is within a regional corridor or supports significant populations of wetland-associated sensitive species and lies adjacent to land use(s) that could result in a high degree of edge effects within the buffer. Although the RPO stipulates a maximum of 200 feet for RPO wetland buffers, actions may be subject to other laws and regulations (such as the Endangered Species Act) that require greater wetland buffer widths.

As described in the RPP (Appendix H), RPO wetlands occur in areas where slopes do not exceed 25 percent and where soils are not highly erosive, making the buffer generally a stable environment. The overall function and value of wetlands on Site would be low to moderate due to the incised channels, general lack of regular water resources, and small riparian vegetation areas. Edge effects of the proposed project on RPO wetlands would be relatively low intensity given the combined LBZ easements and FMZ buffer the effects from adjacent development by providing a 250-foot area between development and the open space. A broader buffer would not be required because the majority of the RPO wetlands are located within biological open space (6.1 acres; 74 percent of RPO wetlands); 2.0 acres (23 percent of RPO wetlands) are protected by Limited Building Zone Easements, and a Biological Open Space Easement, and only 0.2 acre (3 percent of RPO wetlands) are located within proposed development areas. In addition, the

combined LBZ easements and FMZ buffer the effects from adjacent development by providing a 250-foot area between development and the open space. Therefore, a 75-foot wetland buffer is considered adequate to protect the RPO wetlands on Site (Figures 2.4-7A through 2.4-7E). On-site, the RPO wetland buffers total 30.2 acres.

Impacts to RPO wetlands are within four discrete on-site impact areas and five off-site areas (two locations along Deer Springs Road, Camino Mayor, I-15 interchange, and the sewer improvement area). RPO wetland impact area 1 is located at the northern end of Gist Road at the project Site entrance. This area consists of oak riparian forest associated with an intermittent stream channel. The oak riparian forest is bisected by a dirt trail. Impact area 1 would be impacted by activities occurring within the FMZ. This RPO wetland area would be affected by all three FMZ areas: Zone 1 (Irrigated Structure Setback Zone); Zone 2 (Thinning Zone); and a Special Management Zone where only highly flammable, dead, and dying native species would be removed. RPO wetland impact area 2 is located just north east of area 1 and consists of two small polygons of southern willow scrub (0.08 and 0.05 acre) and associated stream channel. These two wetlands would be directly impacted by the development of the proposed project. Two small patches (0.05 and 0.04 acre) of mule fat scrub comprise RPO impact area 3. These two patches are located immediately adjacent to the on-site portion of Gist Road. The fourth RPO impact area is located along the eastern project boundary and I-15, just north of the Mesa Rock Road cul-de-sac. Of the 0.8 acre of oak riparian forest that comprises this RPO wetland, 0.2 acre of the southern tip would be impacted by activities associated with Zone 2 fuel modification. The five off-site RPO areas impacted by the proposed project are associated with improvements to Deer Springs Road, Camino Mayor, I-15 interchange, and sewer facility upgrade. Improvements to Deer Springs Road would result in both permanent and temporary impacts to oak riparian forest canopy immediately adjacent to the existing road (0.83 acre) and both mulefat scrub (0.03 acre) and southern willow scrub (0.06 acre permanent and 0.04 acre temporary) at Deer Springs Road and Sycamore Drive. Improvements to Camino Mayor would permanently impact a small polygon of southern willow scrub (0.06 acre). Improvements to the I-15 interchange would result in 0.02 acres of permanent impacts to coast live oak woodland and 0.12 acre of temporary impacts. Upgrading sewer facilities near Twin Oaks Valley Road would result in permanent impacts to 0.35 acre of southern willow scrub and 0.14 acre of arrundo dominated riparian habitat.

2.4.9.2 Hydrologic Context and Connectivity

The project Site is located within two watersheds. The northern portion of the project Site drains into the approximately 562-square-mile San Luis Rey River Watershed (Hydrologic Unit Code [HUC]: 903.00), and the southern portion of the project Site drains into the approximately 210-square-mile Carlsbad Watershed (HUC: 904.00). Partially contained within the San Luis Rey River Watershed is the Lower San Luis Hydrologic Area (HA) (HA: 903.10). Within the Lower

San Luis HA is the approximately 102.8-square-mile Bonsall Hydrologic Sub-Area (HSA) (HSA: 903.12; South Fork Gopher Canyon) and the 18.9-square-mile Moosa HSA (HSA: 903.13; South Fork Moosa Canyon). Within the Carlsbad Hydrologic Unit, the project Site drains the San Marcos HA (HA: 904.50). Within the San Marcos HA is the approximately 9.5-square-mile Twin Oaks HSA (HSA: 904.53; San Marcos Creek). Both watersheds are located within the approximately 3,900-square-mile RWQCB San Diego Region (Region 9).

The Lower San Luis HA drains a relatively underdeveloped region. However, this watershed is still experiencing significant land development, especially in the region near the project Site. There is generally more extensive existing development within the San Marcos HA. The degree of imperviousness within this watershed can be used to consider the condition and health of the aquatic resources within them, which are often used as a measure for determining the amount of stress a watershed is experiencing (Shilling et al. 2005). The San Luis Rey River is listed on the Clean Water Act 303(d) List (impaired water bodies) for bacteria, chloride, and total dissolved solids resulting from point and nonpoint sources (SWRCB 2011). Additionally, Moonlight State Beach within the San Marcos HA is listed on the Clean Water Act 303(d) List due to nonpoint and point sources (SWRCB 2011). However, there are no water resources on the Clean Water Act 303(d) List within the project Site.

The South Fork of Gopher Canyon drains the northwestern region of the project Site (totaling 434.7 acres), and it flows along North Twin Oaks Valley Road into the San Luis Rey watershed. The South Fork of Moosa Canyon drains the eastern region of the project Site toward I-15, and eventually north to flow into the San Luis Rey River watershed. This drainage system drains approximately 793.7 acres of the project Site, and flow is conveyed below I-15 through existing culverts and storm drain systems. The South Fork of Moosa Canyon drains north to the San Luis Rey River watershed. San Marcos Creek drains the southwestern region of the project Site into the Carlsbad watershed, totaling 754.9 acres. There are no major water bodies located within the project Site.

2.4.9.3 Functions and Values

The beneficial uses associated with the South Fork of Gopher Canyon and South Fork of Moosa Canyon are listed in the Water Quality Control Plan for the San Diego Basin (Region 9) (SWRCB 2012). These uses include potential domestic supply, agricultural supply, industrial service supply, water contact recreation, non-contact water recreation, warm freshwater habitat, and wildlife habitat. The beneficial uses associated with San Marcos Creek include potential domestic supply, agricultural supply, water contact recreation, non-contact water recreation, warm freshwater habitat, and wildlife habitat.

Waters and wetlands are an important part of an ecosystem based on the functions and values they can provide. These functions and values of waters and wetlands are characterized as having a low, moderate, or high ability to provide the following:

- Flood storage and flood flow modification
- Nutrient retention and transformation
- Groundwater recharge
- Sediment trapping
- Toxicant trapping
- Wildlife habitat
- Aquatic habitat
- Public use

Drainages on Site have low potential to function for flood storage and flood flow modification, nutrient retention and transformation, groundwater recharge, sediment trapping, toxicant trapping, aquatic habitat, and public use. The drainages on Site are moderately incised and have natural bottoms. However, due to the steep topography of the project Site, water from rainfall likely results in sheet flow or temporary flow and flooding of certain areas before flowing into the groundwater table. Therefore, any groundwater recharge that occurs would be highly localized in areas where sufficient ponding occurs during rain events. Further, as there are currently no existing commercial or residential uses on the project Site, the potential for the Site to function for toxicant and sediment trapping is limited.

The Site is currently subject to illegal/unauthorized activity, including hiking, biking, off-road vehicle activity, parties, trash dumping, homeless activities, and camping. With the development and associated open space preserve, all of these activities except the biking and hiking would cease and the hiking/biking would be managed and kept to select trails. The other trails would be closed and new trail creation (which currently occurs) would stop. Public use of the drainages does not currently occur nor is it expected to occur proceeding development. The drainages serve as habitat and movement corridors for wildlife, and perhaps for semi-aquatic species, but due to the lack of permanent water resources on Site, there is no habitat for aquatic species.

2.4.10 Habitat Connectivity and Wildlife Corridors

Wildlife corridors are defined as areas that connect suitable wildlife habitat in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. Natural features, such as canyon drainages, ridgelines, or areas with vegetation cover, provide corridors for

wildlife travel. Wildlife corridors are important because they provide access to mates, food, and water; allow the dispersal of wildlife from high-density areas; and facilitate the exchange of genetic traits between populations (Beier and Loe 1992). Wildlife corridors are considered sensitive by resource and conservation agencies. For the most part, the area in and around the project Site is very similar with regard to undeveloped landscapes with limited human disturbance, similar topographic relief, and similar vegetation communities.

The project Site is surrounded by undeveloped portions of the Merriam Mountains and adjacent to and east of another large undeveloped land form, the San Marcos Mountains (Figure 2.4-8, Wildlife Connectivity). The northern and southern Merriam Mountains, along with the adjacent San Marcos Mountains, represent the largest substantial-sized, essentially native blocks of habitat located west of I-15 in central San Diego County. The Site is currently undeveloped and is intersected by a number of dirt roads and trails that provide connectivity to surrounding undeveloped landscapes. Based on the existing conditions of the Site, wildlife can generally move through the project Site - unencumbered. Wildlife movement within the proposed open space design would occur within three large blocks of open space and four corridors located between development (Figure 2.4-1). Open space blocks of habitat (Blocks 1, 2, and 3) would be internally linked through Corridors A through D, as shown in Figure 2.4-1. Corridor A would include an approximately 1,000-foot by 400-foot linkage. Corridor B would include an approximately 700-foot by 750-foot area. Corridor C would include an approximately 1,500-foot by 800-foot linkage. Corridor D would include an approximately 2,250-foot by 200-foot linkage. All of these would include varying degrees of fuel modification, which should allow for better wildlife mobility than the dense mature chaparral that covers currently most of the intact open space. Corridor B would connect Block 2 with Block 3 across an internal road. Block 2 would be connected to Block 1, without any barriers, along the east side of the project Site. Corridor C would connect an off-site PAMA to Block 3 across an internal road. Corridor A would provide a secondary connection to an off-site PAMA to the south and west by allowing wildlife to cross another internal road and Corridor D. Corridors A and D would also provide an additional linkage from Block 1 to off-site areas to the southwest.

The open space configuration for the proposed project would form a centroid of connectivity to the north, south, east, and west: north along the I-15 corridor and then west into the San Luis Rey River area; south along I-15 into Escondido; east across I-15 to Escondido and other eastern areas; and west through the San Marcos Mountains and then north into the San Luis Rey River area and beyond. Along I-15, there are four bridges under I-15 that might convey wildlife. These occur at Mesa Rock Road, approximately 1.8 miles south of the Site; Lawrence Welk Court, adjacent to the northern boundary of the Site; Gopher Canyon Road, approximately 1.4 miles north of the Site; and Camino Del Rey, approximately 3 miles north of the Site. All of these potential crossing areas are bridge structures that pass under I-15, are insulated from highway noise, are connected to

native habitat and adjacent PAMAs, and experience low traffic volumes. An additional crossing structure, in the form of an overpass, is located at the southern end of the Site at Deer Springs Road. This is a focal point of activity and likely provides little wildlife movement benefit until the late night and early morning hours when traffic and human activity wanes. In September 2014, Dudek reviewed the project boundary with I-15 and Deer Springs Road to note the location and diameters of potential undercrossings. These undercrossings are fairly small and long, so they likely only support movement by small mammal species like rodents, striped skunks, raccoons, and possibly gray foxes. Additionally, the previously discussed I-15 bridges were documented, as were the locations of fencing adjacent to I-15 and culverts. This information is presented within Tables 2.4-11 and 2.4-12, and in Figure 2.4-8. Chain-link fencing occurs at the Deer Springs Road, Mesa Rock Road, and Gopher Canyon Road crossing areas. Five-strand barbed-wire fencing runs along both sides of I-15. Therefore, it is likely that a majority of the larger wildlife are only able to make at-grade crossings of I-15 during the late-night and early morning periods when traffic volumes are reduced with some limited use of the existing bridges and underpasses.

Numerous existing culverts are located adjacent to the proposed project Site along I-15 and Deer Springs Road. The I-15 culverts are relatively long and small, so it is more likely that they would support small and medium sized mammals such as rodents, striped skunks, raccoons, and possibly gray fox and herpetofauna (reptiles and amphibians). There is a small chance that they would support movement by bobcats or coyotes. Those species would more likely make at-grade crossings of I-15 instead. Large species like mule deer and mountain lion would be unable to use the culverts. The Deer Springs Road culverts, while shorter in length, are smaller in diameter yet still probably only support movement across Deer Springs Road by small mammals and herpetofauna. The largest species that might use these would be raccoon. Despite the size, these culverts do provide some ability for some wildlife to move in an east–west direction, as well as north–south direction. The areas where wildlife are likely to move through depend on the wildlife species and their preferred habitat and movement patterns. These are discussed in more detail below.

The majority of habitat on Site is chaparral (91 percent), is relatively dense, and can support a variety of chaparral species. Of 37 mammal species known to regularly occur in California chaparral communities (Quinn 1990), 10 with a potential to occur on Site are found primarily in mature chaparral,⁴ and are uncommon or absent in other habitat types: brush rabbit (*Sylvilagus bachmani*), Merrian’s chipmunk (*Tamias merriami*), California pocket mouse (*Chaetodipus californicus*), California deer mouse (*Peromyscus californicus*), dusky-footed woodrat (*Neotoma fuscipes*), agile kangaroo rat (*Dipodomys agilis*), desert cottontail (*Sylvilagus audubonii*), gray fox (*Urocyon cinereoargenteus*), western spotted skunk (*Spilogale gracilis*), and bobcat (*Lynx rufus*) (Quinn 1990).

⁴ Mature chaparral is characterized by shrubs approximately 3 to 10 feet in height and dense vegetation cover of 50 to 100 percent (Quinn 1990).

Of these 10 species, four were observed during the PSBS (2003) wildlife corridor study and more recent focused surveys: gray fox, brush rabbit, bobcat, and agile kangaroo rat.

Although many species are known to use mature chaparral, some chaparral may be very dense and difficult for medium to larger wildlife, such as mule deer, to maneuver through. As such, dirt access roads and trails may serve as a primary route for medium to larger wildlife movement. Research conducted on cougars (i.e., mountain lions; *Puma concolor*) in Southern California have found that cougars consistently use travel paths less rugged than their general surroundings, and that dirt roads may even promote cougar movement (Dickson et al. 2005). In addition, the most frequently used travel routes for dispersing cougars in the Santa Ana Mountains was found to be scour zones in stream channels, ridgeline routes, and dirt roads (Beier 1995). A similar result was found in Arizona and Utah where cougars crossed unimproved dirt roads more frequently than improved dirt roads and hard-surfaced roads (Van Dyke et al. 1986), suggesting that the intertwining and abundant dirt roads located within the proposed open space areas of the Site would provide facilitation to wildlife movement, especially those of large mammals, through the dense chaparral that characterizes a large portion of this Site. Similar results have been found by Dudek during a number of movement studies conducted in the Santa Ana Mountain foothills, Transverse Ranges, and Sierra Nevada foothills (Appendix H).

Dirt roads may also facilitate movement of coyotes (*Canis latrans*) (PSBS 2003), gray foxes (PSBS 2003), bobcats (Lovallo and Anderson 1996; PSBS 2003) mule deer, and other species. Dirt roads have also been shown to provide landscape linkages for smaller wildlife to pass through unsuitable habitat to more suitable habitat (Brock and Kelt 2004). For example, California ground squirrels may use trails and drainage systems to disperse from colonies (Wiggett et al. 1989). San Diego pocket mice (*Chaetodipus fallax*) and cactus mice (*Peromyscus eremicus*) use low-use dirt trails but avoid low-use paved roads of similar width and rural two-lane highways (Brehme et al. 2013). Brock and Kelt (2004) found that the federally endangered Stephens' kangaroo rat (*Dipodomys stephensi*) used dirt roads extensively to move great distances through otherwise inhospitable habitat to find more suitable habitat.

Mountain lions maintain home ranges between 30 and 125 square miles depending on sex, maturity, and season. There can be some overlap between home ranges with multiple female home ranges overlapping the male and more frequent overlapping of female home ranges. The species moves through portions of their home range in search of prey, bedding, mates, and other resources and may or may not spend much time in any portion of their home range depending on those same resources and their needs at the moment. Although mountain lions have been anecdotally reported as occurring on Site, as described in the *Merriam Mountains Specific Plan Final EIR* (County of San Diego 2010d) and within 1.75 miles of the Site by Vickers et al. (2015), the dense chaparral and human influence likely reduce their utilization of the Site to brief periods of time and at broad intervals. The main prey item for mountain lion is typically mule

deer in this part of the county, which prefers a mix of more open vegetation to forage in with nearby denser habitat to escape in. The age of chaparral communities is tied to its value to mule deer. As discussed in (Sommer et al. 2007), “Fire in woodland chaparral is closely linked to quantity, quality, and diversity of food plants necessary for successful reproduction and survival of deer populations. In mature or late seral stage chaparral communities, browse quality, quantity, availability, and diversity are primary limiting factors during much of the year.” Early to intermediate successional chaparral habitat is best for mule deer forage. While mule deer require some cover for thermal, hiding and escape cover, in shrub communities dominated by woody plants, lack of disturbance over time results in a shift to late seral stage vegetation that is dense and unsuitable for mule deer (Sommer et al. 2007).

While lack of documented occurrence does not indicate a lack of presence, the density of vegetation, combined with a lack of tracks or scat piles within the network of dirt paths and roads supports the assessment that the Site likely does not currently provide high-quality mule deer habitat. As discussed above, mule deer and other larger mammals will favor travel along dirt roads and trails – particularly through otherwise difficult terrain and cover – simply to conserve energy. Since mule deer have only been occasionally recorded within the Site, the general lack of suitable prey further reduces the potential for mountain lions to use the Site for extended periods of time. It is likely that they would primarily use the Site for movement purposes.

2.4.11 Regulatory Setting

2.4.11.1 Federal

The federal Endangered Species Act of 1973 (16 United States Code (U.S.C.) 1531 et seq.), as amended, is administered by USFWS and the National Oceanic and Atmospheric Administration, National Marine Fisheries Service. This legislation is intended to provide a means to conserve the ecosystems upon which endangered and threatened species depend, and provide programs for the conservation of those species, thus preventing extinction of plants and wildlife. Under provisions of Section 9(a)(1)(B) of the FESA, it is unlawful to “take” any listed wildlife species.⁵ “Take” is defined in Section 3(19) of the FESA as, “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.”

Under FESA, the USFWS may issue incidental take statements (ITSs), which authorize the take of listed wildlife species provided such take does not jeopardize the continued existence of the species. The ITSs can be obtained through a consultation process (formal or informal) with the USFWS or National Marine Fisheries Service under Section 7(a)(2) of FESA, which allows

⁵ FESA does not prohibit the “take” of listed plant species. (See Section 9(a)(2); see also *Center for Biological Diversity, et al. v. Bureau of Land Management, et al.*, 2016 DJDAR 8465, 84668468 (9th Cir. 2016), opinion issued August 15, 2016.

federal agencies to consult directly with the USFWS to obtain ITSs for projects that also require other agency permits or approvals. The ITSs also can be obtained through Section 10(a)(1)(B), which requires non-federal agencies or applicants to obtain ITSs for projects on non-federally owned land after the approval of a habitat conservation plan (HCP). As alluded to above, take of federally listed plants is not prohibited; thus, the USFWS does not issue ITSs (under Section 7 or Section 10) for disturbance of listed plants.

Upon development of an HCP, USFWS can issue ITPs for listed fish and wildlife species where the HCP specifies, at a minimum, the following:

- The level of impact that will result from the take
- Steps that will minimize and mitigate the impacts
- Funding necessary to implement the HCP
- Alternative actions to the take considered by the applicant and the reasons why such alternatives were not chosen
- Other measures that the Secretary of the Interior may require as being necessary or appropriate for the HCP

The Habitat Loss Permit (HLP) Ordinance was adopted in March of 1994 in response to both the listing of the coastal California gnatcatcher as a federally threatened species, and the adoption of the Natural Communities Conservation Plan (NCCP) Act by the State of California. Pursuant to the Special 4(d) Rule under the FESA, the County is authorized to issue “take permits” for the California gnatcatcher (in the form of Habitat Loss Permits) in lieu of Section 7 or 10(a) Permits typically required from the USFWS. Although issued by the County, the wildlife agencies must concur with the issuance of a HLP for it to become valid as take authorization under the FESA. The HLP Ordinance states that projects must obtain an HLP prior to the issuance of a grading permit, clearing permit or improvement plan if the project will directly or indirectly impact any of several coastal sage scrub habitat types. The Ordinance requires an HLP if coastal sage scrub or related habitat will be impacted, regardless of whether the Site is currently occupied by gnatcatchers. HLPs are not required for projects within the boundaries of the MSCP since take authorization is conveyed to those projects through compliance with the MSCP. HLPs are also not required for projects that have separately obtained Section 7 or 10(a) permits for take of the gnatcatcher.

The Migratory Bird Treaty Act (MBTA) prohibits the take of any migratory bird or any part, nest, or eggs of any such bird. Under the MBTA, “take” is defined as pursuing, hunting, shooting, capturing, collecting, or killing, or attempting to do so (16 U.S.C. 703 et seq.). Additionally, Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds, requires that any project with federal involvement address impacts of federal actions on migratory birds to promote conservation of migratory bird populations (66 Federal Register

3853–3856). Executive Order 13186 requires federal agencies to work with USFWS to develop a memorandum of understanding. USFWS reviews actions that might affect these species.

Pursuant to Section 404 of the Clean Water Act, ACOE regulates the discharge of dredged and/or fill material into waters of the United States. The term “wetlands” (a subset of waters of the United States) is defined in 33 Code of Federal Regulations (CFR) 328.3(b) as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.” In the absence of wetlands, the limits of ACOE jurisdiction in non-tidal waters, such as intermittent streams, extend to the ordinary high water mark, which is defined in 33 CFR 328.3(e).

The bald eagle (*Haliaeetus leucocephalus*) and golden eagle are federally protected under the Bald and Golden Eagle Protection Act, passed in 1940 to protect the bald eagle and amended in 1962 to include the golden eagle (16 U.S.C. 668 et seq.). This act prohibits the take, possession, sale, purchase, barter, offering to sell or purchase, export or import, or transport of bald eagles and golden eagles and their parts, eggs, or nests without a permit issued by the USFWS. The definition of “take” includes to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb. The act prohibits any form of possession or taking of both eagle species, and the statute imposes criminal and civil sanctions, as well as an enhanced penalty provision for subsequent offenses. Further, the act provides for the forfeiture of anything used to acquire eagles in violation of the statute. The statute exempts from its prohibitions on possession the use of eagles or eagle parts for exhibition, scientific, and Native American religious uses.

However, there is allowance within the act that, after investigation, the Secretary of the Interior may determine that direct and purposeful taking is compatible with the preservation of bald eagle or golden eagle. If so, then the Secretary may permit the taking, possession, and transportation of specimens for the scientific or exhibition purposes of public museums, scientific societies, or zoological parks, or for the religious purposes of Native American tribes. The Secretary may also determine that it is necessary to permit the taking of eagles for the protection of wildlife or of agricultural or other interests in any particular locality. This permitting may be for the seasonal protection of domesticated flocks and herds, and may also permit the taking, possession, and transportation of golden eagles for the purposes of falconry if the eagles may cause depredations on livestock or wildlife. Finally, the Secretary of the Interior may permit the taking of golden eagle nests that interfere with resource development or recovery operations, or in an emergency.

2.4.11.2 State

CDFW administers the CESA (California Fish and Game Code, Section 2050 et seq.), which prohibits the “take” of plant and animal species designated by the California Fish and Game

Commission as endangered or threatened in California. Under CESA Section 86, take is defined as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” CESA Section 2053 stipulates that state agencies may not approve projects that will “jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available consistent with conserving the species or its habitat which would prevent jeopardy.”

Sections 3511, 4700, and 5515 of the Fish and Game Code designate certain birds, mammals, and fish, respectively, as “fully protected” species. These species may not be taken or possessed without a permit from the Fish and Game Commission, and such take may only occur pursuant to scientific research or in connection with an authorized Natural Community Conservation Plan (NCCP). No “incidental take” of fully protected species is allowed.

CESA Sections 2080 through 2085 address the taking of threatened, endangered, or candidate species by stating, “No person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the Commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided in this chapter, the Native Plant Protection Act (Fish and Game Code, Sections 1900–1913), or the California Desert Native Plants Act (Food and Agricultural Code, Section 80001).”

Section 2081(b) and (c) of the Fish and Game Code authorizes take of endangered, threatened, or candidate species if take is incidental to otherwise lawful activity and if specific criteria are met. In such cases, CDFW issues the applicant an Incidental Take Permit (ITP), which functions much like an ITS in the federal context. Sections 2081(b) and (c) also require CDFW to coordinate consultations with USFWS for actions involving federally listed species that are also state-listed species. In certain circumstances, Section 2080.1 of the CESA allows CDFW to adopt a federal incidental take statement or a 10(a) permit as its own, based on its findings that the federal permit adequately protects the species and is consistent with state law. As mentioned above, CDFW may not issue a Section 2081(b) ITP for take of “fully protected” species. Pursuant to Section 1602 of the Fish and Game Code, CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. A Streambed Alteration Agreement is required for impacts to jurisdictional wetlands in accordance with Section 1602 of the California Fish and Game Code.

Section 2835 of the Fish and Game Code allows CDFW to authorize incidental take in an NCCP. Take may be authorized for identified species whose conservation and management is provided for in the NCCP, whether or not the species is listed as threatened or endangered under the FESA or

CESA, provided that the NCCP complies with the conditions established in Section 2081 of the Fish and Game Code. The NCCP provides the framework for the San Diego MSCP subregional plans.

The Porter–Cologne Water Quality Control Act protects water quality and the beneficial uses of water. It applies to both surface water and groundwater. Under this law, the State Water Resources Control Board develops statewide water quality plans, and the RWQCB develops basin plans that identify beneficial uses, water quality objectives, and implementation plans. The RWQCBs have the primary responsibility to implement the provisions of statewide plans and basin plans. Waters regulated under the Porter–Cologne Water Quality Control Act include isolated waters that are no longer regulated by ACOE. Developments with impact to jurisdictional waters must demonstrate compliance with the goals of the act by developing storm water pollution prevention plans, standard urban storm water mitigation plans, and other measures to obtain a Clean Water Act Section 401 certification.

CEQA requires identification of a project’s potentially significant impacts on biological resources and feasible mitigation measures and alternatives that could avoid or reduce significant impacts. CEQA Guideline 15380(b)(1) defines endangered animals or plants as species or subspecies whose “survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors” (14 CCR 15000 et seq.). A rare animal or plant is defined in Guideline 15380(b)(2) as a species that, although not presently threatened with extinction, exists “in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or ... [t]he species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered ‘threatened’ as that term is used in the federal Endangered Species Act.” Additionally, an animal or plant may be presumed to be endangered, rare, or threatened if it meets the criteria for listing, as defined further in CEQA Guideline 15380(c). CEQA also requires identification of a project’s potentially significant impacts on riparian habitats (such as wetlands, bays, estuaries, and marshes) and other sensitive natural communities, including habitats occupied by endangered, rare, and threatened species.

2.4.11.3 County

The RPO, administered by the County, regulates biological and other natural resources within the County. These resources include wetlands, wetland buffers, floodways, floodplain fringe, steep slope lands, sensitive habitat lands, and significant prehistoric or historic sites. Generally, the ordinance stipulates that no impacts may occur to wetlands except for scientific research; removal of diseased or invasive exotic plant species; wetland creation and habitat restoration; revegetation and management projects; and crossings of wetlands for roads, driveways, or trails/pathways when certain conditions are met. The same exemptions apply to impacts to

wetland buffer areas and improvements necessary to protect adjacent wetlands. Sensitive habitat lands are unique vegetation communities, and support sensitive species, lands essential to the healthy functioning of a balanced natural ecosystem, or wildlife corridors. Impacts to sensitive habitat lands are permitted when all feasible measures necessary to protect and preserve the sensitive habitat lands are required as a condition of permit approval and mitigation provides at least an equal benefit to the affected species (County of San Diego 2011a).

2.4.12 Analysis of Effects and Determination of Significance

This section defines the types of impacts considered in this report to analyze the potential effects of the proposed project on biological resources.

Direct impacts refer to 100 percent loss of a biological resource. For purposes of this report, direct permanent impacts refer to the areas where the development, roads, and FMZs are proposed. Direct temporary impacts refer to the areas where grading and temporary construction areas are proposed within the open space; these areas would be restored and, thus, are considered temporary. Direct impacts were quantified by overlaying the proposed impacts on GIS-located biological resources.

Indirect impacts are reasonably foreseeable effects caused by project implementation on remaining or adjacent biological resources outside the proposed development, roads, and FMZs. Indirect impacts may affect areas within the defined project Site but outside the limits of grading, non-impacted areas, and areas outside the project Site, such as downstream effects. Indirect impacts include short-term effects immediately related to construction activities and long-term or chronic effects related to trail use and development of the project Site. In most cases, indirect effects are not quantified, but in some cases quantification might be included, such as using a noise contour to quantify indirect impacts to nesting birds.

Cumulative impacts refer to the combined environmental effects of the proposed project and other relevant projects. In some cases, the impact from a single project may not be significant, but when combined with other projects, the cumulative impact may be significant.

2.4.12.1 Candidate, Sensitive, or Special-Status Species

Guidelines for the Determination of Significance

For the purpose of this EIR, the County's *Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources* (County of San Diego 2010a) was used to evaluate direct, indirect, and cumulative impacts. Each general subject area is broken into more specific County guidelines, and lettered accordingly, to provide additional clarity on this complex resource topic.

A significant impact would result if:

The project would have a substantial adverse effect, either directly or through habitat modifications, on a candidate, sensitive, or special-status species listed in local or regional plans, policies, or regulations, or by the CDFW or USFWS.

- A. The project would impact one or more individuals of a species listed as federally or state endangered or threatened.
- B. The project would impact an on-site population of a County List A or B plant species, or a County Group I animal species, or a species listed as a state Species of Special Concern (SSC). Impacts to these species are considered significant; however, impacts of less than 5 percent of the individual plants or of the sensitive species' habitat on a project site may be considered less than significant if a biologically based determination can be made that the project would not have a substantial adverse effect on the local long-term survival of that plant or animal taxon.
- C. The project would impact the local long-term survival of a County List C or D plant species or a County Group II animal species.
- D. The project may impact arroyo toad aestivation, foraging, or breeding habitat. Any alteration of suitable habitat within 1 kilometer (3,280 feet) in any direction of occupied breeding habitat or suitable stream segments (unless very steep slopes or other barriers constrain movement) could only be considered less than significant if a biologically based determination can be made that the project would not impact the aestivation or breeding behavior of arroyo toads.
- E. The project would impact golden eagle habitat. Any alteration of habitat within 4,000 feet of an active golden eagle nest could only be considered less than significant if a biologically based determination can be made that the project would not have a substantially adverse effect on the long-term survival of the identified pair of golden eagles.
- F. The project would result in the loss of functional foraging habitat for raptors. Impacts to raptor foraging habitat is considered significant; however, impacts of less than 5 percent of the raptor foraging habitat on a project site may be considered less than significant if a biologically based determination can be made that the project would not have a substantial adverse effect on the local long-term survival of any raptor species.
- G. The project would impact the viability of a core wildlife area, defined as a large block of habitat (typically 500 acres or more not limited to project boundaries, although smaller areas with particularly valuable resources may also be considered a core wildlife area) that supports a viable population of a sensitive wildlife species or supports multiple wildlife species. Alteration of any portion of a core habitat could only be considered less

than significant if a biologically based determination can be made that the project would not have a substantially adverse effect on the core area and the species it supports.

- H. The project would cause indirect impacts, particularly at the edge of proposed development adjacent to proposed or existing open space or other natural habitat areas, to levels that would likely harm sensitive species over the long term. The following issues should be addressed in determining the significance of indirect impacts: increasing human access; increasing predation or competition from domestic animals, pests, or exotic species; altering natural drainage; and increasing noise and/or nighttime lighting to a level above ambient that has been shown to adversely affect sensitive species.
- I. The project would impact occupied burrowing owl habitat.
- J. The project would impact occupied cactus wren habitat, or formerly occupied coastal cactus wren habitat that has been burned by wildfire.
- K. The project would impact occupied Hermes copper habitat.
- L. The project would impact nesting success of the following sensitive bird species through grading, clearing, fire-fuel modification, and/or other noise-generating activities such as construction.

Analysis

- A. There are no federally listed or state-listed endangered or threatened plant species known to occur on Site. However, one federally threatened wildlife species was detected on Site. Coastal California gnatcatcher was observed occurring in the project Site, and the project Site may support foraging and nesting opportunities that would be impacted by the proposed project.

Loss of coastal California gnatcatcher from construction-related activities, including unintentional habitat loss, soil loss, water quality impacts, introduction of invasive species, and/or disruption of wildlife activities by construction activities adjacent to remaining suitable habitat would be considered significant. If any active nests or the young of this species are impacted through direct grading, these impacts would be **significant (Impact W-1)**, based on the FESA and MBTA.

Potential permanent direct impacts to coastal California gnatcatcher would include the loss of suitable nesting and foraging habitat (56.7 acres), and replacement with residential, commercial, recreational, and infrastructure uses (Tables 2.4-13 and 2.4-14). Permanent direct impacts to suitable foraging and nesting habitats would be **significant (Impact W-2)**.

- B. Special-Status Plant Species (County List A and B Species): Short-term, construction-related, or temporary direct impacts to County List A plant species would primarily result

from construction activities. Clearing, trampling, or grading of special-status plants outside designated construction zones would be significant. Potential short-term temporary impacts to County List A and B plant species would be **significant (Impact SP-1)**. Impacts to special-status plant species within a temporary construction area are considered permanent impacts and are discussed below (Table 2.4-15).

Two County List A plant species would be directly impacted by the proposed project—summer holly and Ramona horkelia. Approximately 196 individuals of summer holly, a County List A species with a CRPR 1B.2, would be directly impacted by the proposed project (14 percent of the on-site individuals). Approximately 62 individuals of Ramona horkelia, a County List A species with a CRPR 1B.3, would be directly impacted by the proposed project (100 percent of the on-site individuals). This proposed impact would be **significant (Impact SP-2)**.

Special-Status Wildlife Species (County Group 1 or State SSC): Loss of special-status wildlife species (County Group 1 or state SSC animals) including individual amphibians, reptiles, and small mammals from construction-related activities would result in short-term direct impacts that would be **significant (Impact W-3)**.

Thirteen County Group 1 and/or state SSC animal species were detected within the project Site during biological surveys: western spadefoot, Cooper's hawk, sharp-shinned hawk,⁶ Bell's sage sparrow, red-shouldered hawk, turkey vulture, yellow warbler, coastal California gnatcatcher, red-diamond rattlesnake, Blainville's horned lizard, coast patch-nosed snake, and San Diego desert woodrat.

In addition, one County Group 1 and/or state SSC wildlife species has high potential to occur within the project Site: northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*). Potential permanent direct impacts to the wildlife species described previously include removal of suitable nesting and/or foraging habitat, summarized in Tables 2.4-13 and 2.4-14. Loss of suitable nesting/foraging habitat would be **significant (Impact W-4)**.

- C. Special-Status Plant Species (County List C and D Species): There would be no direct impacts to County List C plant species resulting from implementation of the proposed project. The project, will however, cause direct impacts to three County List D plant species: chaparral rein orchid, Engelmann oak, and ashy spike-moss.

Three County List D plant species would be directly impacted by the proposed project: chaparral rein orchid, Engelmann oak, and ashy spike-moss. Figures 2.4-9A through 2.4-9E show the proposed project's impacts to County List D plant species on the project Site. Chaparral rein orchid and Engelmann oak are listed as CRPR 4.2, and ashy-spike moss is listed as CRPR 4.1. Specifically, the proposed project would impact all five

⁶ Sharp-shinned hawk has a high potential to forage on the project Site, but not nest.

occurrences of chaparral rein orchard individuals, 64 percent of the Engelmann oaks mapped on Site, and one of three occurrences of ashy spike-moss (Table 2.4-16). These proposed impacts to County List D species would be **less than significant** because, based on the species CRPR of 4, these species are of limited distribution but not considered “rare” from a statewide perspective; therefore, proposed impacts are not expected to substantially affect long-term survival of the species (CNPS 2014).

Special-Status Wildlife Species (County Group 2): The following County Group 2 special-status wildlife species were incidentally observed either directly or indirectly (i.e., scat, tracks) within the project Site: Belding’s orange-throated whiptail, San Diego ringneck snake, western bluebird, barn owl, mule deer, and monarch butterfly. Figures 2.4-9A through 2.4-9D show the proposed project’s impacts in relation to the special-status wildlife observations mapped on Site. Eight additional Group 2 species were observed but are analyzed above because they are state SSC animals: western spadefoot, coastal whiptail, red-diamond rattlesnake, Blainville’s horned lizard, coast patch-nosed snake, yellow warbler, northwestern San Diego pocket mouse, and San Diego desert woodrat. No additional County Group 2 species were determined to have a high potential to occur.

Construction related activities may cause the loss of Group 2 special-status wildlife species that are not state SSC animals. This impact, however, is less than significant because the affected species has a widespread presence or the project Site is not of great importance to the species. The identified Group 2 wildlife species occur within a variety of habitats and through wide geographic, topographic, and elevation ranges, within which there are an abundance of these species in the region. Regardless of the significance of impacts to Group 2 species, mitigation measure M-BIO-8A would ensure that suitable habitat for these species would be preserved within the open space. However, if any active nests or young of nesting special-status bird species (County Group 2) are impacted through direct grading, these impacts would be **significant (Impact W-5)**, based on the MBTA.

- D. No arroyo toads have been detected on the project Site nor are they expected to occur. No appropriate breeding habitat occurs on Site or in vicinity, and the Site is not within 1 kilometer (0.6 mile) of any known breeding habitat (PSBS 2007). Impacts would be **less than significant** and no mitigation is required.
- E. Although the project Site contains a historic nest site for golden eagles (as described in PSBS 2007), no golden eagles were reported by PSBS (2007) or others in this region for many years. There are no records of golden eagle on Site in the CNDDDB (CDFW 2014c), and the closest species occurrences are of a male eagle approximately 4.5 miles to the east in 2015/2016, and another approximately 8 miles northeast in 1991 (nest located) and 2000 (adult and young flying over) (CDFW 2014c). Additionally, the project Site is primarily

composed of dense chaparral vegetation, in which eagles cannot efficiently conduct foraging activities. Impacts would be **less than significant** and no mitigation is required.

- F. Foraging habitat for raptors is present throughout portions of the project Site. Suitable foraging habitat for raptors would be impacted (Tables 2.4-13 and 2.4-14). Therefore, impacts to raptor foraging habitat would be **significant (Impact W-6)**.
- G. The project Site is included in a core wildlife area, defined as a large block of habitat (typically 500 acres or more) that supports a viable population of multiple wildlife species. Impacts to the existing core wildlife area from construction-related activities would result in short-term direct impacts. Clearing, trampling, or grading of vegetation outside designated construction zones could occur in the absence of avoidance and mitigation measures. Impacts would potentially be **significant (Impact CWA-1)**.

The project would result in on-site impacts to 776.6 acres of the core wildlife area, and this would be a **significant** impact to viable populations of multiple wildlife species (**Impact CWA-2**) (see Table 2.4-6 for the species that were observed and the sensitive species that are known or expected to occur). With the exception of the observed California gnatcatcher, none of the species that occur in the core wildlife area are particularly rare or uncommon in the area.

Short-term indirect impacts to the core wildlife area as a result of the proposed project would include short-term, construction-related, or temporary indirect impacts resulting in increased human activity during construction, lighting, and noise. Short-term indirect impacts to the core wildlife area would be a **significant impact (Impact CWA-3)**. Long-term indirect impacts to habitat connectivity and wildlife corridors include habitat fragmentation, human activity (including an increase in intrusions by both humans and domestic pets), lighting, and noise from the proposed urban development, recreational facilities, and human activity. Long-term indirect impacts to the core wildlife area would be a **significant impact (Impact CWA-4)**.

- H. Special-Status Plant Species: Short-term indirect impacts to County List A plant species as a result of the proposed project would include short-term, construction-related, or temporary indirect impacts resulting in generation of fugitive dust, changes in hydrology due to construction, and the introduction of chemical pollutants. Short-term indirect impacts to County List A plant species would be a **significant impact (Impact SP-3)**.

Potential long-term or permanent indirect impacts to County List A plant species as a result of the proposed project would include generation of fugitive dust, habitat fragmentation, use of chemical pollutants (herbicides), altered hydrology, introduction of non-native invasive species, alteration of the natural fire regime, and shading. Potential long-term indirect impacts to County List A plant species would be a **significant impact (Impact SP-4)**.

There would be no indirect impacts to County List B plant species resulting from implementation of the proposed project.

Special-Status Wildlife Species: Short-term (temporary) indirect impacts to special-status wildlife species as a result of the proposed project would include short-term, construction-related, or temporary indirect impacts that could result in generation of fugitive dust, noise, chemical pollutants, increased human activity during construction, and invasive predators and non-native animal species. Short-term indirect impacts to special-status wildlife species would be a **significant** impact (**Impact W-7**).

Potential long-term or permanent indirect impacts to special-status wildlife species would include generation of fugitive dust; off-road-vehicle use, introduction of non-native, invasive plant and animal species; habitat fragmentation; alteration of the natural fire regime; and altered hydrology. Potential long-term indirect impacts to special-status wildlife species would be a **significant** impact (**Impact W-8**).

- I. Burrowing owl was detected in 1998 surveys for Safa Ranch, which covered the northern part of the central valley of the present project Site. The 1998 report had no discussion on this species; any detection of this species was likely in the grassy area of the central valley. No observations have been made of burrowing owl in the numerous field visits since 1998 (PSBS 2007). No burrowing owls have been detected on the project Site or are anticipated to occur. The closest CNDDB record is 5.6 miles south of the project Site (CDFW 2015). Therefore, **no impacts** would occur to occupied burrowing owl habitat.
- J. No cactus wrens (*Campylorhynchus brunneicapillus*) have been detected on the project Site. No appropriate breeding habitat for this species occurs on Site or in the immediate vicinity. There have been numerous species occurrences in the vicinity of the Site, with the closest occurrence approximately 4.5 to 5.0 miles north of the project Site. Additional occurrences are located north, west, and south of the Site (CDFW 2014c). Due to the lack of suitable habitat on Site, **no impacts** to occupied cactus wren habitat would occur.
- K. No Hermes copper butterflies (*Lycaena hermes*) have been detected on the project Site. Although the butterfly's preferred adult nectaring plant, California buckwheat (*Eriogonum fasciculatum* var. *foliolosum*), occurs throughout the project Site, the requisite larval host plant (i.e., true limiting factor), spiny redberry (*Rhamnus crocea*), has not been detected during plant surveys. In addition, the project Site is north of most recent records for this species, and the closest occurrence is located 25 miles south of the project Site near Mission Trails (CDFW 2014c). Based on the lack of suitable habitat for this species, the project Site is not considered occupied Hermes copper butterfly habitat. Therefore, **no impacts** related to this guideline would occur.

- L. Indirect impacts associated with construction, such as noise, could affect the nesting success of tree-nesting raptors. Construction-related impacts to the nesting success of tree-nesting raptors would be a **significant** impact (**Impact W-9**).

Impacts to the nesting success of tree-nesting raptors (i.e., Cooper's hawk and red-tailed hawk) as a result of habitat removal associated with the proposed project are anticipated. Long-term direct impacts to nesting habitat for Cooper's hawk and red-shouldered hawk are summarized in Tables 2.4-13 and 2.4-14, and impacts to general vegetation communities are described in Table 2.4-17. On- and off-site suitable nesting habitat consists of coast live oak woodland, eucalyptus woodland, southern coast live oak riparian forest, and scrub oak chaparral. Impacts to the nesting success of tree-nesting raptors associated with the loss of suitable nesting habitat would be **significant** (**Impact W-10**).

Coastal cactus wren, least Bell's vireo, southwestern willow flycatcher, golden eagle, and light-footed clapper rail (*Rallus longirostris levipes*) were not documented nesting on the project Site; therefore, the proposed project would not impact the nesting success of these species. No ground-nesting raptors (e.g., northern harrier (*Circus cyaneus*) and burrowing owl) are expected to nest on the project Site. Therefore, the proposed project would have **no impact** on the nesting success of these species.

2.4.12.2 Riparian Habitat or Sensitive Natural Community

Guidelines for the Determination of Significance

For the purpose of this EIR, the County's *Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources* (County of San Diego 2010a) was used to evaluate the direct, indirect, cumulative impact analysis. Each general subject area is broken into more specific County guidelines, and lettered accordingly, to provide additional clarity on this complex resource topic.

A significant impact would result if:

The project would have a substantial adverse effect on riparian habitat or another sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFG [now CDFW] or USFWS.

- A. Project-related grading, clearing, construction, or other activities would temporarily or permanently remove sensitive native or naturalized habitat (as listed in County of San Diego 2010a, Table 5, excluding those without a mitigation ratio) on or off the project Site. This Guideline would not apply to small remnant pockets of habitat that have a demonstrated limited biological value. No de minimus standard is specified under which

an impact would not be significant; however, minor impacts to native or naturalized habitat that is providing essentially no biological habitat or wildlife value can be evaluated on a case-by-case basis to determine whether the projected impact may be less than significant. For example, an impact to native or naturalized upland habitat under 0.1 acre in an existing urban setting may be considered less than significant (depending on a number of factors). An evaluation of this type should consider factors such as type of habitat, relative presence or potential for sensitive species, relative connectivity with other native habitat, wildlife species and activity in the project vicinity, and current degree of urbanization and edge effects in project vicinity. Just because a particular habitat area is isolated, for example, does not necessarily mean that impacts to the area would not be significant (e.g., vernal pools). An area that is disturbed or partially developed may provide a habitat “island” that would serve as a functional refuge area “stepping stone” or “archipelago” for migratory species.

- B. Any of the following would occur to or within jurisdictional wetlands and/or riparian habitats as defined by U.S. Army Corps of Engineers (ACOE), California Department of Fish and Game (CDFG), and the County of San Diego: removal of vegetation; grading; obstruction or diversion of water flow; adverse change in velocity, siltation, volume of flow, or runoff rate; placement of fill; placement of structures; construction of a road crossing; placement of culverts or other underground piping; any disturbance of the substratum; and/or any activity that may cause an adverse change in native species composition, diversity, and abundance.
- C. The project would draw down the groundwater table to the detriment of groundwater-dependent habitat, typically a drop of 3 feet or more from historically low groundwater levels.
- D. The project would cause indirect impacts, particularly at the edge of proposed development adjacent to proposed or existing open space or other natural habitat areas, to levels that would likely harm sensitive habitats over the long term. The following issues should be addressed in determining the significance of indirect impacts: increasing human access; increasing predation or competition from domestic animals, pests, or exotic species; altering natural drainage; and increasing noise and/or nighttime lighting to a level above ambient that has been shown by the best available science to adversely affect the functioning of sensitive habitats.
- E. The project does not include a wetland buffer adequate to protect the functions and values of existing wetlands. If the project is subject to the Resource Protection Ordinance (RPO), buffers of a minimum of 50 feet and a maximum of 200 feet to protect wetlands are required based on the best available science available to the County at the time of

adoption of the ordinance. The following examples provide guidance on determining appropriate buffer widths:

- i. A 50-foot wetland buffer would be appropriate for lower quality RPO-wetlands where the wetland has been assessed to have low physical and chemical functions, vegetation is not dominated by hydrophytes, soils are not highly erosive, and slopes do not exceed 25 percent.
- ii. A wetland buffer of 50 to 100 feet is appropriate for moderate- to high-quality RPO wetlands that support a predominance of hydrophytic vegetation or wetlands within steep slope areas (greater than 25 percent) with highly erosive soils. Within the 50- to 100-foot range, wider buffers are appropriate where wetlands connect upstream and downstream, where the wetlands serve as a local wildlife corridor, or where the adjacent land use(s) would result in substantial edge effects that could not be mitigated.
- iii. Wetland buffers of 100 to 200 feet are appropriate for RPO wetlands within regional wildlife corridors or wetlands that support significant populations of wetland-associated sensitive species, or where stream meander, erosion, or other physical factors indicate a wider buffer is necessary to preserve wildlife habitat.
- iv. Buffering of greater than 200 feet may be necessary when an RPO wetland is within a regional corridor or supports significant populations of wetland-associated sensitive species and lies adjacent to land use(s) that could result in a high degree of edge effects within the buffer. Although the RPO stipulates a maximum of 200 feet for RPO wetland buffers, actions may be subject to other laws and regulations (such as the Endangered Species Act) that require greater wetland buffer widths.

Analysis

- A. Short-term, construction-related, or temporary direct impacts to special-status upland vegetation communities would primarily result from construction activities. The proposed project would result in either 8.7 or 9.2 acres (Deer Springs Road Option A and Option B, respectively) of on-site temporary impacts associated with grading and improvements to Deer Springs Road. The amount of temporary impacts would be determined by the final Deer Springs Road option approved for the project. Of the temporary impacts, 8.5 to 9.0 acres would impact special-status vegetation communities (see Table 2.4-17). In addition, clearing, trampling, or grading of special-status vegetation communities outside designated construction zones could occur in the absence of avoidance and mitigation measures. Impacts related to other off-site improvements of roads and sewer facilities would result in an additional 8.8 acres of temporary impacts. Of those impacts 3.9 acres would be to sensitive upland vegetation. Potential temporary direct impacts to sensitive upland vegetation communities on Site and off site would be **significant (Impact V-1)**.

There would be permanent direct impacts to 776.6 acres of on-site vegetation communities and land covers, including permanent direct impacts to 757.2 acres of special-status upland vegetation communities, as a result of the proposed project (see Table 2.4-18). There would be permanent off-site direct impacts associated with Deer Springs Road improvements which total 47.5 acres (Option A), including 5.7 acres of special-status upland vegetation (see Table 2.4-19), or 50.2 acres (Option B), including 7.1 acres of special-status upland vegetation (see Table 2.4-19). There are additional off-site impacts that would occur to 23 acres, including 6.8 acres of special-status upland vegetation (see Table 2.4-20). The proposed project would permanently impact up to 757.2 acres of sensitive upland vegetation. Permanent direct impacts to special-status upland vegetation communities would be **significant (Impact V-2)**.

- B. On-Site Impacts: No permanent or temporary direct impacts would occur to wetlands under the combined jurisdiction of ACOE/RWQCB/CDFW. Table 2.4-21 quantifies the on-site permanent direct impacts to jurisdictional resources. There would be permanent direct impacts to 2.13 acres of CDFW/County RPO wetlands and 3.30 acres of impacts to CDFW-only riparian habitat from the proposed project. These impacts would include development and FMZ activities. There would be additional impacts to 1.41 acres of ACOE/RWQCB/CDFW non-wetland waters.

There would be 0.06 acre of impacts to ACOE/RWQCB/CDFW non-wetland waters associated with temporary grading, which would be **significant (Impact V-3)**.

Off-Site Impacts – Temporary: Off-site impacts are summarized in Tables 2.4-22 and 2.4-23. Off-site temporary grading would impacts are the same for both Deer Springs Road options and includes 0.52 acre of temporary impacts to southern coast live oak riparian forest (CDFW riparian habitat and County RPO), and 0.01 acre of non-wetland waters (ACOE/RWQCB/CDFW). Additional impacts from off-site road improvements would include impacts to 0.01 acre of non-wetland waters and less than 0.01 acre of southern willow scrub (CDFW only) associated with Camino Mayor, and 0.04 acre of impacts to non-wetland waters and 0.39 acre of impacts to coast live oak woodland (CDFW only) associated with Sarver Lane. Mar Vista and I-15 interchange improvements will result in less than 0.1 acre and 0.12 acre of temporary impacts to coast live oak woodland which is assumed to be under the jurisdiction of all three agencies as well as the County. Temporary wetland impacts would be **significant (Impact V-3)**.

Off-Site Impacts – Permanent: For permanent off-site impacts, associated with Deer Springs Road, both options are identical. Both options would result in impacts to 0.09 acre of ACOE/RWQCB/CDFW/County resources including 0.06 acre of southern willow scrub and 0.03 acre of mulefat scrub. In addition, 0.83 acre of CDFW and County jurisdictional southern coast live oak riparian forest will also be permanently impacted.

Both options include up to 0.08 acre of permanent impacts to non-wetland waters (ACOE/RWQCB/CDFW). Other off-site road improvements would result in impacts to jurisdictional resources, including 0.06 acre of impacts to non-wetland waters and 0.06 acre of impacts to southern willow scrub (CDFW riparian habitat/County RPO) associated with Camino Mayor. Improvements to Sarver Lane would result in impacts to less than 0.01 acre of non-wetland waters and 0.56 acre of CDFW-only coast live oak woodland; impacts associated with the sewer improvements would include 0.35 acre of southern willow scrub and 0.14 acre of arundo dominated riparian. Permanent impacts resulting from improvements to the I-15 interchange include 0.02 acre of coast live oak woodland which is assumed to be under the jurisdiction of all three agencies as well as the County (Table 2.4-23). Permanent impacts to County RPO wetlands, CDFW riparian habitat, (ACOE/RWQCB), wetlands and non-wetland waters of the United States/state would be **significant (Impact V-4)**.

- C. Water for the proposed project would be supplied by the Vallecitos Water District. No groundwater pumping would occur; therefore, **no impacts** to the groundwater table would occur.
- D. Any indirect impacts that would cause adverse changes to special-status vegetation communities or jurisdictional resources over the long term would be significant; typically, they result from errant construction activities and from long-term edge effects. Due to the large scale of the project, short-term construction-related indirect impacts, such as generation of fugitive dust, changes in hydrology resulting from construction, and the introduction of chemical pollutants (including herbicides), to special-status vegetation communities and jurisdictional resources would be a potentially **significant impact (Impact V-5)**.

Potential long-term, permanent indirect impacts to special-status vegetation communities and jurisdictional resources as a result of the proposed project would include fugitive dust, habitat fragmentation, chemical pollutants, altered hydrology, introduction of non-native invasive species, and alteration of the natural fire regime. Potential long-term, indirect impacts to special-status vegetation communities and jurisdictional resources would be a **significant impact (Impact V-6)**.

- E. The County requires all RPO wetlands to have a buffer to protect their functions and values. The buffer requirements depend on the overall quality of the wetlands, and are between 50 and 200 feet. The functions and values of the on-site drainages are categorized by flood storage and flood flow modification, nutrient retention and transformation, groundwater recharge, sediment trapping, toxicant trapping, wildlife habitat, aquatic habitat, and public use. Based on this information, a 75-foot-wide wetland buffer is proposed for RPO wetlands within the project Site. Many of the RPO wetlands are located in the open space and have a much larger buffer.

Based on the Fire Protection Plan for the Newland Sierra Project (Appendix N), fire modeling resulted in FMZs that are at least 250 feet wide for most of the Site, 2.5 times larger than the standard 100-foot-wide requirement. The fire buffers are separated into two zones. Zone 1 (Irrigated Structure Setback Zone) extends a minimum of 100 feet starting at a structure and moving outward, where all flammable native vegetation would be removed except for species approved by the Deer Springs Fire Protection District (Appendix N). This zone would be planted with drought-tolerant, fire-resistive, non-invasive plants from the County Fire Chief's Association's Fuel Modification Zone Plant Reference List, and an automatic irrigation system would be installed in this area to maintain hydrated plants without over-watering, allowing for run-off, or attracting nuisance pests. Zone 2 (Thinning Zone) would adjoin Zone 1 and measure up to 150 feet in most areas. Zone 2 would include 50 percent thinning or removal of plants and low ground cover; California sycamore (*Platanus racemosa*), coast live oak, and Engelmann oak would be allowed in Zone 2. The Fire Protection Plan also includes a Special Management Zone where native fuels would be managed such that highly flammable prohibited species and dead and dying plants would be removed, and other native plants that are less prone to ignition and fire spread would be allowed to remain (Appendix N).

The RPO wetlands would have at least a 75-foot-wide buffer between the proposed FMZs and the RPO wetland. There would be potential impacts to 0.4 (0.25 acre of permanent impacts and 0.15 acre of temporary impacts) acre of RPO wetland buffer from FMZ Zone 2 thinning activities. In this area, the RPO wetland would abut the project Site on the east side where the resource appears to extend farther to the slope of I-15. The RPO wetland is buffered by open space to the north–northwest for the entire length of the project boundary, ranging in widths from 400 feet to more than 6,000 feet. To the south–southeast, the RPO wetland is buffered by 350 feet, which would be reduced as the open space ends at the project Site. The majority of the open space surrounding the RPO wetland, including the habitat type impacted, is southern mixed chaparral, a non-wetland habitat type. A portion of the southern mixed chaparral is elevated above the RPO wetland but is not steeply sloped and would not be subject to high erosion. In addition, the chaparral is thick, and the removal of 50 percent of fuel load would still maintain a natural vegetation community that provides soil compaction and erosion control. Other edge effects typical of a reduced buffer area (such as lighting, noise, and trash) would not occur in this area, because Zone 2 fuel modification is the only allowed activity within the buffer. Because the southern mixed chaparral habitat within the buffer would still provide erosion protection, and no other edge effects are expected, the fuel modification activities would not affect the functions and values of the RPO wetland (southern coast live oak riparian forest). With a relatively large buffer between the outer edge of the RPO wetlands to development and minimal fire management activities within a portion of the 75-foot-wide RPO buffer, the buffers would be adequate to protect the

functions and values of the existing wetlands, and this would not be a significant impact per County significance criteria 4.2(e).

The existing North Twin Oaks Valley Road is located within approximately 1.1 acres of RPO wetlands and wetland buffer. No road widening or other improvements are planned for this portion of Twin Oaks Valley Road to maintain the rural character of the road. This County-maintained paved road is regularly used by residents, and the creek continues to function and maintain riparian scrub and woodland habitat. In addition, all of the land to the east and west of the road are preserved in open space (Figures 2.4-9A through 2.4-9E). Because this is an existing road and no widening or other improvements are planned, this area is not considered an impact to RPO wetland buffers, and would not be significant per County significance criteria 4.2(e). The off-site improvement areas would impact 1.49 acres of RPO wetlands, and 3.85 acres of wetland buffer. These off-site impacts would be **significant** per County significance criteria 4.2(e) (**Impact V-7**).

2.4.12.3 Jurisdictional Wetlands and Waterways

Guidelines for the Determination of Significance

For the purpose of this EIR, the County's *Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources* (County of San Diego 2010a) was used to evaluate the direct, indirect, and cumulative impact analysis.

A significant impact would result if:

The project would have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means.

Analysis

Impacts to federally protected wetlands defined by Section 404 of the Clean Water Act are discussed above under Section 2.4.12.2 (B) and (D).

2.4.12.4 Wildlife Movement and Nursery Sites

Guidelines for the Determination of Significance

For the purpose of this EIR, the County's *Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources* (County of San Diego 2010a) was used to evaluate the direct, indirect, and cumulative impact analysis. Each general subject area is broken into more specific County guidelines, and lettered accordingly, to provide additional clarity on this complex resource topic.

A significant impact would result if:

The project would interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

- A. The project would impede wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction.
- B. The project would substantially interfere with connectivity between blocks of habitat, or would potentially block or substantially interfere with a local or regional wildlife corridor or linkage. For example, if the project proposes roads that cross corridors, fencing that channels wildlife to underpasses located away from interchanges would be required to provide connectivity. Wildlife underpasses shall have dimensions (length, width, height) suitable for passage by the affected species based on a Site-specific analysis of wildlife movement. Another example is increased traffic on an existing road that would result in significant road-kill or interference with an existing wildlife corridor/linkage.
- C. The project would create artificial wildlife corridors that do not follow natural movement patterns; for example, constraining a corridor for mule deer or mountain lion [i.e., cougar] to an area that is not well-vegetated or that runs along the face of a steep slope instead of through the valley or along the ridgeline.
- D. The project would increase noise and/or nighttime lighting in a wildlife corridor or linkage to levels likely to affect the behavior of the animals identified in a Site-specific analysis of wildlife movement.
- E. The project does not maintain an adequate width for an existing wildlife corridor or linkage and/or would further constrain an already narrow corridor through activities such as (but not limited to) reduction of corridor width, removal of available vegetative cover, placement of incompatible uses adjacent to it, and placement of barriers in the movement path. The adequacy of the width shall be based on the biological information for the target species, the quality of the habitat within and adjacent to the corridor, topography, and adjacent land uses. Where there is limited topographic relief, the corridor should be well-vegetated and adequately buffered from adjacent development. Corridors for bobcats, deer, and other large animals should reach rim-to-rim along drainages.
- F. The project does not maintain adequate visual continuity (i.e., long lines of sight) within wildlife corridors or linkage. For example, development (such as homes or structures) sited along the rim of a corridor could present a visual barrier to wildlife movement. For stepping-stone/archipelago corridors, a project does not maintain visual continuity between habitat patches.

Analysis

- A. Temporary direct impacts (short-term or construction-related) to potential avian foraging and nesting habitat, and potential habitat connectivity and wildlife movement for species that use the project Site would primarily result from errant construction activities and from 8.7 to 9.2 acres of temporary impacts associated with grading (see Table 2.4-17). Clearing, trampling, or grading of foraging and breeding habitat outside designated construction zones could occur in the absence of avoidance measures, and potential temporary direct impacts to avian foraging and nesting habitat and to wildlife, especially to wildlife that move slowly or are fossorial, would be **significant (Impact WM-1)**.

The proposed project would result in permanent direct impacts to approximately 776.6 acres that has the potential to provide avian foraging, roosting and nesting habitat; foraging, breeding, and nursery habitat for terrestrial wildlife; access to water, shelter, and reproduction habitat; and connectivity and wildlife movement for species that use the project Site. Avian foraging, roosting, nesting and dispersal habitat for the native species that were previously using the habitats of the development area would be eliminated from those areas. Permanent direct impacts to foraging and breeding habitat would be a **significant impact (Impact WM-2)**.

Short-term and long-term indirect impacts to avian foraging and wildlife access to foraging, roosting, nesting, or water resources would include generation of fugitive dust, noise from construction activities, chemical pollutants, increased human activity during construction, invasive predators and non-native animal and plant species, lighting, habitat fragmentation, and the proposed urban development and recreational facilities. These indirect impacts would be a **significant impact (Impact WM-3)**.

- B. The project Site is located within the northern portion of the Merriam Mountains, a narrow chain of low mountains generally running north/south with a variety of east/west-trending ridgelines and scattered peaks. The undeveloped Site contains natural features of scenic and biological value, including rugged topography and rock outcroppings, with a wide range of elevations occurring on Site. Land use within the project Site and in the surrounding areas is a mixture of undeveloped lands and rural residential areas. The area in and around the project Site is very similar with regard to undeveloped landscapes with limited human disturbance, similar topographic relief, and similar vegetation communities. The Site currently facilitates the movement of small and larger mammals to traverse to adjacent undeveloped landscapes.

The proposed project would limit wildlife (particularly large mammals) ability to traverse directly through the project Site in a southward direction toward Deer Springs Creek. A southern connection to Deer Springs Creek would be maintained, but it would be narrower than current conditions. In this area, open space is proposed both between

development areas and areas surrounding the Site, adjacent to open space; these open space areas would provide some opportunity for movement through the project Site. The majority of the northern portion of the project Site would remain as open space, and development would not occur around Twin Oaks Valley Road. Wildlife are expected to cross Deer Springs Road and Twin Oaks Valley Road similar to current conditions, because the open space configuration would allow for continued movement to the south and west. Wildlife crossing could occur at the proposed internal roads within the Site in areas where wildlife are expected to move (see wildlife corridors in Figure 2.4-8). Speed limits within internal roads would be slow to help reduce vehicle collisions with wildlife, and vehicle collisions along Deer Springs Road and Twin Oaks Valley Road are not expected to increase significantly because of the proposed project. Additionally, wildlife crossing these roads are common (e.g., skunk, opossum, mule deer), and genetic flow through the Site and surrounding areas would be maintained both in the short term and long term. In addition, dedicating the northern half of the project Site as biological open space would continue to facilitate wildlife movement to the adjacent PAMA-designated lands of the draft North County Plan, which are largely situated along the northern and eastern boundaries of the project Site. Draft North County Plan PAMAs are also located along the southern boundary of the project Site, and open space within developed landscapes would continue to facilitate movements to these areas. Overall, the project's effects are expected to be greater along the central and southern portions of the project Site, and for large mammals rather than small mammals or reptiles (due to the home range size and mobility of large mammals).

The project would preserve three blocks of habitat (Figure 2.4-8), including the 870.2-acre Block 1, the 153.9-acre Block 2, and the 185.0-acre Block 3. These are not necessarily considered to be corridors so much as blocks of open space, and they would be capable of supporting most of the species present or expected on Site from a multiple-territory standpoint and from a generational standpoint. Although the project Site is not located in the adopted South County Plan area, the following discussion is within the context of the goals and criteria for linkages and corridors as discussed in the MSCP County of San Diego Subarea Plan (County of San Diego 1997): "If a corridor is relatively long, it must be wide enough for animals to hide in during the day. Generally, wide corridors are better than narrow ones. If narrow corridors are unavoidable, they should be relatively short. If the minimum width of a corridor is 400 feet, it should be no longer than 500 feet. A width of greater than 1,000 feet is recommended for large mammals and birds. Corridors for bobcats, deer, and other large animals should reach rim-to-rim along drainages, especially if the topography is steep."

Block 1 would be situated along the northern portion of the project Site. It would include a minimum 10,000-foot by 5,000-foot block adjacent to other draft North County Plan

PAMA-designated lands to the north and would meet the minimum width goals. It would also include the rim-to-rim recommendations. It would maintain connectivity to the remainder of the core wildlife area to the north and west; build off of and buffer existing conservation areas; and conserve Gopher Canyon Creek and associated riparian resources, coastal sage scrub, mafic southern mixed chaparral, California gnatcatcher, and a wide variety of other smaller and medium-sized wildlife, summer holly, and Engelmann oak.

Block 2 would be situated along the western side of the project Site and would directly connect to Block 1. It would include a minimum 1,000-foot by 7,000-foot block of habitat, so would conform to the minimum width goals. This area is intended to support the California gnatcatcher linkage along I-15 by preserving the western portion of the rim-to-rim draft North County Plan PAMA-designated, thus fulfilling the rim-to-rim recommendations. In addition, it would conserve southern mixed chaparral and species linked to that community.

Block 3 would be connected to Blocks 1 and 2 by multiple short corridors (Corridors A through D as described in Section 2.4.10), all of which would meet the minimum standards. Block 3 would be a minimum 4,400 feet by 1,200 feet and would conserve coastal sage scrub, southern mixed chaparral, rock outcrops, ridges, and valleys. The varied terrain would not strictly meet the rim-to-rim recommendation, but would include suitable topography for movement, plus resources on Site. It would also include habitat for all species that might occur on Site, and would maintain connectivity to draft North County Plan PAMA-designated areas and habitat south of the project Site, establishing a preserve along the majority of the southern Site boundary.

Although open space was designed to reduce interference with connectivity between blocks of habitat and local/regional wildlife corridor or linkages, the proposed project could substantially interfere with connectivity between blocks of habitat, such that wildlife seeking movement to landscapes south of the project Site would need to locate and use designated corridors incorporated throughout the Site that would provide some opportunity for these movements. The additional effects of increased traffic may also pose barriers to direct connectivity to adjacent landscapes in the southern half of the project Site. Impacts to smaller mammals, reptiles, and birds are not expected to be significant. Impacts to connectivity between blocks of habitat would be potentially **significant** for larger wildlife species (**Impact WM-4**).

- C. The proposed project would designate open space consisting of two large continuous blocks of key biological resources situated within the northern half and along the eastern boundary of the project Site, as well as a large third block of biological open space in the center of the proposed Site that would connect the abovementioned blocks of open space

to open space located east and south of the project Site (Figure 2.4-8). The off-site open space located in Ramona within the draft North County MSCP area provides a 211.8-acre block of continuous habitat situated between segments of the Cleveland National Forest and San Diego County Parks land.

Block 3 would offer a preserve area within the network of preserves already existing in this vicinity (i.e., 5-mile buffer around the project Site). Nearly all of the other preserves are centered around coastal sage scrub, gentle slopes, or flatter areas. This particular block would provide a diversity of topography that the other preserve sites would not offer. The combination of diverse topographies, peaks, and boulder slopes would provide suitable habitat for a variety of species that the other preserves likely would not, including granite night lizard, granite spiny lizard, bat roosts, and raptor nesting areas, in addition to woodrat, rock wren, canyon wren, slender salamander (*Batrachoseps attenuatus*), and other reptiles. A variety of ferns and annual plants may also be supported within this block. Typical species that have been identified or are expected to occur in this block include blue-gray gnatcatcher, northern red-diamond rattlesnake, southern California rufous-crowned sparrow (*Aimophila ruficeps*), western scrub jay (*Aphelocoma californica*), spotted towhee, California kingsnake, and rosy boa (*Lichanura [=Charina] trivirgata roseofusca*), among others.

Dudek reviewed a draft North County Plan map in August 2014 showing PAMAs and existing preserve areas. Dudek scanned and digitized the map to provide a quick comparison of the existing preserves in the area to provide a visual and quantitative snapshot (see Table 2.4-24; Figure 2.4-6). Based on this, it is apparent that the acreage provided within Block 3 far exceeds many of the existing preserves and is directly comparable to nearly all. Of the approximately 73 preserves in the vicinity, only five are larger than Block 3, and of these, only two are substantially larger.

Table 2.4-25 provides additional information about preserves in Southern California that were set aside for species management or as managed preserves for biodiversity. These are all within the relative size of Block 3.

Block 3 would provide a diversity of topography and microhabitat features that few, if any, preserves in the vicinity provide; would directly connect to adjacent PAMA lands; would support, or is expected to support, the full range of species that could occur on the project Site; would be buffered from adjacent development areas by topography; would be situated similarly to other preserves in the vicinity (i.e., in and around homes, open space, and agricultural areas); and would be larger than nearly all of the other preserves in the vicinity.

Four additional sections of biological open space corridors would be interspersed throughout development areas. Two of these could provide movement through a long corridor and would be considered ancillary to the project.. The other two (Corridors B

and C) are described above under 2.4.12.4 (B). These would meet corridor width criteria, but are too small to support the rim-to-rim recommendation. These corridors are included within the open space and would provide for additional movement but since they are within FMZ, they are not accounted for in the open space acreages. Wildlife would be able to use the 1,600-foot-wide connection between Blocks 2 and 3.

An important aspect of preserve principles is to protect preserves from encroachment. Ideally, preserves would establish blocks of habitat without road access and be inaccessible to human disturbance. Much of the area is encompassed by dense chaparral. In such habitat, unmaintained dirt roads on Site may serve as important wildlife corridors for large mammals, including mule deer, coyote, gray fox, and bobcat. These species may be sensitive to human disturbance and/or presence. Currently the habitat sees much human use, particularly in the southeast and northwest portions of the Site.

Designated public access trails are planned and will use signage and designated trail routes to protect the biological open space and control human encroachment. It is also important to protect large patches of habitat that do not currently contain trails. The proposed trails, as shown in Figure 2.4-10, Proposed Uses, would be located along pre-existing dirt roads and trails. The use of these trails would be monitored and reinforced by a preserve manager who would visit the area on a semi-weekly basis to document and reinforce these efforts.

Management of the biological open space areas would help keep current trespassers from dumping trash, camping, using off-road vehicles, boulder graffiti/tagging, and participating in other illegal activities. In many areas, the portion of FMZ directly adjacent to buildings would consist of vineyards. These would provide a sense of ownership that could deter trespassing. This would also provide wildlife with a visual screen from development and might facilitate wildlife movement. In addition, the zone between the vineyard and the Limited Building Zone Easement for biological open space would be thinned to varying degrees. Since much of the habitat on Site is mature, making movement for large ground-based wildlife difficult except for on dirt trails and dirt roads, the thinned FMZs may provide additional travel avenues for larger ground-based wildlife.

The designated biological open space and corridors were designed to follow natural ridgelines and landscape patterns that would facilitate wildlife movement around and through developed landscapes. In addition, developed landscapes were designed to follow, as feasible, natural contours of the landscape. Therefore, impacts to movement of wildlife as a result of artificial wildlife corridors would be **less than significant**.

- D. Permanent nighttime lighting associated with the proposed project would include residential units, vehicle traffic, and street lamps. These areas may experience high levels of nighttime lighting. In addition, there would be both short-term and long-term noise associated with construction-related activities and increased human activity, respectively.

Although a Site-specific analysis of wildlife movement has not been conducted, it is expected that an increase in nighttime lighting and noise would affect the behavior of wildlife and, as a result, influence wildlife behavior.

For example, the long-term increase in noise and nighttime lighting is likely to affect the behavior of solitary or secluded wildlife (e.g., species that shy away from developed areas). Noise during daylight hours may impact diurnal wildlife, such as birds, mule deer (diurnal and nocturnal), coyote (diurnal and nocturnal), small mammals and reptiles, and insects that can occur in or near developed areas. Nighttime lighting disturbance on animals may include attraction, fixation, and repulsion; improvement in orientation, or disorientation; disruption of biological rhythms; and change in habitat quality, and increase predation risk, and would impact wildlife (e.g., mammals, rodents, bats and owls) that are directly within or adjacent to developed areas or seeking to move through, near, or over these areas. It can also affect diurnal animals, particularly during nesting and nursery seasons. Artificial night lighting can affect the feeding, breeding and egg-laying of insects and can affect plants by altering their bud dormancy, flowering and leaf-fall. The proposed open space areas and corridors would be located throughout developed areas and were designed in large continuous blocks in the northern, eastern, and central portions of the Site to minimize these types of impacts. Therefore, it is expected that some species of wildlife would use these larger habitat patches as a means to escape noise during the day and night and nighttime lighting to traverse through the project Site. Although the project was designed to provide areas of refuge and corridors, noise and nighttime lighting associated with the project would impact wildlife behavior. Therefore, impacts to wildlife behavior due to an increase in noise and nighttime lighting in a wildlife corridor would be potentially **significant (Impact WM-5)**.

- E. Because the project Site is undeveloped, wildlife is able to move freely throughout the Site. Corridors on Site include riparian areas, ridge lines, and established animals trails. The project would remove 406.6 acres of habitat and alter another 369.9 acres in the FMZs and LBZs. The majority of the vegetation to be impacted or altered would consist of granitic southern mixed chaparral (626.9 acres). Off-site improvements associated with Deer Springs Road would permanently impact either 47.5 acres (Option A) or 50.2 acres (Option B). Other off-site improvements would permanently impact 23 acres.

The proposed project would include 1,209.1 acres of open space and four designated corridors interspersed throughout developed areas. The proposed biological open space was designed to maintain large patches of habitat for various wildlife movement and use. In addition, the majority of the project Site is surrounded by draft North County Plan PAMA lands and preserves (see Figure 2.4-1).

One of the goals and criteria for linkages and corridors described in the Multiple Species Conservation Program County of San Diego Subarea Plan (County of San Diego 1997) states:

If a corridor is relatively long, it must be wide enough for animals to hide in during the day. Generally, wide corridors are better than narrow ones. If narrow corridors are unavoidable, they should be relatively short. If the minimum width of a corridor is 400 feet, it should be no longer than 500 feet. A width of greater than 1,000 feet is recommended for large mammals and birds. Corridors for bobcats, deer, and other large animals should reach rim-to-rim along drainages, especially if the topography is steep.

The proposed on-site open space areas would range from nearly 2 miles wide to areas no less than 400 feet wide. The corridors to be located within the developed areas would be smaller and function as stopover habitat for birds or as habitat for smaller mammals, reptiles, birds and insects that do not require large home ranges and are more tolerant of urban-related activities. The corridors within the developed areas would make up 74 acres out of the designated 1,209.1 acres of on-site biological open space for the proposed project.

The remaining on-site open space is characterized by wide and long corridors, and when adjacent undeveloped land is considered, there would be only two areas less than 400 feet wide for a length greater than 500 feet located in the southwest portion of the project Site near some rural residential homes and associated agriculture. When considered as a whole, the proposed open space was designed to allow for wildlife movement from the north to the south, and the proposed project would allow for that through the large blocks of open space at the north, east, and south, as well as possibly through undeveloped lands (FMZs). Additionally, the off-site mitigation area in Ramona would aide in the connection of segments of the Cleveland National Forest and San Diego Parks, and provide protection for continued use by a variety of wildlife. Therefore, this impact would be **less than significant**.

- F. As described above, the open space was designed to maintain and preserve large blocks of habitat that include varying topography and riparian and upland habitat types. These large open space areas would allow for adequate visual continuity and ~~unimpeded-adequate~~ wildlife movement. The smaller corridors interspersed within the developed areas would be along slopes that allow for a grade separation that would increase visual continuity within those areas. Although the smaller corridors are not considered in the preservation acreages, they would provide for ancillary movement of wildlife. Likewise, the outer FMZs, while not included in preservation acreages, would provide a swath of movement areas adjacent to the Site. Clearing within these areas would remove approximately 20 to 50 percent of the vegetation, thus providing suitable cover. Because of the lower density of surrounding vegetation, some wildlife

would be able to more easily use these areas. Impacts as a result of the proposed project would be **less than significant**.

2.4.12.5 Local Policies, Ordinances, and Adopted Plans

Guidelines for the Determination of Significance

For the purpose of this EIR, the County's *Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources* (County of San Diego 2010a) was used to evaluate the direct, indirect, and cumulative impact analysis. Each general subject area is broken into more specific County guidelines, and lettered accordingly, to provide additional clarity on this complex resource topic.

A significant impact would result if:

The project would conflict with one or more local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, and/or would conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state HCP.

- A. For lands outside of the Multiple Species Conservation Plan (MSCP), the project would impact coastal sage scrub vegetation in excess of the County's 5 percent habitat loss threshold as defined by the Southern California Coastal Sage Scrub Natural Communities Conservation Planning (NCCP) Process Guidelines.
- B. The project would preclude or prevent the preparation of the subregional NCCP Process. For example, the project proposes development within areas that have been identified by the County or resource agencies as critical to future habitat preserves.
- C. The project would impact any amount of wetlands or sensitive habitat lands as outlined in the Resource Protection Ordinance (RPO).
- D. The project would not minimize and/or mitigate coastal sage scrub habitat loss in accordance with Section 4.3 of the NCCP Process Guidelines.
- E. The project does not conform to the goals and requirements as outlined in any applicable Habitat Conservation Plan (HCP), Habitat Management Plan (HMP), Special Area Management Plan (SAMP), Watershed Plan, or similar regional planning effort.
- F. For lands within the MSCP, the project would not minimize impacts to Biological Resource Core Areas (BRCAs), as defined in the Biological Mitigation Ordinance (BMO).
- G. The project would preclude connectivity between areas of high habitat values, as defined by the Southern California Coastal Sage Scrub NCCP Process Guidelines.

- H. The project does not maintain existing movement corridors and/or habitat linkages as defined by the BMO.
- I. The project does not avoid impacts to MSCP narrow endemic species and would impact core populations of narrow endemics.
- J. The project would reduce the likelihood of survival and recovery of listed species in the wild.
- K. The project would result in the killing of migratory birds or destruction of active migratory bird nests and/or eggs (MBTA).
- L. The project would result in the take of eagles, eagle eggs, or any part of an eagle (Bald and Golden Eagle Protection Act).

Analysis

- A. The proposed project is designed in accordance with the draft North County Plan. The Section 4(d) Habitat Loss Permit findings are included as Appendix H to this EIR. The HLP findings show that the proposed project would not impact coastal sage scrub vegetation in excess of the County's 5 percent habitat loss threshold as defined by the Southern California Coastal Sage Scrub Natural Communities Conservation Planning Process (NCCP) Guidelines. Therefore there is no significant impact related to Guideline 4.5.A.
- B. The proposed project would not preclude or prevent the preparation of the subregional NCCP because the project has been planned in accordance with the planning principles of the draft North County Plan. First, the proposed project has been identified as a proposed hardline area in the draft North county Plan, which means the proposed project's development areas and biological open space areas have been predetermined and hardlined for the purposes of the draft North County Plan (County of San Diego 2016). Additionally, the proposed project has been developed consistent with the Preliminary Conservation Objectives outlined in the Planning Agreement for the North County Plan (County of San Diego 2008a and 2014). The Planning Agreement identifies preserve design principles for evaluating "Interim Projects," and the proposed project was designed to be consistent with these principles. Finally, the draft North County Plan identifies conservation goals for each of the adjacent PAMA-designated lands planning units, and the proposed project was designed to be consistent with these goals. Project design was evaluated according to the Preliminary Conservation Objectives outlined in the Planning Agreement for the draft North County Plan (County of San Diego 2008a and 2014). These objectives and project applicability/compliance are listed in Table 2.4-26. The entire project Site is designated as a Proposed Hardline Area in the draft North County Plan (Figure 2.4-4). Based on the proposed hardline area as shown for the draft

North County Plan, the proposed biological open space would assemble 1,209.1 acres of on-site habitat into three cohesive, contiguous blocks as well as an additional off-site block of habitat totaling approximately 212 acres (providing habitat value for proposed MSCP-covered species as well as non-covered species), and protect the biological open space from future encroachment through organized habitat management and land stewardship in perpetuity (Figure 2.4-4).

Therefore, the proposed project would not preclude or prevent preparation of the subregional NCCP, and impacts would be **less than significant**. Additional support for this determination is provided below.

Draft North County Plan Preliminary Conservation Objectives

As outlined in Table 2.4-26, habitat loss from the proposed project would not preclude or prevent the North County Plan from achieving the preliminary conservation objectives from the draft North County Plan Planning Agreement (County of San Diego 2008 and 2014a).

Interim Project Preserve Design Principles

In addition to the preliminary conservation objectives, the Planning Agreement for the draft North County Plan identifies an interim project review process, including a set of preserve design principles that interim projects would be evaluated against during the period when the North County Plan is in preparation (County of San Diego 2008a). As described below, habitat loss resulting from the proposed project would not preclude or prevent the County from preparing the North County Plan because the project was developed consistent with the interim project preserve design guidelines.

Principle: On-site open space should provide a long-term biological benefit.

- The biological open space proposed for protection on the project Site is located within a proposed hardline area of the draft North County Plan (County of San Diego 2016), which means that the proposed project's development areas and biological open space areas have been predetermined and hardlined for the purposes of preparing the draft North County Plan. By identifying the proposed on-site biological open space as proposed hardline area, the County of San Diego has determined that the proposed biological open space would provide long-term biological benefit consistent with the draft North County Plan. The proposed 1,209.1 acres of on-site biological open space would occur in an interconnected system of three blocks consisting of a 870.2-acre northern block, a 153.9-acre eastern block, and a 185.0-acre southern block. Each of these blocks would be connected to adjacent open space within the draft North County Plan PAMA Core Areas and linkages. Therefore, the proposed interconnected on-site biological open space would provide long-term biological benefits.

Principle: On-site open space must protect habitat of equal or greater value as that being impacted. No isolated pockets of open space should be used for mitigation credit.

- The proposed project's development areas and associated roadways and fuel modification zones were designed to maintain connectivity and retain the functionality of the reserve design for the draft North County Plan, as reflected by the designation of a proposed hardline area for the Site. By situating a majority of the development area in the southwestern corner of the project Site, the proposed biological open space would be connected to the draft North County Plan PAMA in three key locations:
 - North – Establishing a large, contiguous biological open space (approximately 870.2 acres) in the northern portion of the Site (referred to as Block 1) would retain the connectivity to the remainder of the draft North County Plan Core Area. This portion of the project Site is located in the most interior part of the Core Area, and conserving it would retain the integrity of the draft North County Plan reserve design. The proposed Block 1 biological open space would also build off and buffer existing protected lands north of the project Site. Additionally, the Block 1 open space area would conserve key biological resources, including a section of Gopher Canyon Creek and associated riparian resources, patches of coastal sage scrub, Mafic southern mixed chaparral, and North County Plan covered plant species (i.e., summer holly and Engelmann oak).
 - East – Establishing a north/south biological open space area along nearly the entire eastern portion of the project Site (referred to as Block 2; approximately 153.9 acres) would maintain the landscape connectivity by establishing dedicated conserved lands within the north/south coastal sage scrub “stepping stone” corridor identified as important for California gnatcatcher regional movement. Additionally, the Block 2 biological open space would establish permanently protected habitat for approximately 1.5 miles along the western side of the I-15 valley, which offers good sight lines for moving and dispersing avian species.
 - South – Establishing open space along the southern portion of the Site (referred to as Block 3; approximately 185.0 acres) would maintain the integrity of the draft North County Plan reserve design by dedicating open space adjacent to and connected with the Escondido–Temecula Linkage area located south of the project Site.

Therefore, the proposed on-site biological open space would protect habitat of equal or greater value as that being impacted, and no isolated pockets of open space are proposed by the project.

Principle: Separate lots should be used whenever possible for on-site open space to help protect the biological value of the preserved areas.

- The proposed project's on-site biological open space would be protected within individual lots, and this biological open space would be managed for its biological value for the long term.

Principle: On-site open space shall contribute to regional conservation efforts.

- The proposed on-site and off-site biological open space would establish long-term protection for 1,420.9 acres of habitat for Covered Species and natural communities within the draft North County Plan proposed hardline area and off-site PAMA area consistent with the conservation strategy for the draft North County Plan. Therefore, the proposed project would contribute to the regional conservation efforts on the County and the Wildlife Agencies under the MSCP draft North County Plan.

Principle: Open space design, to the extent known, should not reduce the biological diversity found on the site.

- The proposed project's biological open space was designed to capture the range of plant and animal diversity found on Site in a system of interconnected open space blocks. All of the native vegetation communities and habitat types that occur on the project Site are represented within the proposed on-site biological open space. In addition to the California gnatcatcher movement corridors and coastal sage scrub that would be conserved, the on-site biological open space would preserve unique communities such as Mafic southern mixed chaparral and diverse riparian communities along a segment of Gopher Canyon Creek, which would contribute to the diversity of plant and animal communities preserved in the draft North County Plan. The proposed biological open space would also capture an array of landscape features and microhabitats such as rock outcrops and varying landforms (ridgelines, valleys, and slopes) across a range of topographic gradients and differing aspects, which would contribute to the diversity of plant and animal communities preserved on Site. Therefore, design of the proposed biological open space, to the extent known and using the best available information, would not reduce the biological diversity found on the Site.

Principle: Open space design shall maintain habitat connectivity between areas of high quality habitat.

- The proposed biological open space would be interconnected within the project Site and would also maintain connectivity to the remainder of the San Marcos–Merriam Mountains Core Area and adjacent PAMA linkages. The proposed

development area and associated roadways and fuel modification zones have been strategically designed to maintain connectivity of the PAMA and retain the functionality of the reserve design of the draft North County Plan, as reflected by the designation of a proposed hardline area for the Site. By situating a majority of the development area in the southwestern corner of the project Site, the proposed biological open space would be connected to areas of high-quality habitat off Site within the draft North County Plan PAMA in three locations: north, east, and south. The northern connection would be provided by the 870.2-acre Block 1 open space area, which would connect to an adjacent PAMA Core Area and existing reserves to the north and west of the project Site. The eastern connection would be provided by the 153.9-acre Block 2 open space area, which would maintain the connection to the Escondido–Temecula Linkage PAMA and facilitate California gnatcatcher and other avian movement north/south along the I-15 stepping stone corridor and east/west across the I-15 valley.

Principle: The most sensitive resources shall be protected to maximize long-term viability.

- The project Site is a large property characterized by predominantly (95 percent) native vegetation communities that support important biological resources, some of which are considered sensitive. A majority of the Site (91 percent) is characterized by chaparral communities that are fairly common in the region. Of the chaparral communities, southern mixed chaparral on mafic soils is considered more rare/sensitive, and the proposed project would include nearly all (99 percent) of this vegetation type in biological open space. All of the other vegetation groups found on the Site would also be represented in the biological open space, including coastal scrub, oak woodlands, and riparian.

With respect to plant species considered sensitive, biological surveys of the project Site identified six special-status species, two of which are draft North County Plan Covered Species (summer holly and Engelmann oak) (County of San Diego 2009). Additionally, the Site is considered to have the potential to support two other draft North County MSCP Covered Species (sticky dudleya and felt-leaved monardella), but these species were not detected on the Site. The Site supports a relatively large population of summer holly (1,356 individuals), of which the proposed project would protect 86 percent (1,160 individuals). The Site supports a relatively small population of Engelmann oaks, and the project would protect 36 percent (10 individuals).

With respect to wildlife species considered sensitive, the project Site supports or has the potential to support 16 special-status wildlife species (SSC/County Group 1 species). The Site supports or has the potential to support 10 draft North County

Plan Covered Species: western spadefoot, orange-throated whiptail, Blainville's horned lizard, red-diamond rattlesnake, northern harrier, California gnatcatcher, southern California rufous-crowned sparrow, Bell's sage sparrow, pallid bat, and cougar; however, the Site is not considered to support major or critical populations of these species. Habitat for all of these wildlife species, in addition to numerous other species that are not considered special-status, would be protected within the proposed biological open space.

An important function of the proposed biological open space would be to protect open space in this key geographic location to maintain the connectivity of the regional reserve design and to facilitate the continued movement of California gnatcatcher and other avian species. As described previously for other principles, the biological open space system blocks were designed to protect these landscape functions for long-term viability.

Principle: Edge effects and habitat fragmentation shall be minimized by maximizing the surface area to perimeter ratio, preserving large blocks of contiguous open space. Edge effects shall be further minimized by establishing buffers, providing fencing and/or permanent signs, and limiting trails and/or lighting.

- The proposed project's biological on-site open space would be a large, interconnected system consisting of three open space blocks. These three open space blocks would be connected internally within the Site and externally to off-site PAMA and existing reserves. Both the size and configuration of the proposed biological open space would minimize edge effects and habitat fragmentation. In terms of open space patch size, the proposed project's biological open space system would include Block 1 (870.2 acres), Block 2 (153.9 acres), and Block 3 (185.0 acres). These are large open space patches compared to existing reserves in the San Marcos–Merriam Mountains Core Area of the draft North County Plan PAMA. Based on a review of the Conserved Lands dataset maintained by the San Diego Association of Governments (SANDAG 2015), approximately 532 acres of existing reserve occur within the San Marcos–Merriam Mountains Core Area in approximately 23 discrete open space patches. The largest existing reserve patch in this Core Area is currently 148 acres, and the average open space size across these 23 patches is 24 acres. The three proposed open space blocks have very high area-to-perimeter ratios (expressed in units of square feet-to-feet): Block 1 (886), Block 2 (386), and Block 3 (384). By way of comparison, only one of the existing open space patches in the Core Area has a comparable area-to-perimeter ratio (an 89-acre square patch with a ratio of 413). The average area-to-perimeter ratio of the existing open space patches in the Core Area is 132. By designing the biological open space in large blocks with high area-to-perimeter ratios, the

proposed project would minimize edge effects and habitat fragmentation. Additionally, the design features and mitigation measures of the proposed project include a Limited Building Zone Easement, which is a required minimum 100 foot easement adjacent to biological open space that prohibits the building of structures that would require vegetation clearing for fire purposes, would include directional lighting and other lighting specifications, and would include open space fencing and signage, all of which would minimize edge effects.

San Marcos – Merriam Mountain Core Area Conservation Goals

The County is in the process of developing the draft North County Plan (County of San Diego 2009). The draft North County Plan includes conservation goals for each PAMA planning unit. The following describes the consistency of the proposed project with the draft conservation goals for the San Marcos–Merriam Mountains Core Area, which is the PAMA designated by the draft North County Plan adjacent to the Site (County of San Diego 2014b).

- To the maximum extent practicable, conserve oak woodlands, coastal sage scrub (particularly in Twin Oaks) to maintain populations and connectivity of coastal California gnatcatcher and other coastal sage scrub-dependent species, and chaparral on mafic or gabbro soils that support sensitive plant species, such as chaparral beargrass and Parry’s tetracoccus, San Diego thornmint (particularly in San Marcos Mountains), or California adolphia. Refer to natural community and species goals and objectives in the Conservation Analysis (Volume II).
- To the maximum extent practicable and in consideration of all the competing goals and principles that relate to this project Site, the proposed on-site biological open space of the proposed hardline area for the Site has been developed consistent within this conservation goal. Considering that this Site is predominantly characterized by chaparral habitats, chaparral plant and animal species are the primary species supported by the Site. Mafic chaparral communities would be 99 percent conserved in the proposed on-site biological open space. The chaparral-related plant species listed in this draft goal (i.e., chaparral beargrass, Parry’s tetracoccus, San Diego thornmint, and California adolphia) were not documented on the Site. At the regional scale, the importance of the Site is in its location and geographic position within the reserve design for the draft North County Plan. By designing the Site with three interconnected biological open space blocks covering more than 1,209 acres, the proposed project would maintain populations and connectivity of California gnatcatcher and other avian species, particularly by maintaining the north/south I-15 “stepping-stone” corridor and the east/west movement corridor across the

I-15 valley. Biological open space Block 2 would avoid coastal sage scrub found to be occupied by California gnatcatcher. A portion of the oak woodlands with buffers would also be conserved within the large interconnected open space system. Volume II of the draft North County Plan has not been made available; therefore, an evaluation of consistency with the natural community and species goals and objectives from the draft North County Plan Conservation Analysis was not possible.

- Ensure that a core community of coastal California gnatcatcher and other coastal sage scrub-dependent species remains in the coastal sage scrub block in Twin Oaks. Refer to species goals and objectives in the Conservation Analysis (Volume II).
 - The proposed project Site is not located in the Twin Oaks area of the San Marcos–Merriam Mountains Core Area; therefore, this draft conservation goal is not applicable. The proposed project would conserve California gnatcatcher habitat on Site and maintain generational movement of California gnatcatcher north and south, and east and west, across the Site.
- Conserve the north/south connectivity of coastal California gnatcatcher habitat along I-15 between the Riverside County line and the City of Escondido. Maintain the east/west connectivity of natural habitats on either side of I-15 for dispersal of coastal sage scrub community birds.
 - As stated above for previous draft conservation goals and principles, the proposed open space design would conserve the north/south connectivity of coastal California gnatcatcher habitat along I-15. In addition, a potential east/west connection in the northwestern portion of the open space would be conserved over the long term in the proposed biological open space.
- Promote conservation of riparian and upland habitats of Gopher Canyon Creek for water quality and sensitive species, such as southwestern pond turtle and least Bell's vireo.
 - The proposed open space design includes preservation of a portion of the South Fork of Gopher Canyon that is located within the western edge of the project Site, which is a tributary to Gopher Canyon Creek and the San Luis Rey River. Inclusion of the headwaters to Gopher Canyon Creek into the proposed open space design assists in the maintenance of water quality and the conservation of riparian habitat. In addition, upland habitat surrounding this tributary is included in the proposed open space design. The Site was not found to support southwestern pond turtle (*Actinemys marmorata pallida*) or least Bell's vireo, but the proposed project would protect upstream reaches of Gopher Canyon Creek that supports riparian habitat and resources.

- Ensure the San Diego thornmint population in the Palisades open space preserve is maintained and enhanced, if practicable. Refer to species goals and objectives in the Conservation Analysis (Volume II).
 - This draft conservation goal is not applicable to the project Site, and this species does not occur on the Site.

The proposed open space design is consistent with planning guidelines for the adjacent San Marcos Hills–Merriam Mountains Core Area.

- C. The project Site includes RPO wetlands and RPO wetland buffers. As shown in Table 2.4-19, there would be permanent direct impacts to approximately 2.13 acres of County RPO wetlands, which would be a **significant** impact (**Impact P-1**). The RPP provides information on the RPO resources, including sensitive habitat lands, RPO wetlands, steep slope lands, floodplains, and lands containing significant prehistoric and historic sites (Appendix H). The RPP includes a discussion of the project's general consistency with the RPO and how the RPO impacts meet the exemption criteria under Section 86.605 of the RPO. The on-site and off-site resource management plans (RMPs) (BTR Appendices L and M; Appendix H to this EIR) describe the management activities for the open space preserve, which includes RPO wetlands and wetland buffers.
- D. The proposed project is designed to minimize and/or mitigate coastal sage scrub habitat loss in accordance with Section 4.3 of the Southern California Coastal Sage Scrub NCCP Process guidelines.

The Draft HLP Including 4(d) Findings is included in Appendix E to the BTR (Appendix H). These Findings describe how the project's mitigation for loss of coastal sage scrub habitat conforms with the NCCP Process Guidelines by incorporating the following features: (i) the project has been designed to minimize habitat loss; (ii) the project limits habitat loss to less than 5 percent, as recommended by guidelines; (iii) the project achieves connectivity among high-value habitat by preserving biological open space that is connected to most of the existing core populations in the 5-mile study area and maintaining the north/south I-15 stepping stone corridor; and (iv) the project ensures that development would not reduce the likelihood of the survival and recovery of listed species. Therefore, this impact would be **less than significant**.

- E. The project conforms to the goals and requirements as outlined in applicable regional planning efforts (draft North County Plan, NCCP, HLP, General Plan, and North County Plan), which is described in detail in Section 2.4.12.5(B). There are no habitat management plans or special area management plans for the project Site; therefore, **no impact** would occur.

- F. The Biological Mitigation Ordinance does not apply to the draft North County Plan planning area. Therefore, **no impacts** to Biological Resource Core Areas would occur.
- G. The project would not preclude connectivity between areas of high habitat values, as defined by the Southern California Coastal Sage Scrub NCCP Guidelines. Impacts would be **less than significant**.

The project Site is characterized by approximately 95 percent native vegetation and 5 percent non-native communities and other land cover. A majority of the Site (nearly 91 percent; 1,803.8 acres) is characterized by chaparral communities. Approximately 4 percent (79.7 acres) of the Site is characterized by coastal scrub communities. The remainder of the Site supports oak woodland (0.5 percent; 9.1 acres) and riparian communities (0.4 percent; 8.3 acres).

The 79.7 acres of coastal scrub communities on the Site consists of the following types: 68.2 acres of Diegan coastal sage scrub, 2.0 acres of coastal sage scrub–*Baccharis* dominated, 1.7 acres of flat-topped buckwheat, and 7.8 acres of coastal sage–chaparral transition. Based on the 2009 draft North County Plan, there is approximately 29,888 acres of coastal sage scrub in the North County Plan area (County of San Diego 2009). Therefore, the project Site contains 0.27 percent of the total coastal sage scrub in the draft North County Plan area.

The 79.7 acres of coastal sage scrub on the project Site occurs in five general patch locations: three patch locations in the northern portion of the Site, one in the central portion of the Site, and one patch in the southeastern portion of the Site. The coastal sage scrub patches in the northern portion of the Site are small, comprising 7.18 acres, 4.76 acres, and 2.90 acres. The central coastal sage scrub patch is the largest, with a combined acreage of all coastal sage scrub types of 48.73 acres. The southeastern coastal sage scrub patch totals 16.13 acres.

The draft North County Plan California Gnatcatcher Habitat Evaluation Model shows a majority of the project Site as “None,” with several small patches of “Low” value for California gnatcatcher (County of San Diego 2008b). In terms of the North County Plan’s composite Habitat Evaluation Model, the majority of the project Site (58 percent) is considered moderate value. The remainder of the Site is classified as High or Very High (31 percent), or Low, Agricultural, or Developed (11 percent). The High and Very High values from the North County Plan’s composite Habitat Evaluation Model on the project Site are not a result of habitat value for California gnatcatcher, and do not correspond to the areas of mapped coastal sage scrub on the Site.

The conservation strategy for the draft North County Plan is based on a reserve design that includes existing preserves, PAMAs, and biological open space within proposed hardline areas. The project Site is designated as proposed hardline area within the

approximately 7,640-acre San Marcos–Merriam Mountains Core Area of the North County Plan PAMA. This Core Area comprises approximately 5 percent of the overall North County Plan PAMA.

In the reserve design of the draft North County Plan, the San Marcos Merriam Mountains Core Area is connected to other portions of the reserve design through the adjacent Escondido–Temecula Linkage located along I-15 north and south of the Site, and through the Moosa Canyon Linkage and Lower San Luis Rey River Linkage that are both located north of the project Site. In the vicinity of the project Site, the largest and highest proportion of Very High and High habitat value areas occurs in the western portion of the San Marcos–Merriam Mountains Core Area, in the predominantly open space areas west of Twin Oaks Valley Road and west of Vista Valley Country Club south and north of Gopher Canyon Road. Farther to the north, Very High and High habitat value areas are concentrated along Moosa Canyon (along Camino del Rey) and the Lower San Luis Rey River (along State Route (SR) 76). Off Site along the I-15 corridor, smaller scattered areas of Very High and High habitat value occur that is often referred to as the coastal sage scrub “ladder” or “stepping stone” corridor. East of the I-15 corridor, patches of Very High and High habitat value occur on the open space slope east of Lawrence Welk Resort Village.

The loss of 56.7 acres of coastal sage scrub resulting from the proposed project would not preclude connectivity between areas of high habitat values. The proposed on-site biological open space would maintain connectivity to the to the adjacent PAMA and retain the functionality of the reserve design for the draft North County Plan. By situating a majority of the development area in the southwestern corner of the project Site, the proposed on-site biological open space would be connected to the draft North County Plan PAMA in three key locations (north, east, and south), as discussed in Section 2.4.12.5(B).

The areas of Very High and High habitat value on the project Site that would be impacted by the proposed project are isolated from other areas of contiguous Very High or High value habitat areas by existing land uses (e.g., existing development areas and the I-15 corridor). Therefore, the proposed project would not increase or contribute to the isolation of high-value areas.

Approximately 47 percent (291 acres) of the Very High and High habitat value areas on the project Site would be conserved in proposed on-site biological open space. Therefore, the proposed project would retain areas of high habitat value within an interconnected biological open space system developed consistent with the reserve design objectives of the draft North County.

The proposed project would conserve additional coastal sage scrub habitat off Site in a location that contributes to the North County Plan PAMA. Contribution of off-site coastal sage scrub mitigation (106.4 acres) in addition to the on-site biological open space would further offset the effects of the loss of coastal sage scrub from the proposed project.

Overall, the entire proposed biological open space would contain a diversity of environmental characteristics that are present in the vicinity, including representative populations of special-status plant and animal species; existing dirt trails and canyon bottoms currently used by wildlife for movement across the Site; and the north/south-trending tributary to Gopher Canyon along Twin Oaks Valley Road, which provides linkage opportunities to the San Marcos Mountains.

Additionally, the off-site mitigation area in Ramona would aid in the connection of segments of the Cleveland National Forest and San Diego County Parks land and provide protection for continued use by a variety of wildlife. The preservation of 211.8 acres of one large off-site parcel situated in a key natural gap in the adjacent agricultural (ranches, poultry farms) landscape amid cattle ranch lands and open space would provide for connectivity-preservation of habitat between segments of the Cleveland National Forest located approximately 2 miles to the east and west, and San Diego County Parks land located approximately 3 miles to the north and south.

- H. The Biological Mitigation Ordinance does not apply to the draft North County Plan Planning Area. Therefore, **no impacts** to Biological Resource Core Areas would occur.
- I. No narrow endemic species were documented on the project Site and **no impacts** would result.
- J. California gnatcatcher occurs on Site; however, the project was designed to avoid 33 percent (25.2 acres) of the suitable habitat and conserve coastal scrub in accordance with the County's guidelines. The resident pair is expected to remain after the project is implemented. Additional information is provided in Sections 2.4.12.5(B), (D), and (G), and in the draft HLP (Appendix E to the BTR (Appendix H)). The proposed project would not reduce the likelihood of survival and recovery of any listed species in the wild; therefore, impacts would be **less than significant**.
- K. Short-term, construction-related impacts to migratory birds and active migratory bird nests and/or eggs protected under the MBTA would be a **significant impact (Impact P-2)**.
- L. No golden or bald eagle nests occur on Site. No eagles have been observed on Site during previous surveys (PSBS 2007) or in recent 2013–2014 surveys by Dudek. **No impacts** would result.

2.4.13 Cumulative Impact Analysis

The biological cumulative impact study area (“study area”) was chosen because it has similar biological resources to other projects, includes the relevant North County Plan planning areas, and is bound by logical topographic boundaries. Within the extent of the cumulative projects, the USFWS-designated critical habitat for coastal California gnatcatcher and mafic chaparral within 5 miles of the project Site was chosen to represent habitat for the sensitive resources on Site. The proposed project Site is located within the Peninsular Ranges of the California Floristic Province, as defined in the Jepson Flora Project (Jepson Flora Project 2016). The cumulative study area is almost entirely located within the Peninsular Ranges of the California Floristic Province. The geographic system developed by the Jepson Flora Project “combines features of natural landscapes and biota to delimit the units, as opposed to using the often arbitrary and unnatural boundaries of counties for that purpose. The Jepson geographic system most importantly reflects broad patterns of natural vegetation (and, at a finer scale, more specific plant assemblages), geology, topography, and climate” (Jepson Flora Project 2016). The study area is bound on the south and southwest by urban lands, on the west by the San Marcos Mountains, on the north by Gopher Canyon, and on the east by Moosa Canyon. Of the 199 reasonably foreseeable projects provided by the County, 87 projects are located within the 66,681-acre biological study area. Potential impacts to biological resources were examined for these 87 cumulative projects and are summarized in Table 2.4-28.

The reasonably foreseeable projects are located in the City of San Marcos, City of Vista, City of Escondido, Rainbow, Valley Center, and unincorporated areas of San Diego County, and include proposed and recently approved projects. For those projects located within or adjacent to the I-15 corridor, California gnatcatchers are of particular interest, because the associated habitats may serve as a conduit for longitudinal and occasional latitudinal movement around the freeway. Gnatcatchers are relatively uncommon east of I-15 compared to areas to the west.

All projects would be required to conform to existing regulations with respect to avoidance, minimization, and mitigation of impacts to sensitive habitat, achieving no-net-loss of wetlands and like/kind replacement for impacts to sensitive habitat that cannot be avoided. Therefore, it is assumed that impacts would be assessed and mitigated pursuant to CEQA, and those projects within the County’s jurisdiction would be reviewed under the County’s guidelines, during the project review and approval process.

Existing Cumulative Conditions

Within the California Floristic Province, the Peninsular Ranges subregion (i.e., an area of similar climatic and plant community associations) stretches from southern Los Angeles County along the valley, foothills, and mountains south to Baja California, Mexico. The cumulative study area

is characterized by rural areas, residential and commercial development, agricultural areas, and undeveloped land. The undeveloped land includes chaparral, coastal scrub, oak woodland, riparian scrub and woodland, riparian forest, and grasslands. The assemblage of plant and wildlife species, including special-status species, in the cumulative study area is largely the same as that identified for the proposed project.

Cumulative Methodology

The cumulative analysis conducted for biological resources is based on the list method and considers relevant projects from Table 1-10 in Chapter 1 that are located within the study area. Figure 1-46 in Chapter 1 shows the extent of the cumulative study area. Reasonably foreseeable cumulative projects within the cumulative study area have the potential to affect similar vegetation communities as the proposed project, and, therefore, could cumulatively contribute to impacts to natural vegetation communities in the region and species that are associated with these habitat types.

The cumulative analysis for wildlife movement and local and regional planning is similarly limited to the cumulative study area. Since the study area is largely undeveloped, wildlife movement through and around the reasonably foreseeable cumulative study area would still be possible. Local and regional planning efforts are defined by the jurisdiction of local planning authorities, which, in the case of the proposed project, is the County. The County of San Diego is preparing the draft North County Plan, a subregional plan being prepared under the NCCP framework. The North County Plan includes a series of core and linkage areas intended to foster wildlife movement.

2.4.13.1 *Candidate, Sensitive, or Special-Status Species*

Special-Status Plant Species and Vegetation Communities

Direct

The project Site is characterized by a diverse assemblage of vegetation communities that supports or has the potential to support special-status plant species.

For a cumulative impact to special-status plant species to occur, the cumulative projects would have to result in the loss of the same special-status plant species or their habitat as the proposed project such that those species become more limited in their distribution, population size, or available suitable habitat within the cumulative study area. The cumulative projects that occur in the biological cumulative analysis study area are estimated to result in impacts to similar vegetation communities and land covers as the proposed project, and would have the potential to impact the same special-status plant species as the proposed project. Construction of the

proposed project would result in the potential direct loss of special-status plant species and the loss of suitable habitat for special-status plant species.

Some of the occurring or potentially occurring special-status plant species in the study area are found only in and around the cumulative study area. Because the sensitive plant species found on the Site are either scattered throughout the chaparral (Engelmann oak and summer holly) or in numbers too low to constitute a viable population (Ramona horkelia), no cumulative impacts beyond those associated with the vegetation type are expected.

The proposed project, combined with the reasonably foreseeable cumulative projects listed in Table 2.4-28, despite species avoidance, minimization, and mitigation measures that would likely be implemented by each project, would have the potential to reduce the distribution and/or the overall population size of one or more of these special-status plant species, such that they would be vulnerable to environmental variability and would be at a higher risk of becoming imperiled. However, given the preservation of suitable habitat, additional mitigation measures, and the distribution of impacted special-status plants within the study area, cumulative project impacts would be **less than significant**.

Indirect

Habitat Fragmentation

The proposed project would involve development of currently intact habitat. Habitat fragmentation and isolation of plant populations may cause extinction of local populations as a result of two processes: reduction in total habitat area, which reduces effective population sizes, and insularization of local populations, which affects dispersal rates (Wilcox and Murphy 1985; Wilcove et al. 1986). The potential cumulative indirect project impacts would be **significant (Impact BI-C-1)**.

Increased Human Activity

The proposed project would involve development of seven neighborhoods, recreational facilities (e.g., parks), and designated open space. The Site is currently subject to illegal/unauthorized activities, including hiking, biking, off-road-vehicle activity, parties, trash dumping, homeless population activities, and camping. With the project and associated open space preserve, all of these activities except the biking and hiking would cease, and hiking/biking would be managed and kept to select trails. To protect the proposed open space easement from unauthorized entry or disturbance, both permanent post and rail fencing, along with walls and strategic placement of signage shall be installed approximately every 200 feet. The illegal trails would be closed and new trail creation (which currently occurs) would potentially stop. Therefore, the proposed development is expected to lead to a decrease in human activity in the open areas of the project Site. The potential cumulative indirect project impacts would be **less than significant**.

Non-Native, Invasive Species

Invasive plant species that thrive in native habitats are a well-documented problem in Southern California and throughout the United States. Development could also fragment native plant populations, which may increase the likelihood of invasion by exotic plants due to the increased interface between natural habitats and developed areas. Bossard et al. (2000) list several adverse effects of non-native species in natural open areas, including the fact that exotic plants compete for light, water, and nutrients, and can create a thatch that blocks sunlight from reaching smaller native plants. Exotic plant species may alter habitats and displace native species over time, leading to extirpation of native plant species. The introduction of non-native, invasive animal species could negatively affect native species that may be pollinators of or seed dispersal agents for special-status plant species. The potential cumulative indirect project impacts would be **significant (Impact BI-C-1)**.

Alteration of Natural Fire Regime

The proposed project could potentially increase the risk of fire, including fire associated with electrical short circuits or electrical equipment malfunction within developed neighborhoods, or inadvertent/intentional ignitions within or adjacent to open space. Shorter-than-natural fire return intervals can preclude recovery of native vegetation between fires, weaken the ecological system, allow for invasion of exotic species, and result, in some cases, in permanent transition of the vegetation to non-native communities such as annual grassland and weedy communities (Keeley 1987; Malanson and O'Leary 1982; O'Leary et al. 1992). If the natural fire regime is suppressed, longer-than-natural fire return intervals can result in excessive buildup of fuel loads so that when fires do occur, they are catastrophic. Unnaturally long fire intervals can also result in senescence of plant communities, such as chaparral, that rely on shorter intervals for rejuvenation. The potential cumulative indirect project impacts would be **significant (Impact BI-C-1)**.

Changes in Hydrology

Construction could result in hydrologic and water-quality-related impacts adjacent to and downstream of the project Site. Hydrologic alterations include changes in flow rates and patterns in streams and rivers, and dewatering, which may affect adjacent and downstream aquatic, wetland, and riparian vegetation communities. Water-quality impacts include chemical-compound pollution (fuel, oil, lubricants, paints, release agents, and other construction materials), erosion, increased turbidity, and excessive sedimentation. Direct impacts can also remove native vegetation and increase runoff from roads and other paved surfaces, resulting in increased erosion and transport of surface matter into special-status plant occurrences. Altered erosion, increased surface flows, and underground seepage can allow for establishment of non-native plants. Changed hydrologic conditions can also alter seed bank characteristics and modify habitat for ground-dwelling fauna that may disperse seed. The potential cumulative indirect project impacts would be **significant (Impact BI-C-1)**.

Chemical Pollutants

Erosion and chemical pollution (releases of fuel, oil, lubricants, paints, release agents, and other construction materials) may affect special-status plant species. The use of chemical pollutants can decrease the number of plant pollinators, increase the existence of non-native plants, and cause damage to and destruction of native plants. No herbicides would be used during construction. The potential cumulative indirect project impacts would be **significant (Impact BI-C-1)**.

Fugitive Dust

For a cumulative impact related to construction dust generation resulting in vegetation degradation to occur, the reasonably foreseeable cumulative projects would have to be constructed at the same time and in proximity to each other to cumulatively contribute to the degradation of vegetation from construction dust across the cumulative study area. The listed cumulative projects within the biological cumulative study area involve a variety of project types. Additionally, most of the cumulative study area is generally characterized by undisturbed native vegetation communities. Construction of some cumulative projects may only partially overlap or would be complete prior to commencement of proposed project construction activities, and impacts would be less severe than if they were constructed simultaneously. If all of the reasonably foreseeable cumulative projects in proximity to the proposed project were to be constructed simultaneously, substantial dust generation could degrade nearby vegetation. The cumulative indirect project impacts would be **significant (Impact BI-C-1)**.

Special-Status Wildlife Species

Direct

For a cumulative impact to special-status wildlife species to occur, the cumulative projects would have to result in the loss of the same special-status wildlife species or their habitat as the proposed project such that those species become more limited in their distribution, population size, or available suitable habitat within the study area. The listed cumulative projects that occur in the biological cumulative analysis study area would have the potential to impact the same special-status wildlife species as the proposed project due to a similar climate and similar distribution of vegetation communities.

As described above, the biological cumulative analysis study area includes the USFWS-designated critical habitat for coastal California gnatcatcher, mafic chaparral, and a portion of the Peninsular Ranges eco-geographic extent as defined by the Jepson Flora Project (Jepson Flora Project 2016).

There are 24,264 acres of critical habitat for California gnatcatcher within the cumulative study area, including 706 acres within the proposed project Site. The majority of the critical habitat within the proposed project Site (99 percent) is mapped as chaparral, woodland, or grassland, and is not typically considered suitable for California gnatcatcher breeding or base territory. However, the general area has been identified as a network of islands supporting movement, which is likely the source of the designation. The proposed project, combined with the reasonably foreseeable cumulative projects, despite species avoidance, minimization, and mitigation measures that could be implemented by each project, would have the potential to reduce the distribution and/or the overall population size of California gnatcatcher. The cumulative direct project impacts to California gnatcatcher would be **significant (Impact BI-C-2)**.

The proposed project, combined with the reasonably foreseeable cumulative projects, despite species avoidance, minimization, and mitigation measures that could be implemented by each project, would have the potential to reduce the distribution and/or the overall population size of one or more special-status wildlife species (not including California gnatcatcher) such that they would be vulnerable to environmental variability and at a higher risk of becoming imperiled. However, the suite of wildlife species that occur or have potential to occur within the project Site are wide-ranging and occur in a wide variety of habitat types that occur throughout the biological cumulative analysis study area. The proposed project would not cumulatively contribute to impacts to these species or their habitat. Therefore, cumulative project impacts would be **less than significant**.

Indirect

Generation of Fugitive Dust

Dust and applications for fugitive dust control can impact vegetation surrounding the limits of grading, resulting in changes in the community structure and function. These changes could result in impacts to suitable habitat for special-status wildlife species. The cumulative indirect project impacts would be **significant (Impact BI-C-1)**.

Non-Native, Invasive Plant and Animal Species

Invasive plant species that thrive in native habitats are a well-documented problem in Southern California and throughout the United States. Development could also fragment native plant populations, which may increase the likelihood of invasion by exotic plants due to the increased interface between natural habitats and developed areas. Bossard et al. (2000) list several adverse effects of non-native species in natural open areas, including that exotic plants compete for light, water, and nutrients and can create a thatch that blocks sunlight from reaching smaller native plants. Exotic plant species may alter habitats and displace native species over time, leading to extirpation of native plant species and subsequently suitable

habitat for special-status wildlife species. Conversion of native habitat to non-native habitat, and increased edge and human uses can lead to increased non-native and sometimes problematic invasive wildlife species such as brown-headed cowbirds, Argentine ants (*Linepithema humile*), European starlings (*Sturnus vulgaris*), house sparrows (*Passer domesticus*), bullfrogs (*Lithobates catesbeianus*), and African clawed frogs (*Xenopus laevis*). In addition, trash can attract and artificially maintain higher populations of native predators such as ravens and coyotes that could disproportionately impact the wildlife species on a site. The cumulative indirect project impacts would be **significant (Impact BI-C-1)**.

Habitat Fragmentation

The proposed project would impact approximately 776.6 acres of vegetation communities and land covers, resulting in potential habitat fragmentation within the study area. Habitat fragmentation can reduce diversity of species, spread invasive species, and reduce access to important habitats (Lovich and Ennen 2011). In addition, habitat fragmentation and isolation of wildlife populations may cause extinction of local populations as a result of two processes: reduction in total habitat area, which reduces effective population sizes, and insularization of local populations, which affects dispersal rates (Wilcox and Murphy 1985; Wilcove et al. 1986). Although the project proposes impacts related to Twin Oaks Valley Road and Deer Springs Road, these road improvements are not expected to result in habitat fragmentation. Wildlife are expected to cross Deer Springs Road and Twin Oaks Valley Road similar to current conditions because the open space configuration allows for continued movement to the south and west. Access to waters sources within the creek along Twin Oaks Valley Road would not be constrained by the proposed project. Habitat fragmentation within the proposed project development area would result in habitat fragmentation of certain habitat types, and could result in an increase in non-native species, as described above. When taken into consideration with the reasonably foreseeable cumulative projects in the region, the cumulative indirect project impacts would be **significant (Impact BI-C-1)**.

Increased Human Activity

The proposed project would involve development of seven neighborhoods, recreational facilities (e.g., parks), and designated open space. Increased human activity could result in trampling of vegetation and soil compaction outside of the impact footprint, and could affect the viability and function of suitable habitat for wildlife species. Trampling can alter an ecosystem, creating gaps in native vegetation either leading to soil erosion or allowing exotic, non-native plant species to become established. Trampling may also affect the rate of rainfall interception and evapotranspiration, soil moisture, water penetration pathways, surface flows, and erosion. An increased human population increases the risk for damage to suitable habitat for wildlife species. In addition, increased human activity can deter wildlife from using habitat areas near the proposed project Site. The cumulative indirect project impacts would be **significant (Impact BI-C-1)**.

Alteration of the Natural Fire Regime

The proposed project could potentially increase the risk of fire, including fire associated with electrical short circuits or electrical equipment malfunction within developed neighborhoods, or inadvertent/intentional ignitions within or adjacent to open space. Shorter-than-natural fire return intervals can preclude recovery of native vegetation between fires, weaken the ecological system, allow for invasion of exotic species, and result, in some cases, in permanent transition of vegetation to non-native communities, such as annual grassland and weedy communities (Malanson and O'Leary 1982; Keeley 1987; O'Leary et al. 1992). If the natural fire regime is suppressed, longer-than-natural fire return intervals can result in excessive buildup of fuel loads so that when fires do occur, they are catastrophic. Unnaturally long fire intervals can also result in senescence of plant communities, such as chaparral, that rely on shorter intervals for rejuvenation. Alterations of plant communities could affect wildlife that relies on those habitat types. The cumulative indirect project impacts would be **significant (Impact BI-C-1)**.

Altered Hydrology

As described in Section 1.2 of Chapter 1 of this EIR, the proposed project would include appropriate stormwater facilities. For purposes of analyzing potential indirect impacts associated with hydrology, urban run-off associated with landscaping and irrigation are described here. Water would be used for landscaping within residential units and maintained shared spaces (e.g., parks). These sources may alter the on-site hydrologic regime. These hydrologic alterations may affect special-status wildlife species. Altered hydrology can allow for the establishment of non-native plants and invasion by Argentine ants, which can compete with native ant species that are known seed dispersers and plant pollinators. Changes in plant composition could affect native vegetation communities and wildlife habitat. Potential impacts would be reduced by design features, including bioretention swales and bioretention basins that have been integrated into the project design, along with additional low-impact design features such as roadside swales. To eliminate potential flooding impacts during peak storm events, stormwater detention would be provided prior to runoff exiting the project Site. Drainage improvements would also be constructed for the off-site road improvements. However, the cumulative indirect project impacts would be **significant (Impact BI-C-1)**.

2.4.13.2 Riparian Habitat or Sensitive Natural Community

The reasonably foreseeable cumulative projects listed in Table 2.4-28 have the potential to result in adverse impacts to vegetation communities. Reasonably foreseeable cumulative projects have the potential to affect similar vegetation communities and land covers within the biological cumulative analysis study area. For cumulative effects to occur, cumulative projects would have to result in the loss of the same vegetation communities as the proposed project such that those

vegetation communities become limited in acreage or extent within the cumulative study area. Additionally, a cumulative impact to native vegetation communities could occur if the cumulative projects use all available land for mitigation such that the loss of native vegetation communities cannot be adequately compensated for within the cumulative study area.

The proposed project would impact up to 777.6 acres of vegetation communities and land covers on Site, and 43.7 acres off Site with Deer Springs Road Option A and 48.1 acres with Deer Springs Road Option B. Many of the vegetation communities directly impacted by the proposed project would be similar to those impacted by the other cumulative projects in the region. Impacts to vegetation communities would vary, but would generally be similar between the proposed project and the cumulative projects.

The proposed project's impacts to vegetation communities would be approximately 1.2 percent of the cumulative analysis study area. Although the foreseeable cumulative projects have not been quantified, the proposed project, combined with the reasonably foreseeable cumulative projects, would impact additional vegetation communities and land covers. Therefore, the proposed project, combined with the reasonably foreseeable cumulative projects in the biological cumulative study area, would contribute incrementally to adverse impacts on vegetation communities. However, the cumulative scenario would most likely impact less than 5 percent of the total cumulative study area; therefore, vegetation communities would not become limited in acreage or extent within the cumulative study area, and cumulative impacts to native vegetation communities would be **less than significant**.

2.4.13.3 Wildlife Movement

A cumulative impact to linkages or wildlife movement corridors, the movement of fish, and/or native wildlife nursery sites would occur if the listed cumulative projects, combined with the proposed project, would result in constraining or blocking known habitat linkages or result in a cumulative barrier to wildlife movement through the cumulative study area. The cumulative study area encompasses a mix of rural areas, agricultural land, residential and commercial development, and undeveloped land. Wildlife movement is currently constrained along the southern boundary of the Site by development and directly to the east by I-15, and varies in the surrounding areas. Wildlife movement corridors and linkages are identified in the draft North County Plan. Within the cumulative study area, linkages connect to various core habitat areas, primarily the San Marcos and Merriam Mountains, Daley Ranch – Lake Wolford, and Pala. Reasonably foreseeable projects that occur in the cumulative study area could potentially inhibit terrestrial wildlife movement, particularly in a north/south direction, because I-15 already presents a barrier to wildlife moving in an east/west direction. With the exception of California gnatcatcher, flying species such as bats, birds, and many invertebrates would still be able access suitable habitat within the open space preserve and adjacent preserve areas. The

total acreage of vegetation communities and land covers analyzed in the biological cumulative analysis study area is approximately 66,681 acres, and the proposed project, combined with reasonably foreseeable cumulative projects, would likely only impact approximately up to 5 percent of the total acreage, but wildlife movement for certain terrestrial species (e.g., large mammals) along the west side of I-15 would likely be interrupted or confined. Therefore, impacts from the proposed project combined with the reasonably foreseeable cumulative projects would be **significant (Impact BI-C-3)**.

Impacts to California gnatcatcher movement within the region is similar to the analysis provided in Sections 2.4.12.4(B) and 2.4.12.5(A), and would be **significant (Impact BI-C-2)**.

2.4.13.4 Local Policies, Ordinances, and Adopted Plans

A cumulative impact to regional planning would occur if the reasonably foreseeable cumulative projects, combined with the proposed project, would conflict with one or more local policies or ordinances protecting biological resources. Those projects within the biological cumulative analysis study area would, similar to the proposed project, be within the future North County Plan area. The County and Wildlife Agencies review projects using the interim processing guidelines in Section 6.6 and Exhibit B of the MSCP North (and East) Planning Agreement and the Focused Conservation Areas map. Those projects that achieve conservation requirements when that review is completed are deemed consistent with the draft North County Plan's Preliminary Conservation Objectives. Therefore, since the project is consistent, reasonably foreseeable projects, in combination with the proposed project, would **not cumulatively contribute** to a potential conflict with local plans.

2.4.14 Significance of Impacts Prior to Mitigation

2.4.14.1 Candidate, Sensitive, or Special-Status Species

2.4.14.1.1 Sensitive Plant Species

- | | |
|--------------------|---|
| Impact SP-1 | Significant short-term direct impacts to summer holly and Ramona horkelia. |
| Impact SP-2 | Significant long-term direct impacts to summer holly and Ramona horkelia. |
| Impact SP-3 | Significant short-term indirect impacts to summer holly and Ramona horkelia. |
| Impact SP-4 | Significant long-term indirect impacts to summer holly, Ramona horkelia, and rainbow manzanita. |

2.4.14.1.2 Sensitive Wildlife Species

- Impact W-1** Direct loss of federally threatened coastal California gnatcatcher nesting individuals (including nests and/or young).
- Impact W-2** Significant long-term direct impacts to coastal California gnatcatcher as a result of removal of suitable habitat.
- Impacts W-3** Significant short-term direct impacts from loss of County Group I and/or SSC species.
- Impact W-4** Significant long-term direct impacts to habitat for County Group I and/or SSC species (described in Tables 2.4-13 and 2.4-14~~2.4-16~~) as a result of removal of suitable habitat and sensitive vegetation types.
- Impact W-5** Significant short-term direct impacts to active nests or the young of nesting Group II.
- Impact W-6** Significant long-term direct impacts to raptor foraging habitat.
- Impacts W-7** Significant short-term indirect impacts from loss of County Group I and/or SSC species.
- Impact W-8** Significant long-term indirect impacts to special-status wildlife species.
- Impact W-9** Significant short-term direct impacts to tree-nesting raptors as a result of project construction.
- Impact W-10** Significant long-term direct impacts to tree-nesting raptors as a result of removal of suitable nesting habitat.

2.4.14.1.3 Core Wildlife Areas

- Impacts CWA-1** Significant impacts to an existing core wildlife area from construction-related activities that would result from short-term direct impacts.
- Impacts CWA-2** Significant long-term direct impacts to a core wildlife area and the subsequent viability of populations of multiple wildlife species as a result of removal of suitable nesting habitat.
- Impacts CWA-3** Significant impacts to an existing core wildlife area from construction-related activities that would result from short-term indirect impacts.

Impacts CWA-4 Significant impacts to an existing core wildlife area from long-term indirect edge effects.

2.4.14.2 Riparian Habitat or Sensitive Natural Community

- Impact V-1** Significant short-term, direct impacts to special-status vegetation communities.
- Impact V-2** Significant permanent, direct impacts to 757.2 acres of special-status upland vegetation communities.
- Impact V-3** Temporary impacts to ACOE/RWQCB/CDFW resources associated with grading.
- Impact V-4** Permanent direct impacts to County RPO wetlands, CDFW riparian habitat, and non-wetland waters of the United States/state.
- Impact V-5** Significant short-term, indirect impacts to special-status upland vegetation and riparian habitat.
- Impact V-6** Significant long-term, indirect impacts to special-status upland vegetation communities and jurisdictional resources.
- Impact V-7** Significant direct impacts to County RPO wetlands and wetland buffers.

2.4.14.3 Wildlife Movement and Nursery Sites

- Impact WM-1** Significant short-term direct impacts to potential foraging and nesting habitat.
- Impact WM-2** Significant permanent, direct impacts to the loss of potential foraging and nesting habitat.
- Impact WM-3** Significant impact to movement of large mammals from loss of wildlife corridors.
- Impact WM-4** Significant impacts to habitat connectivity for larger wildlife species.
- Impact WM-5** Significant impacts to wildlife behavior resulting from noise and/or nighttime lighting in a wildlife corridor.

2.4.14.4 Local Policies, Ordinances, and Adopted Plans

- Impact P-1** Significant permanent direct impacts to RPO wetlands through a legislative amendment to the RPO.

Impact P-2 Loss of active nests and/or young if construction activities occur during the nesting season.

2.4.14.5 Cumulative Impacts

Impact BI-C-1 Potential cumulative indirect impacts would be significant.

Impact BI-C-2 Cumulative direct impacts to California gnatcatcher movement within the region would be significant.

Impact BI-C-3 Cumulative impacts to wildlife movement corridors would be significant.

2.4.15 Mitigation Measures

Table 2.4-29 summarizes the impacts and mitigation required for impacts to special-status species, vegetation communities, and jurisdictional areas.

2.4.15.1 Candidate, Sensitive, or Special-Status Species

Mitigation measures and design considerations for special-status plant and wildlife species are described below.

M-BIO-1 CONSTRUCTION MONITORING: To prevent inadvertent disturbance to areas outside the limits of grading, all grading shall be monitored by a biologist. A “Project Biologist” approved by the County of San Diego (County) shall be contracted to perform biological monitoring during all grading, clearing, grubbing, trenching, and construction activities.

The following shall be completed:

1. The Project Biologist shall perform the monitoring duties before, during, and after construction pursuant to the most current version of the *County of San Diego Report Format and Content Requirements, Biological Resources*. The contract provided to the County shall include an agreement that this will be completed, and a Memorandum of Understanding (MOU) between the biological consulting company and the County shall be executed. The contract shall include a cost estimate for the monitoring work and reporting. In addition to performing monitoring duties pursuant to the most current version of the *County of San Diego Report Format and Content Requirements, Biological Resources*, the Project Biologist shall perform the following duties:
 - a. Attend the preconstruction meeting with the contractor and other key construction personnel prior to clearing, grubbing, or grading to reduce

conflict between the timing and location of construction activities with other mitigation requirements (e.g., seasonal surveys for nesting birds).

- b. Conduct meetings with the contractor and other key construction personnel describing the importance of restricting work to designated areas prior to clearing, grubbing, or grading. Perform weekly inspection of fencing and erosion control measures (daily during rain events) near proposed preservation areas and report deficiencies immediately to the Department of Public Works (DPW) Construction Inspector.
- c. Discuss procedures/training for minimizing harm to or harassment of wildlife encountered during construction with the contractor and other key construction personnel prior to clearing, grubbing, or grading.
- d. Review and/or designate the construction area in the field with the contractor in accordance with the final grading plan prior to clearing, grubbing, or grading.
- e. Conduct a field review of the staking to be set by the surveyor, designating the limits of all construction activity prior to clearing, grubbing, or grading.
- f. Supervise and monitor vegetation clearing, grubbing, and grading to ensure against direct and indirect impacts to biological resources that are intended to be protected and preserved.
- g. Flush special-status and other species (i.e., avian and other mobile species) from occupied habitat areas immediately prior to brush-clearing and earth-moving activities.
- h. Verify that the construction site is implementing the following storm water pollution prevention plan best management practices: dust-control fencing, removal of construction debris and a clean work area, covered trash receptacles that are animal-proof and weather-proof, prohibition of pets on the construction site, and a speed limit of 15 miles per hour during the daylight and 10 miles per hour during dark hours.
- i. Periodically monitor incoming landscape products for compliance with the prohibition on non-native invasive species and the requirement for landscaping composed of native species that do not require high irrigation rates.
- j. Periodically monitor the construction site in accordance with the project's fugitive dust control plan in compliance with San Diego County Air

Pollution Control District's regulations to reduce particulate matter less than 10 microns in diameter (PM_{10}) and fine particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) emissions during construction (refer to the Air Quality Technical Report). Periodically monitor the construction site to see that dust is minimized according to the fugitive dust control plan and that manufactured slopes are revegetated as soon as possible.

- k. Periodically monitor the construction site to see that artificial security light fixtures are directed away from open space and are shielded.
- l. Oversee the construction site so that cover and/or escape routes for wildlife from excavated areas are provided on a daily basis. All steep trenches, holes, and excavations during construction shall be covered at night with backfill, plywood, metal plates, or other means, and the edges covered with soils and plastic sheeting such that small wildlife cannot access them. Soil piles shall be covered at night to prevent wildlife from burrowing in. The edges of the sheeting shall be weighed down by sandbags. These areas may also be fenced to prevent wildlife from gaining access. Exposed trenches, holes, and excavations shall be inspected twice daily (i.e., each morning and prior to sealing the exposed area) by a qualified biologist to monitor for wildlife entrapment. Excavations shall provide an earthen ramp to allow for a wildlife escape route.
- m. Stop or divert all work when deficiencies require mediation and notify DPW Construction Inspector and the County Construction Inspector within 24 hours; produce periodic (monthly during grading) and final reports and submit to the Wildlife Agencies and the PDS (final report will release bond);
- n. Confer with the Wildlife Agencies and the County Construction Inspector within 24 hours any time protected habitat or gnatcatchers or other special-status species are being affected by construction.
- o. Keep daily monitoring notes for the duration of grading for submittal in a final report to substantiate the biological supervision of the grading activities and the protection of the biological resources.
- ~~o.p.~~ Make monthly updates available to the Wildlife Agencies and County based on the daily monitoring notes described above, until such time as the North County MSCP Plan is adopted, after which the MSCP plan provisions will replace this measure.

The cost estimate of the monitoring (provided in the contract) shall be added to the grading bonds that will be posted with the DPW, or bond separately with the PDS. The bond for monitoring shall be released upon the acceptance of the monitoring report for each Final Map.

Documentation: The applicant shall submit the monitoring contract, cost estimate, and MOU to the PDS for review and approval. The applicant shall provide verification that the cost of the monitoring has been added to the grading bond.

Timing: Monitoring shall be performed throughout the duration of grading; if this project includes more than one Final Map, each shall have separate monitoring contracts and documentation.

Monitoring: The PDS shall review the contract, MOU, and cost estimate or separate bonds for compliance with this condition. The cost estimate shall be forwarded to the project manager for inclusion in the grading bond cost estimate and grading bonds. The DPW shall add the cost of the monitoring to the grading bond costs.

M-BIO-2 CONSTRUCTION FENCING: To prevent inadvertent disturbance to sensitive vegetation and species, temporary construction fencing shall be installed. The temporary fencing shall be placed to confine project activities to the areas approved for construction activities and to protect from inadvertent disturbance all open space easements and preserve areas that do not allow grading, brushing, or clearing. Temporary fencing shall also be required in all locations of the project where proposed grading or clearing is within 100 feet of open space or preserve boundaries. The placement of such fencing shall be approved by the Department of Planning & Development Services (PDS), Permit Compliance Section. Upon approval, the fencing shall remain in place until the conclusion of grading activities, after which the fencing shall be removed.

Documentation: The applicant shall provide evidence that the fencing has been installed and have a California licensed surveyor certify that the fencing is located on the boundary of the open space easement(s). The applicant shall submit the certification letter to PDS for approval.

Timing: Prior to the preconstruction conference for each Final Map area, and prior to any clearing, grubbing, trenching, grading, or land disturbances, the fencing shall be installed, and shall remain for the duration of grading and clearing. This may be done in association with grading and improvement plans for each Final Map.

Monitoring: The County of San Diego Construction Inspector shall attend either the preconstruction conference and approve the installation of the temporary fencing, or review the certification and pictures provided by the applicant.

M-BIO-3 MONITORING REPORT: To ensure that the biological monitoring occurred during the grading phase of the project, a final biological monitoring report shall be prepared. The report shall substantiate the supervision of the grading activities and state that grading and construction activities did not impact any additional areas or any other sensitive biological resources. The report shall conform to the County of San Diego *Report Format and Content Requirements, Biological Resources*, and include the following items:

1. Photos of the temporary fencing that was installed during the trenching, grading, and clearing activities.
2. Monitoring logs showing the date and time that the monitor was on site.
3. Photos of the site after the grading and clearing activities.
4. Lists of species observed with special-status species mapped.

Documentation: The Project Biologist shall prepare the final report and submit it to the Department of Planning & Development Services (PDS) for review and approval.

Timing: Upon approval of each Final Map, and prior to approval of the associated grading and improvement plans, the monitoring contract and bonding shall be submitted and complete. Upon completion of grading activities for each Final Map, and prior to rough grading final inspection (Grading Ordinance Section 87.421.a.2), the final report shall be completed and accepted by the PDS.

Monitoring: The PDS shall review the final report for compliance with this condition and the report format guidelines. Upon approval of the report, the PDS shall inform the Department of Public Works (DPW) that the requirement is complete and the bond amount can be relinquished. If the monitoring was bonded separately, then PDS shall inform DPW to release the bond back to the applicant.

M-BIO-4 INVASIVE SPECIES PROHIBITION: The Department of Planning & Development Services (PDS) Landscape Architect shall require that all final landscape plans comply with the following: (1) no invasive plant species as included on the most recent version of the California Invasive Plant Council's California Invasive Plant Inventory for the project region shall be included, and

(2) the plant palette shall be composed of native species that do not require high irrigation rates. The Project Biologist shall periodically check landscape products for compliance with this requirement.

Monitoring: The PDS shall approve the final landscape plans; M-BIO-1 includes periodic monitoring of landscaping products brought to the project Site.

M-BIO-5 NESTING BIRD MANAGEMENT, MONITORING, AND REPORTING PLAN: To avoid impacts to nesting migratory birds and raptors and other nesting birds, which are a sensitive biological resource pursuant to CEQA, the MBTA and Fish and Game Code, breeding season avoidance shall be implemented on all plans.

DESCRIPTION OF REQUIREMENT: There shall be no brushing, clearing, blasting and/or grading allowed during the breeding season of migratory birds or raptors (between January 15 and August 31) or coastal California gnatcatcher (between February 15–August 15). The Director of PDS [PDS, PCC] may waive this condition, through written concurrence from the USFWS and the CDFW (i.e., Wildlife Agencies), provided that no nesting or breeding birds are present within 300 feet of the brushing, clearing or grading (500 feet for raptors) based on a pre-construction survey conducted by a County-approved biological consultant within seven days prior to the proposed start of clearing/grading. Prior to preconstruction conference and prior to any clearing, grubbing, trenching, grading, or any land disturbances and throughout the duration of the grading and construction, compliance with this condition is mandatory unless the requirement is waived by the County upon receipt of concurrence from the Wildlife Agencies. If construction work must occur during the avian breeding season (February 1 through August 31, and as early as January 1 for some raptors), the applicant shall prepare a Nesting Bird Management, Monitoring, and Reporting Plan (NBMMRP) to address avoidance of impacts to nesting birds. This plan shall be designed in coordination with the Wildlife Agencies. To avoid impacts to nesting birds the applicant shall:

1. Prepare an NBMMRP that shall include the following: nest survey protocols describing the nest survey methodologies; a management plan describing the methods to be used to avoid nesting birds and their nests, eggs, and chicks; a monitoring and reporting plan detailing the information to be collected for incorporation into a regular Nest Monitoring Log with sufficient details to monitor the applicant's compliance with California Fish and Game Code Sections 3503, 3503.5, 3511, and 3513; guidance for the monitoring biologists on reducing stress and harm to the nesting birds as a result of monitoring activities, including instructions on frequency of monitoring visits and

distance to keep from the nest; the schedule for the submittal (usually weekly) of the Nest Monitoring Log; standard buffer widths deemed adequate to avoid or minimize significant project-related edge effects (disturbance) on nesting birds and their nests, eggs, and chicks; a detailed explanation of how the buffer widths were determined; and measures the applicant will implement to preclude birds from using project-related structures (e.g., construction equipment, facilities, or materials) for nesting.

2. Conduct preconstruction nesting bird surveys within 72 hours ~~of~~ prior to construction-related activities and implement appropriate avoidance measures for identified nesting birds.
3. If feasible, conduct surveys beyond the project Site to determine presence of nesting birds that the project activities may affect—300 feet for passerine birds and 500 feet for raptors and coastal California gnatcatchers. The survey protocols shall include a detailed description of methodologies used by CDFW-approved avian biologists to search for nests and describe avian behaviors that indicate active nests. The protocols shall include the size of the site being surveyed, method of search, and behavior that indicates active nests.
4. Include each nest identified on the project Site in the Nest Monitoring Logs. The Nest Monitoring Logs shall be updated daily and submitted to CDFW weekly. Since the purpose of the Nest Monitoring Logs is to allow CDFW to track compliance, the logs shall include information necessary to allow comparison between nests protected by standard buffer widths recommended for the project (300 or 500 feet) and nests with buffer widths that were reduced by encroachment of project-related activities. The Nest Monitoring Logs shall provide a summary of each nest identified, including the species, status of the nest, buffer information, and fledge or failure data. The Nest Monitoring Logs shall allow for tracking the success and failure of the buffers, and shall provide data on the adequacy of the buffers for certain species.
5. Rely on its avian biologists to coordinate with CDFW and USFWS to determine the appropriate standard buffer widths for nests within the project corridor/footprint to employ based on the sensitivity levels of specific species or guilds of avian species. The determination of the standard buffer widths shall be Site- and species-/guild-specific and data-driven, and not based on generalized assumptions regarding all nesting birds. Determination of the buffer widths shall consider the following factors:
 - a. Nesting chronologies
 - b. Geographic location

- c. Existing ambient conditions (human activity within line of sight—cars, bikes, pedestrians, dogs, noise)
 - d. Type and extent of disturbance (e.g., noise levels and quality—punctuated, continual, ground vibrations; blasting-related vibrations proximate to tern colonies are known to make the ground-nesting birds flush the nests)
 - e. Visibility of disturbance
 - f. Duration and timing of disturbance
 - g. Influence of other environmental factors
 - h. Species' site-specific level of habituation to the disturbance
 - i. Construction-related noise levels in coastal California gnatcatcher occupied habitat within 500 feet of construction activity would not exceed 60 dBA Leq or pre-construction ambient noise levels, whichever is greater. Project construction within 500 feet of occupied habitat would occur outside of the breeding season if possible. If necessary, construction activities during the breeding season would be managed to limit noise levels in occupied habitat within 500 feet of the project or noise attenuation measures, such as temporary sound walls, would be implemented to reduce noise levels below 60 dBA Leq or below existing ambient noise levels, whichever is greater.
- 6. Apply the standard buffer widths to avoid the potential for project-related nest abandonment and failure of fledging, and minimize any disturbance to nesting behavior. If project activities cause or contribute to a bird being flushed from a nest, the buffer must be widened.
 - 7. Avoidance and buffering of nests in the process of being built on construction equipment or developed structures shall not be necessary. Additionally, although direct impacts to nests with eggs or chicks shall not be allowed, no buffer requirements shall apply.

Documentation: The applicant shall submit the NBMMRP for review and approval by the County of San Diego (County) and the Wildlife Agencies.

Timing: The NBMMRP shall be submitted and approved prior to approval of the first Final Map. No grading shall occur until concurrence is received from the County and the Wildlife Agencies. The Nest Monitoring Logs shall be submitted to the County and the Wildlife Agencies prior to the preconstruction conference

and prior to any clearing, grubbing, trenching, grading, or any land disturbances, and throughout the duration of the grading and construction. Compliance with this condition is mandatory unless the requirement is waived by the County upon receipt of concurrence from the Wildlife Agencies.

Monitoring: The County Construction Inspector shall not allow any grading during the specified dates, unless a concurrence from the Wildlife Agencies is received and reviewed by the Department of Planning & Development Services.

M-BIO-6 REVEGETATION PLAN: To compensate for temporary impacts to special-status vegetation and wildlife habitat impacts, a final Revegetation Plan shall be submitted and approved for temporary impacts from grading to areas within the preserve and outside of the LBZ easement and FMZ. The revegetation plan shall be in compliance with the conceptual restoration plan (Appendix J of the Biological Resources Technical Report (Appendix H)), and provide replacement of comparable native vegetation. The final revegetation plan shall include, at a minimum, the implementation strategy; appropriate seed/source materials (including seed sourced from the existing on-site native plants, to the extent feasible); appropriate planting method; an irrigation plan; quantitative and qualitative success criteria; a maintenance, monitoring, and reporting program; estimated completion time; and contingency measures. The revegetation plan shall conform to the most current version of the County of San Diego (County) *Report Format and Content Requirements for Revegetation Plans*. To ensure project completion and success of the revegetation plan, a surety shall be provided and an agreement shall be executed with the County and consist of a letter of credit, bond, or cash for 100 percent of the estimated costs associated with implementation of the revegetation plan and a 10 percent cash deposit of the cost of all improvements (no less than \$3,000; no more than \$30,000). The surety shall be released upon completion of the revegetation plan, provided the installed vegetation is in a healthy condition and meets the plan's success criteria.

Documentation: The applicant shall prepare the revegetation plan and submit it for review with the applicable review fees and deposits.

Timing: Prior to the approval of the first associated map and prior to the approval of the first associated plan or issuance of the first associated permit, the revegetation plan shall be approved by the Department of Planning & Development Services (PDS).

Monitoring: The PDS Landscape Architect shall review the revegetation plan for conformance with this condition and the County's *Report Format and Content Requirements for Revegetation Plans*. Upon approval of the revegetation plan, a Director's Decision of approval shall be issued to the applicant, with the request for compliance with a Secured Agreement for implementation of the revegetation plan. Upon receipt of the compliance letter, the PDS Landscape Architect shall sign the Agreement for the Director of PDS and ensure that the cash deposit is collected. Upon acceptance of the Agreement, securities, and cash deposit, the PDS Landscape Architect shall provide a confirmation letter acknowledging acceptance of the securities.

M-BIO-7 LIGHTING PLAN: All artificial outdoor light fixtures shall be installed so they are directed away from open space and are shielded in accordance with the project's lighting plan standards as outlined in the Specific Plan for the project. Light fixtures shall be installed in conformance with the County of San Diego's (County) Light Pollution Code, Building Code, Electrical Code, and lighting requirements specified in Section 6324 (Lighting Permitted in Required Yards) and Section 6326 (Lighting Not in Required Yards) of the Zoning Ordinance, along with any other related state and federal regulations such as California Title 24.

Documentation: The applicant shall submit building plans to the County for review in compliance of the above regulations.

Timing: Prior to the approval of all building permits.

Monitoring: The County building inspector shall review structures for compliance with this condition. During construction, the Project Biologist shall review lighting for compliance with this measure as part of the construction monitoring requirement.

M-BIO-8A PRESERVE: The applicant shall preserve in permanent open space approximately 1,420.9 acres of native habitats, generally consistent with the assemblage of vegetation communities impacted by the project in a proposed on-site and off-site open space preserve area (see Table 2.4-27) (see Appendix K to the BTR for the off-site mitigation site description). This shall include preservation of 1,420.9 acres of native habitats to mitigate for project impacts to 760.6 acres of special-status vegetation communities (both upland and riparian), thereby preserving compensatory habitat that provides equal or greater benefits to plant and wildlife species. Proposed on-site open space preserve has already

been evaluated and may be used to satisfy this requirement through M-BIO-8B through M-BIO-8E.

Documentation: An RMP shall be prepared per M-BIO-8D and an application for the RMP shall be submitted to the PDS.

Timing: Prior to issuance of a grading permit, the mitigation shall occur.

Monitoring: The PDS shall accept an application for an RMP, and PDS and DPR shall review the RMP submittal for compliance with this condition and the RMP Guidelines.

M-BIO-8B BIOLOGICAL OPEN SPACE EASEMENT. The County of San Diego (County) shall be granted a biological open space easement, as shown on the approved Tentative Map for the on-site open space and a separate open space easement exhibit for the off-site biological open space. These easements shall be for the protection of biological resources and all of the following shall be prohibited on any portion of the land subject to said easement: grading; excavating; placing soil, sand, rock, gravel, or other material; clearing vegetation; constructing, erecting, or placing any building or structure; vehicular activities; dumping trash; or using for any purpose other than as open space. Granting this open space shall authorize the County and its agents to periodically access the land to perform management and monitoring activities for species and habitat conservation. The only exception(s) to this prohibition are the following:

- ~~1. Selective clearing of vegetation by hand to the extent required by written order of the fire authorities for the express purpose of reducing an identified fire hazard. Although clearing for fire management is not anticipated with the creation of this easement, such clearing may be deemed necessary in the future for the safety of lives and property. All fire clearing shall be pursuant to the applicable fire code of the fire authority having jurisdiction and the Memorandum of Understanding dated February 26, 1997, between the Wildlife Agencies and the fire districts and any subsequent amendments thereto.~~
- 2.1. Activities conducted pursuant to a revegetation or habitat management plan approved by the Director of the Department of Planning & Development Services, Department of Parks and Recreation, and Department of Public Works.
- 3.2. Vegetation removal or application of chemicals for vector-control purposes where expressly required by written order of the County of San Diego Department of Environmental Health.

4.3. Uses, activities, and placement of structures expressly permitted and shown on the plot plan.

5.4. Construction, use, and maintenance of multi-use, non-motorized trails per the specific plan (Figure 1-3, Parks and Trails Plan).

Documentation: The applicant shall show the on-site open space easement on the Final Map and open space easement exhibit with the appropriate granting language on the title sheet concurrent with Final Map review, then submit them for preparation and recordation with the [DGS, RP] and pay all applicable fees associated with preparation of the documents. For the off-site open space an easement will be dedicated to the County through a separate document.

Timing: Prior to the approval of each Final Map, and on the associated map and prior to the approval of any associated plan and issuance of any associated permit, the on-site and off-site biological open space easements shall be recorded.

Monitoring: For recordation on the map, the [PDS, LDR] shall route the Final Map to [PDS, PCC] for approval prior to map recordation. The [PDS, PCC] shall preapprove the language and estimated location of the easements prior to recordation. The [PDS LDR] shall satisfy the condition after map recordation.

M-BIO-8C LIMITED BUILDING ZONE EASEMENT: A Limited Building Zone Easement shall be granted to prohibit the building of structures that would require vegetation clearing within the protected biological open space for fuel management purposes. The easement must extend at least 100 feet from the Biological Open Space boundary.

DESCRIPTION OF REQUIREMENT: Grant to the County of San Diego a LBZ Easement as shown on the Tentative Map. The purpose of this easement is to limit the need to clear or modify vegetation for fire protection purposes within the adjacent biological open space easement and prohibit the construction or placement of any structure that would require vegetation clearing within the protected biological open space for fuel management purposes. The only exceptions to this prohibition are Structures that do not require fuel modification/vegetation management.

Documentation: The applicant shall show the easement on the Final Map with the appropriate granting language on the title sheet concurrent with Final Map review, then submit them for preparation and recordation with the [DGS, RP] and pay all applicable fees associated with preparation of the documents.

Timing: Prior to the approval of each Final Map, and on the associated map and prior to the approval of any associated plan and issuance of any associated permit, the Limited Building Zone easements shall be recorded.

Monitoring: For recordation on the map, the [PDS, LDR] shall route the Final Map to [PDS, PCC] for approval prior to map recordation. The [PDS, PCC] shall preapprove the language and estimated location of the easements prior to recordation. The [PDS LDR] shall satisfy the condition after map recordation.

M-BIO-8D RESOURCE MANAGEMENT PLAN: To provide for the long-term management of the proposed biological open space preserve, a Resource Management Plan (RMP) shall be prepared and implemented. Conceptual RMPs are provided as Appendix L (on-site open space) and Appendix M (off-site open space) to the Biological Resources Technical Report.

DESCRIPTION OF REQUIREMENT: Submit to and receive approval from the Director of the Department of Planning & Development Services (PDS), an RMP consistent with the project's RPP, on file as Environmental Review Number PDS2014-MPA-14-018. The final RMP cannot be approved until the following has been completed to the satisfaction of the Director of PDS, and, in cases where the Department of Parks and Recreation has agreed to be the owner/manager, to the satisfaction of the Director of the Department of Parks and Recreation:

1. The RMP shall be prepared and approved pursuant to the most current version of the County of San Diego (County) Biological Report Format and Content Requirements.
2. The habitat land to be managed shall be completely purchased.
3. The biological open space easements shall be dedicated to ensure that the land is protected in perpetuity.
4. A resource manager shall be selected, and evidence provided by the applicant as to the acceptance of this responsibility by the proposed resource manager.
5. The RMP funding costs, including a Property Assessment Record or other equally adequate forecast. The funding mechanism (endowment or other equally adequate mechanism) to fund annual costs for the RMP and the holder of the security shall be identified and approved by the County.
6. A contract between the applicant and County shall be executed for implementation of the RMP.

7. Annual reports shall include an accounting of all required tasks and details of tasks addressed during the reporting period, and an accounting of all expenditures and demonstration that the funding source remains adequate.

Documentation: The applicant shall prepare the RMP and submit it to the PDS and pay all applicable review fees.

Timing: Prior to approval of the first Final Map, submit the RMP for review and approval.

Monitoring: The PDS shall review the RMP for compliance with the content guidelines, the conceptual RMP, and this condition.

M-BIO-8E BIOLOGICAL OPEN SPACE FENCING AND SIGNAGE: To protect the proposed open space easement from unauthorized entry or disturbance, permanent post and rail fencing, or similar permeable fence, shall be installed along the boundaries of the biological open space. Open space signage shall be placed approximately every 200 feet along the fencing (see Figure 2.4-11, Proposed Biological Open Space/Conceptual Signage and Fencing).

DESCRIPTION OF REQUIREMENT: Open space fencing or walls shall be placed adjacent to residential uses and roads as shown on figure 2.4-11. Open space signage shall be installed as shown on Figure 2.4-11, Proposed Biological Open Space/Conceptual Signage and Fencing, and shall be corrosion resistant, a minimum of 6 inches by 9 inches, on posts not less than 3 feet in height from the ground surface, and must state the following:

Sensitive Environmental Resources

Area Restricted by Easement

Entry without express written permission from the County of San Diego is prohibited. To report a violation or for more information about easement restrictions and exceptions, contact the County of San Diego, Planning & Development Services (Reference: PDS2015-ER-15-08-001)

Documentation: The applicant shall install the fencing or walls as indicated on Figure 2.4-11, Proposed Biological Open Space/Conceptual Signage and Fencing Plan, and include them on the building plans. The applicant shall install the signage as indicated on the Proposed Biological Open Space/Conceptual Signage and Fencing Plan, and have them photographed and verified by a California Registered Engineer or licensed surveyor.

Timing: Prior to occupancy, the fencing or walls and signs shall be in place.

Monitoring: The Department of Planning & Development Services shall verify compliance of the fencing or walls through review of the building permits and this condition. Evidence of the signage shall be photos and a statement from a California Registered Engineer or licensed surveyor that the biological open space signs have been installed in accordance with the Open Space Fencing and Signage Plan.

M-BIO-9 HORKELIA RELOCATION PLAN: For any direct loss of Ramona horkelia (*Horkelia truncata*), the applicant shall prepare and implement a relocation plan prior to the issuance of grading permits. The relocation plan shall provide for replacement of individual plants to be removed at a minimum 1:1 ratio within suitable receptor sites(s) where no future construction-related disturbance will occur. The relocation plan shall specify, at minimum, the following: (1) the location of the receptors site(s) in protected open space areas within the project Site; (2) appropriate methods for replacement (e.g., harvesting seeds, salvaging and transplantation of impacted plants, and/or nursery propagation); (3) receptor site preparation methods; (4) schedule and action plan for maintaining and monitoring the receptor site(s); (5) list of performance criteria and standards for successful mitigation; (6) measures to protect the receptor site(s) (e.g., trespass and erosion control, weeding); and (7) cost of implementing the relocation plan.

Documentation: The applicant shall prepare a final Horkelia Mitigation Plan that complies with the Conceptual Restoration Plan and submit it for review with the applicable review fees and deposits (this is considered a revegetation plan submittal).

Timing: Prior to the approval of the first associated map and prior to the approval of the first associated plan or issuance of the first associated permit, the Horkelia Mitigation Plan shall be approved.

Monitoring: The Department of Planning & Development Services shall review the Horkelia Mitigation Plan for conformance with this condition and the applicable elements of the most current version of the County of San Diego *Report Format and Content Requirements for Revegetation Plans*. Upon approval of the Horkelia Mitigation Plan, security for success of the Horkelia Mitigation Plan shall be collected and the applicant shall provide a confirmation letter acknowledging acceptance of securities.

M-BIO-10 CONTROL OF INVASIVE SPECIES: The Resource Manager will map occurrences of perennial, non-native species that have a rating of moderate or high by the California Invasive Plant Council. If found, weed control treatments shall include all legally permitted chemical, manual, and mechanical methods applied with the authorization of the County of San Diego agriculture commissioner. The application of herbicides shall be in compliance with all state and federal laws and regulations under the prescription of a pest control advisor and implemented by a licensed applicator. Where manual and/or mechanical methods are used, disposal of the plant debris shall follow the regulations set by the County of San Diego agriculture commissioner. ~~The timing of the weed control treatment shall be determined for each plant species in consultation with the pest control advisor, County of San Diego agriculture commissioner, and California Invasive Plant Council with the goal of controlling populations before they start producing seeds.~~

Timing: The timing of the weed control treatment shall be on an as-needed basis determined for each plant species in consultation with the pest control advisor, County of San Diego agriculture commissioner, and California Invasive Plant Council with the goal of controlling populations before they start producing seeds.

Monitoring: The County requires monthly monitoring of the open space. The Resource Manager shall visit the open space each month in order to monitor the overall conditions of the open space and determine if any management tasks are required. The Resource Manager shall monitor the treated areas until the invasive species are determined to be eradicated.

Documentation: An annual monitoring letter report will be submitted to the County at the end of January, which summarizes the overall condition of vegetation communities and sensitive species in the Open Space Preserve, outlines proposed management tasks for the following year, and provides results of management activities proposed in the previous report.

M-BIO-11 FIRE PROTECTION PLAN: To minimize the potential exposure of the project Site to fire hazards, all features of the Fire Protection Plan for the Newland Sierra Project shall be implemented in conjunction with development of the project.

2.4.15.2 Riparian Habitat or Sensitive Natural Community

The proposed project would impact 40 percent (776.6 acres of 1,985 acres) of the special-status vegetation communities on Site through development and fuel modification. The off-site improvements would impact between 70.0 and 72.6 acres.

Mitigation for short-term, direct impacts to special-status vegetation communities include mitigation measures M-BIO-1 (biological monitoring to avoid unintentional construction impacts), M-BIO-2 (temporary construction fencing), and M-BIO-3 (monitoring verification through preparation of a biological monitoring report).

Mitigation for short-term and long-term indirect impacts to special-status vegetation communities are analyzed in Sections 2.4.4 and 2.4.5. The project would require construction monitoring to avoid unintentional impacts to species and habitat impacts (M-BIO-1); construction areas would have temporary construction fencing to avoid inadvertent habitat destruction (M-BIO-2); there would be monitoring verification through preparation of a biological monitoring report (M-BIO-3); landscape plans would prohibit invasive species and landscape products would be verified on the job site (M-BIO-4) by compensation with like (occupied) habitat and habitat management of existing populations of sensitive species, suitable habitat, and special-status vegetation communities and placing a biological open space easement over the open space (M-BIO-8A and M-BIO-8B); a Limited Building Zone easement would be placed around the biological open space and will extend at least 100 feet from the boundary; fencing and signage would be installed around biological open space (M-BIO-8E); clearing or modification of vegetation adjacent to biological open space would be limited (M-BIO-8C); construction monitoring would include a fugitive dust control plan to prevent dust-related impacts (M-BIO-1); a Resource Protection Plan would be in place to coordinate regulated herbicide application to control invasive species, a fire protection plan would minimize the potential exposure of the project Site to fire hazards, and ongoing annual monitoring and reporting would occur (M-BIO-8D, M-BIO-10, and M-BIO-11); and federal and state agency permits for jurisdictional wetland would result in no-net-loss of wetlands through revegetation and enhancement (M-BIO-12). This impact would be mitigated to less than significant through implementation of the above mitigation measures.

In accordance with County guidelines (County of San Diego 2010a), impacts to special-status vegetation communities would require mitigation. There would be permanent direct impacts to approximately 757.2 acres of special-status upland vegetation communities, and 497.3 acres of habitat with equivalent function and value are required to be conserved to offset this significant impact. Mitigation measure M-BIO-8 describes the on-site and off-site preservation of 1,420.9 acres of open space, which would mitigate for impacts to special-status vegetation communities.

M-BIO-12 FEDERAL AND STATE AGENCY PERMITS: To comply with the state and federal regulations for impacts to U.S. Army Corps of Engineers (ACOE), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW) jurisdictional resources, the following agency permits are required, or verification that they are not required shall be obtained.

The following permit and agreement shall be obtained, or evidence from the respective resource agency, satisfactory to the director of the Department of Planning & Development Services (PDS) that such an agreement or permit is not required, shall be provided:

- a. A Clean Water Act, Section 401/404 permit issued by the California RWQCB and ACOE for all project-related disturbances of waters of the United States and/or associated wetlands.
- b. A Section 1602 Streambed Alteration Agreement issued by CDFW for all project-related disturbances of any streambed and/or associated riparian habitat.

Documentation: The applicant shall consult each agency to determine if a permit or agreement is required. Upon completion of the agency review of this project, the applicant shall provide a copy of the permit(s)/requirement(s)/agreement(s).

Timing: Prior to approval of any grading and or improvement plans and issuance of any grading or construction permits.

Monitoring: PDS shall review the permits/agreements for compliance with this condition. Copies of these permits shall be included on the grading plans.

2.4.15.3 Wildlife Movement and Nursery Sites

The project would include construction monitoring to avoid unintentional species and habitat impacts (M-BIO-1); construction areas would have temporary construction fencing to avoid inadvertent habitat destruction (M-BIO-2); there would be monitoring verification through preparation of a biological monitoring report (M-BIO-3); and vegetation would be replaced through a vegetation plan, where possible, for temporary vegetation impacts (M-BIO-6). With these measures, short-term, direct impacts that would impact potential foraging and breeding habitat would be significant and mitigated. Mitigation for long-term direct impacts to potential foraging and breeding habitat for wildlife species includes M-BIO-8A through M-BIO-8E (habitat preservation and management).

2.4.15.4 Local Policies, Ordinances, and Adopted Plans

The proposed project would mitigate for impacts to RPO wetlands through on-site and, if needed, off-site conservation of open space.

Project construction would be phased, where appropriate, to avoid work during the bird breeding season (generally January through August). If construction activity is to commence during the breeding season, a biological survey for nesting bird species must be conducted within the proposed impact area 72 hours prior to each new construction activity, , a waiver of nesting bird season prohibition obtained from the director of PDS, and implementation of the Nesting Bird Management, Monitoring, and Reporting Plan in coordination with the wildlife agencies as described in mitigation measure M-BIO-5, above.

No other mitigation is proposed for impacts to local policies, ordinances, and plans because the proposed project remains consistent with all approved planning documents and plans.

2.4.15.5 I-15 Interchange Improvements

While the final configuration and design of the Caltrans interchange improvements are not known at this time, Caltrans' selection of the final "build" project or alternative may have the potential to impact or remove biological resources, including RPO wetlands. To ensure potential impacts to biological resources remain less than significant, this EIR recommends the following measure:

M-BIO-13 I-15 INTERCHANGE IMPROVEMENTS: Caltrans can and should prepare, or cause to be prepared, a biological resources study to evaluate these potential impacts. Remaining potentially significant biological impacts of the interchange improvements require further detail as to the Caltrans-selected "build" project or alternative, along with its size, configuration, and disturbance zones.

2.4.16 Conclusion

2.4.16.1 Candidate, Sensitive, or Special-Status Species

2.4.16.1.1 Sensitive Plant Species

Impact SP-1

The significant short-term direct impacts to summer holly and Ramona horkelia would be reduced to **less than significant** through implementation of mitigation measures **M-BIO-1, M-BIO-2, M-BIO-3, and M-BIO-9**, which require biological monitoring, temporary construction fencing, preparation of a biological monitoring report, and relocation of Ramona horkelia through implementation of a Mitigation and Monitoring Plan. These mitigation measures would

prevent and document that construction would not cause additional impacts beyond the project footprint.

Impact SP-2

The significant long-term direct impacts to summer holly and Ramona horkelia would be reduced to **less than significant** through implementation of mitigation measures **M-BIO-1**, **M-BIO-8A**, and **M-BIO-9**, which require biological monitoring, commensurate on- or off-site habitat management and conservation that has been demonstrated to contain habitat for these species, and relocation of Ramona horkelia through implementation of a Mitigation and Monitoring Plan. This would reduce the impact to less than significant because there would be adequate numbers of individuals and habitat to preserve and manage the species in perpetuity. Impacts to 14 percent of the summer holly population would be mitigated with on-site preservation and management (M-BIO-8A). This would reduce the impact to less than significant because there would be adequate numbers of individuals and habitat to preserve and manage the species in perpetuity. Impacts to 100 percent of the Ramona horkelia population would be mitigated through a transplantation/revegetation program that would meet applicable standards and be regulated through a Revegetation Plan (M-BIO-9) (see Appendix I of the BTR (Appendix H)).

Impact SP-3

The significant short-term indirect impacts to summer holly and Ramona horkelia would be reduced to **less than significant** through implementation of mitigation measures **M-BIO-1**, **M-BIO-2**, and **M-BIO-3**, which require biological monitoring during construction, temporary construction fencing, and a biological monitoring report. These impacts have been reduced to less than significant because these measures would prevent and document that construction would not cause additional impacts beyond the project footprint.

Impact SP-4

The significant long-term indirect impacts to summer holly, Ramona horkelia, and rainbow manzanita would be reduced to **less than significant** through implementation of mitigation measures **M-BIO-4**, **M-BIO-8A-E**, **M-BIO-10**, and **M-BIO-11**, which provide for biological review of landscape plans, habitat conservation and management of equivalent function and value, regulation of landscape installation and herbicide application, and implementation of a fire protection plan. Potential indirect impacts be reduced to less than significant because

human activity would be restricted to the project footprint, the risk of fire would be reduced, and release of exotic plants and animals would be minimized to the extent possible, and the revegetation plan would include adaptive management that would add measures to restore the population if needed (Appendix I of the BTR (Appendix H)).

2.4.16.1.2 Sensitive Wildlife Species

Impact W-1

Direct loss of federally threatened coastal California gnatcatcher nesting individuals (including nests and/or young) would be reduced to **less than significant** through implementation of mitigation measures **M-BIO-1, M-BIO-2, M-BIO-3, M-BIO-4, M-BIO-5, M-BIO-6, and M-BIO-7**, which require biological monitoring during construction, temporary construction fencing, preparation of a biological monitoring report, review of landscape plans, preconstruction surveys for nesting birds and setbacks, and minimizing night lighting. Biological monitoring and reporting would ensure that additional habitat is not impacted during construction, and that the best management practices (BMPs) outlined in the Storm Water Pollution Prevention Plan (SWPPP) are adhered to. Preconstruction surveys would identify locations of coastal California gnatcatchers and other migratory bird nests and implement construction limitations or provide suitable buffers between these locations and construction activities. Review of the conceptual landscape plan would ensure that native species are being used, thus reducing the potential for invasive species to encroach upon existing native habitat. PDS would confirm use of native species during approval of the final landscape plans prior to grading. Minimizing night and outdoor lighting would reduce disruption of nocturnal wildlife movement. Therefore, implementation of these mitigation measures would reduce these impacts to less than significant.

Impact W-2

The significant long-term direct impacts to coastal California gnatcatcher as a result of removal of suitable habitat would be reduced to **less than significant** through implementation of mitigation measures **M-BIO-8A through M-BIO-8E**, which would provide commensurate on- or off-site habitat management and conservation that is demonstrated to contain habitat for these species. The proposed project has been incorporated into the overall conservation strategy of the County's draft North County Plan, and the development areas and biological open space areas of the proposed

project are identified as proposed hardline areas in the draft North County Plan (County of San Diego 2016). Loss of coastal sage scrub and any associated incidental take of California gnatcatcher would be authorized through the County's Section 4(d) HLP process or through Section 7 consultation with the US Army Corps of Engineers and the USFWS. A Draft Habitat Loss Permit, including 4(d) findings has been provided in Appendix H of this EIR. As demonstrated by the incorporation of the proposed project as a proposed hardline area in the draft North County Plan and by the draft HLP findings provided in Appendix H, the loss of coastal sage scrub associated with the proposed project would be consistent with the NCCP Guidelines, County's draft North County Plan, and the Section 4(d) Rule.

Impacts W-3 and W-7: Potential significant short-term direct and indirect impacts from loss of County Group I and/or SSC species would be reduced to **less than significant** through implementation of mitigation measures **M-BIO-1, M-BIO-2, M-BIO-3, M-BIO-4, M-BIO-5, M-BIO-6, and M-BIO-7**, which require biological monitoring during construction, preparation of a biological monitoring report, biological review of landscape plans, preconstruction surveys for nesting birds and setbacks, revegetation of temporarily impacted areas, and minimizing night and outdoor lighting. Biological monitoring and reporting would ensure that additional habitat is not impacted during construction and that the BMPs outlined in the SWPPP are adhered to. Preconstruction surveys would identify locations of nesting birds and implement construction limitations or provide suitable buffers between these locations and construction. The conceptual landscape plans would demonstrate that native species are being used, thus reducing the potential for invasive species to encroach upon existing native habitat. PDS would confirm use of native species during approval of the final landscape plans prior to grading. Minimizing night and outdoor lighting would reduce disruption of nocturnal wildlife movement and harm to nesting and nursery sites, and monitoring excavated areas and soil piles would prevent entrapment and potential death of wildlife species. Therefore, implementation of these mitigation measures would reduce these impacts to less than significant because the measures would minimize the potential for loss of individuals.

Impact W-4

The significant long-term direct impacts to habitat for County Group I species (described in Table ~~2.4-16~~ 2.4-13 and 2.4-14) as a result of removal of suitable habitat and sensitive vegetation types would be reduced to **less than significant** through implementation of mitigation measure **M-BIO-8A**, which would provide commensurate on- and off-site purchase of mitigation lands, habitat management and conservation on those lands that have been demonstrated to contain habitat for these species, and off-site preservation of sensitive habitat and species in accordance with the County's *Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources* through established mitigation ratios.

This would reduce the impact to less than significant because the amount of preserved habitat would be adequate to compensate for the rarity of the habitat types and would be managed in perpetuity to provide equivalent function and value, all in accordance with the County's *Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources*.

Impact W-5

The significant short-term direct impacts to active nests or the young of nesting Group II or SSC species would be reduced to **less than significant** through implementation of mitigation measure **M-BIO-5**, which would require preconstruction surveys for nesting birds and setbacks for active nests. These impacts would be reduced to less than significant by ensuring that nests and fledglings are not directly impacted by construction activities. Active nests would be mapped during the nesting bird surveys, and buffers to eliminate construction activities near nests would be applied.

Impact W-6

The significant long-term direct impacts to raptor foraging habitat would be reduced to **less than significant** through implementation of mitigation measures **M-BIO-8A** through **M-BIO-8E**, which would provide commensurate on- and off-site habitat, management, and conservation that has been demonstrated to contain raptor foraging habitat.

Impact W-8

The significant long-term indirect impacts to special-status wildlife species would be reduced to **less than significant** through the implementation of mitigation measures **M-BIO-4**, **M-BIO-6**, **M-BIO-8A-E**, and **M-BIO-11**, which would provide for biological review of

landscape plans, revegetation of temporarily impacted areas, habitat conservation and management of equivalent function and value, and implementation of a fire protection plan. Potential indirect impacts would be reduced to less than significant because human activity would be restricted to the project footprint, the risk of fire would be reduced, and release of exotic plants and animals would be minimized to the extent possible, and the revegetation plan would include adaptive management that would add measures to restore the population if needed (Appendix I of the BTR (Appendix H)).

Impact W-9

The significant short-term indirect impacts to tree-nesting raptors as a result of project construction would be reduced to **less than significant** through mitigation measure **M-BIO-5**, which would provide for avoidance of impacts through setbacks, preconstruction surveys for nesting birds and implementation of nest buffers should nests be found.

Impact W-10

The significant long-term direct impacts to tree-nesting raptors as a result of removal of suitable nesting habitat, as shown in Table 2.4-13 and 2.4-14 and discussed in Section 2.4.12.1(L), would be reduced to **less than significant** through implementation of mitigation measures **M-BIO-8A** through **M-BIO-8E**, which would provide for off-site management and conservation of habitat with equivalent or better function and value for these species. Avoidance of direct impacts on Site for individuals would be ensured during construction by a monitoring biologist.

2.4.16.1.3 *Core Wildlife Area*

Impacts CWA-1 and CWA-3: Significant impact to the existing core wildlife area from construction-related activities that would result from short-term direct impacts would be mitigated to **less than significant** through the implementation of **M-BIO-1, M-BIO-2, M-BIO-3, M-BIO-6, and M-BIO-7**. These mitigation measures require biological monitoring during construction, temporary construction fencing, preparation of a biological monitoring report, revegetation of temporary impacts, and minimization of night and outdoor lighting. Biological monitoring and reporting and temporary fencing would ensure that additional habitat is not impacted during construction, and that the BMPs outlined in the SWPPP are adhered to. Revegetation of temporary impacts would ensure that native vegetation would be restored, thus reducing the potential for invasive species to encroach upon existing native habitat. Minimizing night and outdoor lighting during construction would reduce disruption of nocturnal wildlife movement.

Impact CWA-2 and CWA-4: Significant long-term direct impacts to the core wildlife area and the subsequent viability of populations of multiple wildlife species as a result of removal of suitable habitat would be reduced to **less than significant** through implementation of mitigation measures **M-BIO-8A through M-BIO-8E**, which would provide habitat preservation and management of existing populations of sensitive species, suitable habitat, and special-status vegetation communities.

2.4.16.2 *Riparian Habitat or Sensitive Natural Community*

Impact V-1 Significant short-term, direct impacts to special-status vegetation communities would be reduced to **less than significant** through implementation of mitigation measures **M-BIO-1, M-BIO-2, M-BIO-3, M-BIO-6, and M-BIO-7**, which would require biological monitoring, placement of temporary construction fencing, preparation of a biological monitoring report, implementation of a revegetation plan for temporary impacts, and minimization of night and outdoor lighting. Biological monitoring and reporting would ensure that

additional habitat is not impacted during construction, and that the BMPs outlined in the SWPPP are adhered to.

Impact V-2

Significant permanent, direct impact to 757.2 acres of special-status upland vegetation communities would be reduced to **less than significant** through implementation of mitigation measures **M-BIO-8A** through **M-BIO-8E**, which would provide for 1,420.9 acres of conservation and management of habitat with equivalent function and value in accordance with the County's *Guidelines for Significance and Report Format and Content Requirements: Biological Resources*.

Implementation of M-BIO-8A would reduce impacts to vegetation through in-kind habitat/vegetation preservation and management of special-status vegetation communities, based on the appropriate ratio specific to each type of vegetation community and in conformance with the mitigation ratios required by the County's *Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources* (County of San Diego 2010a) has been proposed. The required mitigation ratios were determined through consideration of the rarity and sensitivity of each individual vegetation community throughout the County, and are appropriate to maintain, preserve, and protect each specific habitat community. Typically, the required mitigation ratios are higher (i.e., 3:1) for vegetation communities that are most sensitive and rare to provide a higher level of preservation and protection. The on-site and off-site RMPs (provided for by M-BIO-8D) provides for the long-term funding, management, and monitoring efforts, including performance standards to measure the success of mitigation, and would ensure that impacts to the habitat communities are truly mitigated. All mitigation land would be located within a biological open space easement (or owned by a governmental agency for the purpose of conservation), and would be part of the North County Plan. The larger undeveloped framework of the surrounding landscape is currently under review for incorporation into the draft North County Plan. The designated open space as part of the proposed project would be consistent with North County Plan draft

guidelines, thereby preserving a portion of the connections of large and diverse landscapes for wildlife. Implementation of these mitigation measures would reduce significant impacts to vegetation communities to less than significant in accordance with the County's *Guidelines for Significance and Report Format and Content Requirements: Biological Resources*, the Southern California CSS NCCP process guidelines, and the Planning Agreement between the County and the Wildlife Agencies (County of San Diego 2008a).

Impact V-3

The proposed project would result in temporary impacts to ACOE/RWQCB/CDFW resources (i.e., wetland and non-wetland waters) associated with temporary grading, which would be reduced to **less than significant** through **M-BIO-6** and **M-BIO-12**. M-BIO-6 requires the restoration and revegetation of temporarily impacted areas to pre-project conditions (i.e., a 1:1 ratio) (Appendix H) thus restoring the functions and values of those resources. M-BIO-12 requires permits from the appropriate federal and state agencies to impact jurisdictional resources.

Impact V-4

The proposed project would result in permanent direct impacts to County RPO wetlands, CDFW riparian habitat, and non-wetland waters of the United States/state, which would be reduced to **less than significant** through **M-BIO-8A** through **M-BIO-8E**. These mitigation measures would require the permanent preservation and management of open space. In addition M-BIO-12 would require permits from the appropriate federal and state agencies to impact jurisdictional resources. County RPO wetlands, CDFW riparian habitat, and non-wetland waters of the United States/state would be conserved within the open space, thus retaining the functions and values of those resources. Mitigation for permanently impacted jurisdictional resources would be identified through the permitting process to ensure that impacts to these resources are mitigated in accordance with state and federal laws and regulations. Mitigation for permanently impacted jurisdictional resources will be identified through the permitting process to ensure that impacts to these resources are mitigated in accordance with state and federal laws and regulations.

Impact V-5

The significant short-term, indirect impacts to special-status upland vegetation and riparian habitat would be reduced to **less than significant** through implementation of mitigation measures **M-BIO-1, M-BIO-2, M-BIO-3, and M-BIO-12**, which require temporary construction fencing, biological monitoring, preparation and implementation of a SWPPP, preparation of a biological monitoring report, implementation of a fugitive dust control plan, and obtaining permits from the appropriate federal and state agencies. Fencing, biological monitoring and reporting would ensure that additional habitat is not impacted during construction, and that the BMPs outlined in the SWPPP are adhered to. Implementation of the fugitive dust control plan would ensure that impacts related to dust are avoided to the maximum extent possible.

Impact V-6

Significant long-term, indirect impacts to special-status upland vegetation communities and jurisdictional resources would be reduced to **less than significant** through implementation of mitigation measures **M-BIO-1, M-BIO-4, M-BIO-8A through M-BIO-8E, M-BIO-10, M-BIO-11, and M-BIO-12**, which would provide for biological monitoring and implementation of a fugitive dust control plan, biological review of landscape plants, 1,420.9 acres of habitat conservation and management of habitat of equivalent function and value, regulated herbicide application, implementation of a fire protection plan, and obtaining permits from the appropriate federal and state agencies.

Impact V-7

The significant direct impacts to County RPO wetlands and wetland buffers would be reduced to **less than significant** through implementation of **M-BIO-8A through M-BIO-8E**, which would involve the permanent preservation and management of open space, and management of RPO resources as specified in the RMP. Much of the County RPO wetlands would be conserved within the open space, thus retaining the functions and values of those resources. Additionally, the RPP (Appendix H) provides information about the proposed project as generally consistent with the RPO, and where not consistent, it meets the RPO exemption because the project design concentrates development in the

southern portion of the Site to create a biological preserve in the northern portion of the Site, provides a core habitat block in the Merriam Mountains, and requires improvements to Deer Springs Road, a General Plan Mobility Element road and essential facility in the County's General Plan. Since the County RPO wetlands are also jurisdictional resources of the state, implementation of M-BIO-12, which requires permits from the appropriate federal and state agencies to impact jurisdictional resources, would identify additional mitigation through the permitting process to ensure that impacts to these resources are mitigated in accordance with state and federal laws and regulations.

2.4.16.3 Wildlife Movement and Nursery Sites

- Impact WM-1** The significant short-term direct impacts to potential foraging and nesting habitat would be reduced to **less than significant** through implementation of mitigation measures **M-BIO-1**, **M-BIO-2**, **M-BIO-3**, and **M-BIO-6**, which require biological monitoring, preparation and implementation of a SWPPP, preparation of a biological monitoring report, and preparation of a revegetation plan for temporarily impacted areas. Temporary construction fencing, biological monitoring and reporting would ensure that additional habitat is not impacted during construction and that the BMPs outlined in the SWPPP are adhered to. Revegetation of temporary impacts would ensure that native vegetation would be restored, thus reducing the potential for invasive species to encroach upon existing native habitat.
- Impact WM-2** The significant permanent, direct impact to the loss of potential foraging and nesting habitat would be reduced to **less than significant** through implementation of mitigation measures **M-BIO-8A** through **M-BIO-8E**, which provide commensurate habitat management and conservation of open space areas. This would reduce the impact to less than significant because there would be adequate habitat to support wildlife species in perpetuity and in accordance with the County's *Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources* for habitat with equivalent function and value, as well as management of that habitat.
- Impact WM-3** Short-term or long-term indirect impacts to suitable foraging and nesting habitat for wildlife species would be **less than significant** as a result of the proposed project, and no mitigation is proposed. The significant impact to movement of large mammals from loss of wildlife corridors would be reduced

to **less than significant** through implementation of mitigation measures **M-BIO-8A** through **M-BIO-8E**, which would provide for commensurate habitat management and conservation of open space areas. This would reduce the impact to less than significant because there would be adequate habitat conserved within the open space available for wildlife movement to cross through the project Site to adjacent open space. In addition, the preserve created by the open space would constitute a core habitat for most species.

Impact WM-4 Significant impacts to habitat connectivity for larger wildlife species would be **less than significant** through implementation of mitigation measures **M-BIO-8A** through **M-BIO-8E**, which would provide for habitat management and conservation of open space areas that would allow for ~~unimpeded~~ adequate wildlife movement and use. This would reduce the impact to less than significant because the proposed open space design consists of two large continuous blocks of key biological resources situated within the northern half along the eastern boundary of the project Site, and open space in the center of the proposed development that would connect the above-mentioned blocks of open space to regional open space located east and south of the project Site. This analysis demonstrates that there would be adequate habitat available for wildlife to use on Site or to move to available habitat areas outside of the project Site.

Impact WM-5 Significant impacts to wildlife behavior resulting from noise and/or nighttime lighting in a wildlife corridor would be reduced to **less than significant** through implementation of mitigation measure **M-BIO-7**, which would minimize nighttime and outdoor lighting, and **M-BIO-8A**, which would provide commensurate habitat management and conservation of open space areas. This would reduce the impact to less than significant because lighting would not interfere with nocturnal wildlife movements, and the proposed open space design consists of two large continuous blocks of key biological habitat that are buffered by FMZs where adjacent to residences. These features would help reduce the urban/wildland interfaces and allow wildlife to move through the open space areas relatively uninterrupted.

2.4.16.4 Local Policies, Ordinances, and Adopted Plans

Impact P-1 The significant permanent direct impacts to RPO wetlands would be significant and avoidable through a legislative amendment to the RPO. The project's avoidance of the RPO wetlands and wetland buffers is infeasible because the development would be concentrated in the southern portion of the Site. While this results in permanent impacts to RPO wetlands, this design is intended to create a

biological preserve in the northern portion of the Site, provide a core habitat block in the Merriam Mountains, and provide required improvements to Deer Springs Road. The RPP provides information on the RPO resources, including sensitive habitat lands, RPO wetlands, steep slope lands, floodplains, and lands containing significant prehistoric and historic sites (Appendix H). Impacts would be reduced to **less than significant** with implementation of **M-BIO-8D, M-BIO-8A, and M-BIO-12**. The on-site RMP provides for the management of RPO resources (M-BIO-8D). In addition, the project would include habitat preservation and management of existing populations of sensitive species, suitable habitat, and special-status vegetation communities (M-BIO-8A), and require obtaining permits from the appropriate federal and state agencies to impact jurisdictional resources (M-BIO-12).

Impact P-2 The proposed project could result in the loss of active nests and/or young if construction activities occur during the nesting season. This impact would be reduced to **less than significant** through **M-BIO-5**, which would require preconstruction nesting bird surveys in suitable habitat and appropriate buffers if active nests are found.

2.4.16.5 Cumulative Impacts

Impact BI-C-1 Potential cumulative indirect impacts would be significant and would be reduced to **less than significant** through mitigation measures **M-BIO-8A** through **M-BIO-8E**, which would provide for habitat management and conservation of open space areas that would allow for ~~unimpeded~~ adequate wildlife movement and use. This impact would also be mitigated for through M-BIO-10 through M-BIO-12.

Impact BI-C-2 Cumulative direct impacts to California gnatcatcher movement within the region would be reduced to **less than significant** through **M-BIO-8A** through **M-BIO-8E**, which would provide for habitat management and conservation of open space areas that would allow for ~~unimpeded~~ adequate wildlife movement and use.

Impact BI-C-3 Cumulative impacts to wildlife movement corridors would be reduced to **less than significant** through **M-BIO-8A** through **M-BIO-8E**, which would provide for habitat management and conservation of open space areas that would allow for ~~unimpeded~~ adequate wildlife movement and use.

Table 2.4-1
On-Site Vegetation Communities and Land Cover Types

General Vegetation Community/Land Cover Type	Code ¹	Acres
<i>Coastal Scrub</i>		
Diegan coastal sage scrub (including disturbed)*	32500	68.2
Coastal sage scrub – Baccharis dominated (including disturbed)	32530	2.0
Flat-topped buckwheat – disturbed*	32800	1.7
Coastal sage – chaparral transition*	37G00	7.8
<i>Subtotal</i>		79.7
<i>Chaparral</i>		
Granitic southern mixed chaparral* (including disturbed)	37121	1,700.7
Mafic southern mixed chaparral*	37122	58.8
Scrub oak chaparral*	37900	44.3
<i>Subtotal</i>		1,803.8
<i>Woodland</i>		
Coast live oak woodland *	71160	9.1
<i>Riparian</i>		
Freshwater marsh*	52400	0.1
Southern coast live oak riparian forest*	61310	5.2
Mulefat scrub*	63310	0.2
Southern willow scrub*	63320	2.5
Southern willow scrub/tamarisk scrub*	63320/63810	0.3
<i>Subtotal</i>		8.3
<i>Non-Native Communities and Land Covers</i>		
Eucalyptus woodland	79100	0.5
Intensive agriculture	18200	<0.0
Orchard and vineyards	18100	2.0
Urban/developed	12000	9.2
Disturbed habitat	11300	57.0
Non-native grassland*	42200	16.1
<i>Subtotal</i>		84.8
Total²		1,985.6

¹ Holland (1986) as modified by Oberbauer et al. (2008).

² May not total due to rounding.

* Considered special-status by the County of San Diego (2010a).

Table 2.4-2
Deer Springs Road Off-Site Vegetation Communities and Land Cover Types (Option A)

General Vegetation Community/Land Cover Type	Code ¹	Acres
<i>Coastal Scrub</i>		
Coastal sage – chaparral transition*	37G00	1.7
<i>Subtotal</i>		1.7

Table 2.4-2
Deer Springs Road Off-Site Vegetation Communities and Land Cover Types (Option A)

General Vegetation Community/Land Cover Type	Code ¹	Acres
<i>Chaparral</i>		
Granitic southern mixed chaparral* (including disturbed)	37121	1.7
<i>Subtotal</i>		1.7
<i>Woodland</i>		
Coast live oak woodland * (including disturbed)	71160	3.1
<i>Riparian</i>		
Southern coast live oak riparian forest*	61310	1.4
Disturbed wetland	11200	0.1
Mulefat Scrub	63310	0.04
Southern Willow Scrub	63320	0.1
<i>Subtotal</i>		1.6
<i>Non-Native Communities and Land Covers</i>		
Agriculture	18000	2.5
Eucalyptus woodland	79100	1.8
Orchard and vineyards	18100	2.0
Urban/developed	12000	33.2
Disturbed habitat	11300	3.6
Non-native grassland*	42200	1.4
Intensive Agriculture	18200	1.6
Extensive Agriculture	18300	6.1
<i>Subtotal</i>		52.2
Total²		60.3

¹ Holland (1986) as modified by Oberbauer et al. (2008).

² May not total due to rounding.

* Considered special-status by the County of San Diego (2010a).

Table 2.4-3
Deer Springs Road Off-Site Vegetation Communities and Land Cover Types (Option B)

General Vegetation Community/Land Cover Type	Code ¹	Acres
<i>Coastal Scrub</i>		
Coastal sage – chaparral transition*	37G00	2.1
<i>Subtotal</i>		2.1
<i>Chaparral</i>		
Granitic southern mixed chaparral* (including disturbed)	37121	2.4
<i>Subtotal</i>		2.4
<i>Woodland</i>		
Coast live oak woodland*	71160	3.3
<i>Riparian</i>		
Southern coast live oak riparian forest*	61310	1.4
Disturbed Wetland	11200	0.1

Table 2.4-3
Deer Springs Road Off-Site Vegetation Communities and Land Cover Types (Option B)

General Vegetation Community/Land Cover Type	Code ¹	Acres
Mulefat Scrub	63310	0.04
Southern willow scrub	63320	0.1
<i>Subtotal</i>		<i>1.6</i>
<i>Non-Native Communities and Land Covers</i>		
Agriculture	18000	2.6
Eucalyptus woodland	18300	2.0
Orchard and vineyards	18100	2.3
Urban/developed	12000	33.9
Disturbed habitat	11300	3.9
Non-native grassland*	42200	1.8
Intensive agriculture	18200	1.6
Extensive agriculture	18300	6.1
<i>Subtotal</i>		<i>54.1</i>
Total²		63.7

¹ Holland (1986) as modified by Oberbauer et al. (2008).

² May not total due to rounding.

* Considered special-status by the County of San Diego (2010a).

Table 2.4-4
Vegetation Communities and Land Cover Types for Off-Site Improvements

General Vegetation Community/ Land Cover Type	Camino Mayor (acres)	Mesa Rock Road (acres)	Sarver Lane (acres)	Mar Vista	South Santa Fe	I-15 Interchange	Sewer Improvements	Total Additional Off Site (acres)
<i>Coastal Scrub</i>								
Diegan coastal sage scrub (including disturbed)*	—	0.5	—			0.9	—	1.4
Coastal Sage-Chaparral transition*	—	—	—	—	—	0.3	—	0.3
<i>Chaparral</i>								
Granitic southern mixed chaparral* (including disturbed)	2.9	—	3.2				—	6.1
<i>Woodland</i>								
Coast live oak woodland (including disturbed)*	—	—	1.0	<0.01	—	0.1	—	1.1
<i>Riparian</i>								
Southern willow scrub*	0.1	—	—				3.3	3.4
Arundo-dominated riparian	—	—	—				0.3	0.3

Table 2.4-4
Vegetation Communities and Land Cover Types for Off-Site Improvements

General Vegetation Community/ Land Cover Type	Camino Mayor (acres)	Mesa Rock Road (acres)	Sarver Lane (acres)	Mar Vista	South Santa Fe	I-15 Interchange	Sewer Improvements	Total Additional Off Site (acres)
<i>Non-Native Communities and Land Covers</i>								
Intensive agriculture	—	—	0.8	—	—	—	—	0.8
Extensive Agriculture	—	—	0.1	—	—	—	—	0.1
Eucalyptus woodland	—	—	—	0.6	—	0.2	—	0.8
Orchard and vineyards	0.8	—	—	—	—	—	—	0.8
Urban/developed	0.4	1.8	2.2	1.2	0.4	8.9	1.1	14.9
Disturbed habitat	0.8	—	0.4	0.1	—	1.6	0.8	2.9
Non-native grassland*	—	—	<0.1			1.8	—	1.9
Non-native woodland	—	—	0.3				—	0.3
<i>Subtotal</i>	<i>1.9</i>	<i>1.8</i>	<i>3.8</i>	<i>1.9</i>	<i>0.4</i>	<i>12.6</i>	<i>—</i>	<i>22.4</i>
Total¹	4.9	2.3	7.9	1.9	0.4	13.9	5.5	31.4

¹ May not total due to rounding.

* Considered special-status by the County of San Diego (2010a).

**Table 2.4-5
Plant Species Detected or Moderate Potential to Occur On Site**

Scientific Name	Common Name	Status (Federal / State) ¹	CRPR ¹	County of San Diego ¹	Primary Habitat Associations / Life Form / Blooming Period / Elevation Range	Verified on Site (Direct / Indirect Evidence)	Potential to Occur On Site	Status On Site or Potential to Occur
<i>Arctostaphylos rainbowensis</i>	Rainbow Manzanita	None/None	1B.1	List A	Chaparral / evergreen shrub / December–March / 740–1,770 feet	No	Moderate potential to occur	A handful of shrubs were recorded on a chaparral slopes west of Interstate 15 near Windsong Lane south of Mesa Rock Road (CDFW 2015).
<i>Asplenium vespertinum</i>	Western spleenwort	None/None	4.2	List D	Chaparral, cismontane woodland, coastal scrub/rocky/perennial rhizomatous herb/February–June/ 591–3,281 feet	No	Moderate potential to occur	This species was recorded in the San Marcos quad (CNPS 2014), and there is suitable vegetation and rocky areas on Site. Not observed during 2007 or 2013 surveys, but species may occur within dense chaparral that could not be 100% surveyed.
<i>Baccharis vanessae</i>	Encinitas baccharis	FT/ SE	1B.1	List A	Chaparral (maritime), cismontane woodland/sandstone/deciduous shrub/August–November/ 200–2,400 feet	No	Moderate potential to occur	Suitable vegetation is present. Previously assumed to only occur on sandstone soils, but has since been confirmed on Cieneba soils, which occurs on Site and has been found within dense scrub oak (USFWS 2011). Recorded in the vicinity, ² with the nearest occurrence located on Cieneba soils approximately 7.5 miles south of the project Site (CDFW 2015); however, species is not known from any sites north of State Route (SR) 78, except one location in San Mateo Wilderness. Not observed during 2007 or 2013 surveys, but

**Table 2.4-5
Plant Species Detected or Moderate Potential to Occur On Site**

Scientific Name	Common Name	Status (Federal / State) ¹	CRPR ¹	County of San Diego ¹	Primary Habitat Associations / Life Form / Blooming Period / Elevation Range	Verified on Site (Direct / Indirect Evidence)	Potential to Occur On Site	Status On Site or Potential to Occur
								species may occur within chaparral that could not be 100% surveyed.
<i>Brodiaea orcuttii</i>	Orcutt's brodiaea	None/None	1B.1	List A	Closed-cone conifer forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, vernal pools; mesic, clay, sometimes serpentine/ bulbiferous herb/May–July/ 100–5,550 feet	Yes	Detected on Site during focused surveys	Recorded within San Marcos quad (CNPS 2014), but clay soils (Las Posas) on Site limited to preserve area west of Twin Oaks Valley Road; no vernal pools or seep-related habitats are present, and grasslands are limited on Site. However, this species was observed during the 2013 surveys. Two isolated populations were observed in the open space, just northeast of the abandoned airstrip.
<i>Caulanthus simulans</i>	Payson's jewel-flower	None/None	4.2	List D	Chaparral, coastal scrub; sandy and granitic/annual herb/(Feb) March–May (June)/300–7,200 feet	No	Moderate potential to occur	Suitable vegetation and soils on Site. Recorded in the vicinity; ² not detected during 2007 or 2013 surveys, but species may occur within dense chaparral that could not be 100% surveyed.
<i>Ceanothus verrucosus</i>	Wart-stemmed ceanothus	None/None	2.2	List B, MSCP	Chaparral/shrub/ December–April/3–1,247 feet	No	Moderate potential to occur	Suitable chaparral vegetation present, and species is known from mountains south of San Marcos. Nearest occurrence is less than 1 mile west of the project Site within the Palisades Estates in the San Marcos Mountains. This occurrence

**Table 2.4-5
Plant Species Detected or Moderate Potential to Occur On Site**

Scientific Name	Common Name	Status (Federal / State) ¹	CRPR ¹	County of San Diego ¹	Primary Habitat Associations / Life Form / Blooming Period / Elevation Range	Verified on Site (Direct / Indirect Evidence)	Potential to Occur On Site	Status On Site or Potential to Occur
								occurs on Las Posas soils in mafic chaparral (CDFW 2015). Conspicuous shrub was not observed on Site during surveys; only <i>C. tomentosus</i> found on Site; however, species may occur within dense chaparral that could not be 100% surveyed.
<i>Clarkia delicata</i>	Delicate clarkia	None/None	1B.2	List A	Chaparral, cismontane woodland/often gabbroic /annual herb/April–June/ 770–3,300 feet	No	Moderate potential to occur	Suitable vegetation present; gabbroic soils are limited to areas west of Twin Oaks Valley Road and potentially the area where Ramona horkelia was observed. Recorded in the vicinity. ² Not detected during 2007 or 2013 surveys, but species may occur within dense chaparral that could not be 100% surveyed.
<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i>	Summer holly	None/None	1B.2	List A	Chaparral, cismontane woodland/evergreen shrub/ April–June/100–1,800 feet	Yes	Detected on Site during focused surveys	This species was found throughout the Site within southern mixed chaparral and two occurrences in scrub oak chaparral (PSBS 2007) and during 2013 focused plant surveys.
<i>Dichondra occidentalis</i>	Western dichondra	None/None	4.2	List D	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland/	No	Moderate potential to occur	Suitable vegetation is present on Site, but the species was not detected during 2007 or 2013

**Table 2.4-5
Plant Species Detected or Moderate Potential to Occur On Site**

Scientific Name	Common Name	Status (Federal / State) ¹	CRPR ¹	County of San Diego ¹	Primary Habitat Associations / Life Form / Blooming Period / Elevation Range	Verified on Site (Direct / Indirect Evidence)	Potential to Occur On Site	Status On Site or Potential to Occur
					rhizomatous herb/March–May/160–1,650 feet			surveys. Species may occur within dense chaparral that could not be 100% surveyed. Recorded in the vicinity. ²
<i>Dudleya viscida</i>	Sticky dudleya	None/None	1B.2	List A	Coastal bluff scrub, chaparral, coastal scrub; rocky/perennial herb/May–June/30–1,800 feet	No	Moderate potential to occur	Suitable habitat present on Site, but not detected during 2007 or 2013 surveys. Species may occur within dense chaparral or other areas that could not be 100% surveyed. Recorded in the vicinity. ²
<i>Horkelia truncata</i>	Ramona horkelia	None/None	1B.3	List A	Chaparral, cismontane woodland/clay, gabbroic/perennial herb/May–June/1,300–4,300 feet	Yes	Detected on Site during focused surveys	A single population of seven individuals of this plant was located in the southeastern portion of the Site (PSBS 2007), and three populations were detected on Site in 2013, but could occur in other chaparral habitat on Site. All occurrences within southern mixed chaparral; not associated with mapped or Site-specific mafic soil.
<i>Lepidium virginicum</i> var. <i>robinsonii</i>	Robinson's pepper-grass	None/None	1B.2	List A	Chaparral, coastal scrub/annual herb/January–July/<2,900 feet	No	Moderate potential to occur	Suitable habitat on Site, but not detected during 2007 or 2013 surveys, but species may occur within dense chaparral that could not be 100% surveyed. Recorded in the vicinity. ²

**Table 2.4-5
Plant Species Detected or Moderate Potential to Occur On Site**

Scientific Name	Common Name	Status (Federal / State) ¹	CRPR ¹	County of San Diego ¹	Primary Habitat Associations / Life Form / Blooming Period / Elevation Range	Verified on Site (Direct / Indirect Evidence)	Potential to Occur On Site	Status On Site or Potential to Occur
<i>Monardella hypoleuca</i> ssp. <i>lanata</i>	Felt-leaved monardella	None/None	1B.2	List A	Chaparral, cismontane woodland/rhizomatous herb/ June–August/1,000–3,600 feet	No	Moderate potential to occur	Suitable vegetation is present on Site, and species is recorded within San Marcos quad (CNPS 2014). Not observed during 2007 or 2013 surveys, but species may occur within dense chaparral that could not be 100% surveyed.
<i>Pentachaeta aurea</i> ssp. <i>aurea</i>	Golden-rayed pentachaeta	None/None	4.2	List D	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland, valley and foothill grassland/ annual herb/ March–July/260–6,070 feet	No	Moderate potential to occur	Suitable habitat on Site, but not detected during 2013 focused plant surveys, and its distribution in San Diego County appears limited (Jepson Online Interchange 2014). Species may occur within dense chaparral that could not be 100% surveyed. Recorded in the vicinity. ²
<i>Piperia cooperi</i>	Chaparral rein orchid	None/None	4.2	List D	Chaparral, cismontane woodland, valley and foothill grassland/perennial herb/ March–June/50–5,200 feet	Yes	Detected on Site during focused surveys	Detected on Site during 2013 focused surveys. One occurrence in the east-central portion of the Site within southern mixed chaparral in 2013, but probably occurs in other areas on Site.
<i>Pseudognaphalium leucocephalum</i>	White rabbit-tobacco	None/None	2.3	None	Chaparral, cismontane woodland, coastal scrub, riparian woodland/sandy, gravelly/perennial herb/ (July) August–November (December)/0–6,890 feet	Yes	Detected on Site during focused surveys.	Detected on Site during focused surveys in 2013.

**Table 2.4-5
Plant Species Detected or Moderate Potential to Occur On Site**

Scientific Name	Common Name	Status (Federal / State) ¹	CRPR ¹	County of San Diego ¹	Primary Habitat Associations / Life Form / Blooming Period / Elevation Range	Verified on Site (Direct / Indirect Evidence)	Potential to Occur On Site	Status On Site or Potential to Occur
<i>Quercus engelmannii</i>	Engelmann oak	None/None	4.2	List D	Chaparral, cismontane woodland, riparian woodland, valley and foothill grassland/deciduous tree/March–June/400–4,250 feet	Yes	Detected on Site during focused surveys	One occurrence in the northwestern corner and several occurrences throughout the north-central portion of the Site within southern mixed chaparral. Several additional individuals occur in coast live oak woodlands in the southeastern corner of the Site.
<i>Salvia munzii</i>	Munz's sage	None/None	2.3	List B	Chaparral, Coastal scrub/perennial evergreen shrub/February–April/ 394–3,494 feet	No	Detected on Site during focused surveys	Detected on Site in 2014.
<i>Selaginella cinerascens</i>	Ashy spike-moss	None/None	4.1	List D	Chaparral, Coastal scrub/perennial rhizomatous herb/n/a/66–2,100 feet	Yes	Detected on Site during focused surveys	Detected on Site in 2013. Two occurrences in the north-central portion and one occurrence in central portion of the Site, but probably occurs in other areas on Site. All occurred within southern mixed chaparral.

**Table 2.4-5
Plant Species Detected or Moderate Potential to Occur On Site**

Scientific Name	Common Name	Status (Federal / State) ¹	CRPR ¹	County of San Diego ¹	Primary Habitat Associations / Life Form / Blooming Period / Elevation Range	Verified on Site (Direct / Indirect Evidence)	Potential to Occur On Site	Status On Site or Potential to Occur
<i>Tetracoccus dioicus</i>	Parry's tetracoccus	None/None	1B.2	List A	Chaparral, coastal scrub/deciduous shrub/ April–May/ 550–3,300 feet	No	Moderate potential to occur	Suitable vegetation and soils are present, and species is recorded within the San Marcos quad with four occurrences occurring less than 1.5 miles west of the project Site. These occurrences occur on Las Posas soils in mafic chaparral (CNPS 2014). This conspicuous shrub species likely would have been identified during previous surveys if present, and was not detected during 2013 focused plant surveys; however, species may occur within dense chaparral that could not be 100% surveyed.

¹ **Federal Designations**

FT: Federally listed as threatened

State Designations

SE: State listed as endangered

CRPR: California Rare Plant Rank

1A: Plants presumed extirpated in California and either rare or extinct elsewhere

1B: Plants rare, threatened, or endangered in California and elsewhere

2A: Plants presumed extirpated in California, but common elsewhere

2B: Plants rare, threatened, or endangered in California, but more common elsewhere

3: Plants about which we need more information – a review list

4: Plants of limited distribution – a watch list

Threat Rank

.1 – Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)

.2 – Fairly threatened in California (20%–80% occurrences threatened/moderate degree and immediacy of threat)

.3 – Not very threatened in California (<20% of occurrences threatened/low degree and immediacy of threat or no current threats known)

County Designations

List A – Plants categorized as County List A species are plants that are rare, threatened, or endangered in California and elsewhere.

List B – Plants categorized as County List B are rare, threatened, or endangered in California, but more common elsewhere.

List C – Plants categorized as County List C species are plants that may be rare, but more information is needed to determine their true rarity status.

List D – Plants categorized as County List D are of limited distribution and are uncommon, but not presently rare or endangered.

MSCP

² Vicinity refers to records within the San Marcos, Morro Hill, Bonsall, Pala, San Luis Rey, Valley Center, Encinitas, Rancho Santa Fe, and Escondido quadrangles.

Table 2.4-6
Wildlife Species Detected or Moderate or High Potential to Occur

Scientific Name	Common Name	Status (Federal/ State/ County/ Other) ¹	Primary Habitat Associations	Verified on Site (Direct / Indirect Evidence)	Potential to Occur On Site	Status on Site or Potential to Occur
<i>Amphibians</i>						
<i>Spea</i> [= <i>Scaphiopus</i>] <i>hammondi</i>	Western spadefoot	None/SSC/Group II	Most common in grasslands, coastal sage scrub near rain pools or vernal pools; riparian habitats.	Observed ²	Observed	Observed in substantial numbers in large artificial puddle within quarry. Other occurrences documented approximately 1 mile north (in 1997) and 5 miles south of the Site (in 2001; CDFW 2014a).
<i>Reptiles</i>						
<i>Anniella pulchra</i> <i>pulchra</i> (<i>Anniella</i> <i>stebbinsi</i>)	Silvery legless lizard	None/SSC/Group II; recent studies indicate it may be more sensitive	Sparse vegetation of chaparral and riparian, loose soil for burrowing.	No	Moderate potential to occur	May occur within riparian or woodland habitat. Species not detected in the vicinity (CDFW 2014a).
<i>Aspidoscelis</i> [<i>Cnemidophorus</i>] <i>hyperythra</i> <i>beldingi</i>	Belding's orange-throated whiptail	None/SSC/Group II	Coastal scrub (low elevation), chaparral, Valley–Foothill hardwood, especially washes and sandy areas with patches of brush and rocks.	Observed	Observed	Detected on Site (PSBS 2007). Species found often in openings or along trails in coastal sage scrub or chaparral, and was occasionally observed throughout the Site.
<i>Aspidoscelis tigris</i> <i>stejnegeri</i>	Coastal whiptail	None/None/Group II	Deserts and semiarid areas with sparse vegetation and open areas, also in woodland and riparian	Observed	Observed	Detected on Site in 2007 (PSBS 2007) and in 2013 and 2014. Species was observed twice, both times

Table 2.4-6
Wildlife Species Detected or Moderate or High Potential to Occur

Scientific Name	Common Name	Status (Federal/ State/ County/ Other) ¹	Primary Habitat Associations	Verified on Site (Direct / Indirect Evidence)	Potential to Occur On Site	Status on Site or Potential to Occur
			areas, especially where ground may be firm soil, sandy, or rocky.			along dirt roads.
<i>Coleonyx variegatus abbotti</i>	San Diego banded gecko	None/None/Group I	Cismontane chaparral, coastal sage scrub, desert scrub; granite outcrops.	No	Moderate potential to occur	May occur on Site; suitable vegetation and rock outcrops are present. Species not observed on Site.
<i>Crotalus ruber</i>	Red-diamondback rattlesnake	None/SSC/Group II	Variety of shrub habitats where there is heavy brush, large rocks, or boulders. Chaparral, woodland, grassland, and desert areas, especially in rocky areas and dense vegetation.	Observed	Observed	Detected on Site (PSBS 2007) and likely occurs within rocky or boulder areas in the northeastern portion of the Site.
<i>Diadophis punctatus similis</i>	San Diego ringneck snake	None/None/Group II	Open, rocky areas in moist habitats near intermittent streams: marsh, riparian woodland, sage scrub.	Observed	Observed	Detected on Site (PSBS 2007). Highest potential within canyon bottoms, drainages, microhabitats at base of rock clusters, and within dense chaparral debris piles.
<i>Plestiodon</i> [= <i>Eumeces</i>] <i>skiltonianus</i> <i>interparietalis</i>	Coronado Skink	None/SSC/Group II	Grassland, chaparral, pinyon juniper sage woodland, pine-oak and pine forests in coastal ranges in Southern California. Especially prefers early successional stages or open areas, found in rocky areas close to streams and on dry hillsides.	No	High potential to occur	Suitable habitat present. Probably occurs on Site, but not observed. Species detected 0.5 mile northeast (in 1995) and approximately 4.5 miles southwest (in 2006) of the Site (CDFW 2014a).

**Table 2.4-6
Wildlife Species Detected or Moderate or High Potential to Occur**

Scientific Name	Common Name	Status (Federal/ State/ County/ Other) ¹	Primary Habitat Associations	Verified on Site (Direct / Indirect Evidence)	Potential to Occur On Site	Status on Site or Potential to Occur
<i>Lichanura</i> [=Charina] <i>trivirgata</i> <i>roseofusca</i>	Rosy boa	None/None/Group II	Desert and chaparral from coast to Mojave and Colorado Deserts, especially in moderate to dense vegetation and rocky cover; habitats with mix of brushy cover and rocky soil like coastal canyons and hillsides, desert canyons, washes, and mountains.	No	Moderate potential to occur	Suitable habitat present. Closest species detections documented approximately 5 miles north and 6.5 miles northwest of the Site in 1923 and 1927, respectively. In 1967, species detected approximately 10 miles southwest of the Site (CDFW 2014a).
<i>Phrynosoma</i> <i>blainvillei</i>	Blainville's horned lizard	None/SSC/Group II	Coastal sage scrub, chaparral in arid and semi-arid climate, especially friable, rocky, or shallow sandy soils.	Observed	Observed	Detected on Site (PSBS 2007) and during recent surveys in 2013. The species was detected in two locations: southeastern corner of the project Site—directly northwest of the end of Mesa Rock Road—and southeast of the abandoned landing strip (directly west of the water tower). During 2014 reptile habitat assessments, two horned lizard scats were mapped in the northeastern portion of the Site. It is likely to occur throughout the Site where harvester ants occur and where openings occur in the chaparral.
<i>Salvadora</i> <i>hexalepis</i> <i>virgultea</i>	Coast patch- nosed snake	None/SSC/Group II	Brushy or shrubby vegetation in coastal Southern California, especially use small	Observed	Observed	Detected on Site during 2013 surveys. Species detected in the southeastern corner, directly east of Mesa Rock Road. Suitable habitat

**Table 2.4-6
Wildlife Species Detected or Moderate or High Potential to Occur**

Scientific Name	Common Name	Status (Federal/ State/ County/ Other) ¹	Primary Habitat Associations	Verified on Site (Direct / Indirect Evidence)	Potential to Occur On Site	Status on Site or Potential to Occur
			mammal burrows for refuge.			present. Next closest species detection occurred 6.5 miles southwest (in 2000) and 7.5 miles south (in 2005) of the Site (CDFW 2014a).
<i>Thamnophis hammondi</i>	Two-striped garter snake	None/ SSC/Group I	Coastal California from Salinas to northwest Baja, from sea level to approx. 7,000 feet above mean sea level; especially highly aquatic, found in or near permanent fresh water, often along streams with rocky beds and riparian growths.	No	Moderate potential to occur	May occur in streams along Deer Springs Road. Closest species detections approximately 6.5–7.0 miles southwest of the Site in 1998 and 1991. Additional detections 13.5 miles northwest of the Site recorded in 1999 (CDFW 2014a).
<i>Birds</i>						
<i>Accipiter cooperii</i> (nesting)	Cooper's hawk	None/WL/Group I	Riparian and oak woodlands, montane canyons.	Observed	Observed	Detected on Site in 2013. This species has been recorded nesting within and adjacent to the Merriam Mountains (Unitt 2004). Additional nesting occurrences are approximately 4 miles northwest of the Site (in 2003) and further CNDDB occurrences are 6 and 11 miles north and northeast, respectively, off Site (CDFW 2014a).
<i>Accipiter striatus</i> (nesting)	Sharp-shinned hawk	None/WL/Group I	Nests in coniferous forests, ponderosa pine, black oak, riparian deciduous, mixed conifer, Jeffrey pine; winters	Observed	Not expected to nest; observed foraging on Site	Detected on Site during recent surveys (Appendix H). Species detected soaring overhead at the abandoned landing strip in the

**Table 2.4-6
Wildlife Species Detected or Moderate or High Potential to Occur**

Scientific Name	Common Name	Status (Federal/ State/ County/ Other) ¹	Primary Habitat Associations	Verified on Site (Direct / Indirect Evidence)	Potential to Occur On Site	Status on Site or Potential to Occur
			in lowland woodlands and other habitats.			northern portion of the project Site (Appendix H). Not observed during previous surveys (PSBS 2007). Not expected to nest, as they are not known to nest on the coastal slope in Southern California. No nesting detected on the project Site.
<i>Aimophila ruficeps canescens</i>	Southern California rufous-crowned sparrow	None/WL/Group I	Grass-covered hillsides, coastal sage scrub, chaparral with boulders and outcrops.	No	Moderate potential to occur	Potential to occur on Site but not observed (PSBS 2007). Species detected on project Site in 1992 and numerous locations surrounding the vicinity, including directly outside of the Site's northwest boundary (in 2001; CDFW 2014a).
<i>Artemisiospiza [Amphispiza] belli belli</i> (nesting)	Bell's sage sparrow	BCC/WL/Group I	Coastal sage scrub and dry chaparral along coastal and inland valleys.	Observed	Observed	<i>A. belli</i> detected on Site in 2013. Closest additional species detection documented approximately 2.5 miles northeast of project Site in 2000 (CDFW 2014a). Additional occurrences documented 6 and 11 miles southwest and southeast, respectively, of the Site (CDFW 2014a).
<i>Buteo lineatus</i>	Red-shouldered hawk	None/None/Group I	Riparian and woodland habitats, eucalyptus.	Observed	Observed	Detected on Site (PSBS 2007) and in 2013.

**Table 2.4-6
Wildlife Species Detected or Moderate or High Potential to Occur**

Scientific Name	Common Name	Status (Federal/ State/ County/ Other) ¹	Primary Habitat Associations	Verified on Site (Direct / Indirect Evidence)	Potential to Occur On Site	Status on Site or Potential to Occur
<i>Cathartes aura</i>	Turkey vulture	None/None/ Group I	Rangeland, agriculture, grassland; uses cliffs and large trees for roosting, nesting and resting.	Observed	Observed	Detected on Site in 2007 (PSBS 2007) and in 2013.
<i>Elanus leucurus</i> (nesting)	White-tailed kite	None/Fully Protected/ Group I	Open grasslands, savanna- like habitats, agriculture, wetlands, oak woodlands, riparian.	No	Moderate potential to occur	May occur in oak woodlands or riparian habitat on the Site. Closest species nesting occurrence approximately 4.5 miles east of the Site on San Luis Rey River (CDFW 2014a). No juveniles have been observed in the vicinity however.
<i>Icteria virens</i> (nesting)	Yellow-breasted chat	None/SSC/Group I	Dense, relatively wide riparian woodlands and thickets of willow, vine tangles, and dense brush.	No	Moderate potential to occur	May occur in eastern or western riparian habitats during spring and summer; not detected. Several species occurrences documented along San Luis Rey River, approximately 4.5 miles northwest of the Site (CDFW 2014a). Generally, the available habitat is not of typical height and density needed.
<i>Picoides nuttallii</i>	Nuttall's woodpecker	BCC/ None/ None	Low-elevation oak and riparian deciduous habitats; tree cavities and foliage provide cover; requires snags and dead limbs for nest excavation.	Observed	Observed	Detected on Site in 2013. Species detected in the southern portion of the project Site within oak riparian forest adjacent to Gist Road (north of Sarver Lane).

Table 2.4-6
Wildlife Species Detected or Moderate or High Potential to Occur

Scientific Name	Common Name	Status (Federal/ State/ County/ Other) ¹	Primary Habitat Associations	Verified on Site (Direct / Indirect Evidence)	Potential to Occur On Site	Status on Site or Potential to Occur
<i>Poliophtila californica californica</i>	Coastal California gnatcatcher	FT/SSC/Group I	Coastal sage scrub, coastal sage scrub–chaparral mix, coastal sage scrub–grassland ecotone, riparian in late summer.	Detected by vocalizations	Observed	Detected on Site. Calls of this species were detected by an experienced and permitted biologist within the southern mixed chaparral in the western section of the abandoned landing strip during focused southwestern willow flycatcher and least Bell's vireo surveys on June 24, 2013; however, no individuals were detected during a follow up Site visit in October 2013. During a habitat assessment on August 14, 2014, this same individual was observed. An additional location was observed during the spring 2013 focused surveys along I-15 north of the Mesa Rock cul-de-sac. Species occurrences recorded in southeastern portion of the Site in 2002–2003 (CDFW 2014a).
<i>Setophaga petechia</i>	Yellow warbler	BCC/SSC/ Group II	Nests in foothill riparian woodlands dominated by cottonwoods, alders, and willows; winters in a variety of habitats.	Observed	Observed	Detected on Site in 2013. Several closest occurrences are also documented from approximately 5–8 miles north, northeast, and east of project Site near or in the San Luis Rey River (CDFW 2014a).
<i>Sialia mexicana</i>	Western bluebird	None/None/Group II	Open forests of deciduous, coniferous or mixed trees, savanna, edges of riparian woodland.	Observed	Observed	Detected on Site in 2013.

**Table 2.4-6
Wildlife Species Detected or Moderate or High Potential to Occur**

Scientific Name	Common Name	Status (Federal/ State/ County/ Other) ¹	Primary Habitat Associations	Verified on Site (Direct / Indirect Evidence)	Potential to Occur On Site	Status on Site or Potential to Occur
<i>Tyto alba</i>	Common barn owl	None/None/Group II	Open habitats, including grassland, chaparral, riparian, and other wetlands.	Observed	Observed	Detected on Site in 2013. Suitable open habitats occur on Site.
<i>Mammals</i>						
<i>Antrozous pallidus</i>	Pallid bat	None/SSC/Group II/ WBWG: H	Rocky outcrops, cliffs, and crevices with access to open habitats for foraging.	No	Moderate potential to occur	May forage in riparian habitat on Site. Several scattered occurrences documented southeast and northwest of the Site. Closest occurrence documented approximately 5 miles southeast in 1968 (CDFW 2014a). Suitable rocky outcrops occur.
<i>Chaetodipus californicus femoralis</i>	Dulzura pocket mouse	None/SSC/Group II	Coastal sage scrub, chaparral, riparian-scrub ecotone; more mesic areas.	No	Moderate potential to occur	May occur on Site but not detected. Species occurrences documented in several locations around Site. Closest detections are approximately 2.5 miles northeast and 5.5 miles southeast of the Site in 1993 and 1953, respectively (CDFW 2014a).
<i>Perognathus fallax fallax</i>	Northwestern San Diego pocket mouse	None/SSC/Group II	Coastal sage scrub, grassland, sage scrub-grassland ecotones, sparse chaparral; rocky substrates, loams and sandy loams.	No	High potential to occur	Suitable vegetation occurs on Site as well as loam and sandy loam soil types. Closest species occurrence approximately 2.5 miles northeast of the Site in 1993. Additional detections scattered approximately 8.5 to 13 miles in all directions from Site (CDFW 2014a).

**Table 2.4-6
Wildlife Species Detected or Moderate or High Potential to Occur**

Scientific Name	Common Name	Status (Federal/ State/ County/ Other) ¹	Primary Habitat Associations	Verified on Site (Direct / Indirect Evidence)	Potential to Occur On Site	Status on Site or Potential to Occur
<i>Lasiurus blossevillei</i>	Western red bat	None/SSC/Group II/ WBWG: H	Prefers open habitats or habitat mosaics with access to trees for cover and open areas or habitat edges for feeding.	No	Moderate potential to occur	May occur along riparian areas during migration. Species not detected in vicinity.
<i>Myotis ciliolabrum</i>	Western small- footed myotis	None/None/Group II/WBWG:M	Caves, old mines, abandoned buildings.	No	Moderate potential to occur	No suitable roosting locations on Site or nearby. Species not detected in vicinity.
<i>Myotis yumanensis</i>	Yuma myotis	None/None/Group II/WBWG:LM	Closely tied to open water which is used for foraging; open forests and woodlands are optimal habitat.	No	Moderate potential to occur	Very little roosting habitat on Site. May forage in riparian areas with water. Several species occurrences documented approximately 10.5 miles northwest of project Site (CDFW 2014a).
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	None/SSC/Group II	Coastal sage scrub, chaparral, pinyon-juniper woodland with rock outcrops, cactus thickets, dense undergrowth.	Sign observed	Observed	Detected on Site in 2007 (PSBS 2007) and 2014. Woodrat middens were detected throughout the Site, but the majority were not mapped.
<i>Odocoileus hemionus</i>	Mule deer	None/None/Group II	Coastal sage scrub, chaparral, riparian, woodlands, forest; often browses in open areas adjacent to cover.	Sign observed	Observed	Detected on Site during early surveys of property (PSBS 2007). Sign (e.g., scat) was occasionally observed infrequently throughout the Site. It is not likely that this species spends much time on the Site due to the density of chaparral. Sign would have been ubiquitous on the network of dirt roads.

**Table 2.4-6
Wildlife Species Detected or Moderate or High Potential to Occur**

Scientific Name	Common Name	Status (Federal/ State/ County/ Other) ¹	Primary Habitat Associations	Verified on Site (Direct / Indirect Evidence)	Potential to Occur On Site	Status on Site or Potential to Occur
<i>Invertebrates</i>						
<i>Danaus plexippus</i>	Monarch butterfly	None/None/Group II	Overwinters in eucalyptus groves.	Observed	Observed	Detected on Site during 2013 surveys. Suitable eucalyptus woodland on Site; however, no winter roosts were detected. Closest significant roost occurrence approximately 9.5 miles west of the Site in 1997 (CDFW 2014a).

¹ **Federal Designations**

BCC: USFWS—Birds of Conservation Concern

FT: Federally listed as threatened

State Designations

SSC: California Species of Special Concern

WL: CDFW Watch List Species

County Designations

County: Multiple Species Conservation Plan Covered Species

Group I: County of San Diego Sensitive Animal List

Group II: County of San Diego Sensitive Animal List

WBWG: Western Bat Working Group

WBWG: H—Western Bat Working Group: High Priority

WBWG: LM—Western Bat Working Group: Low–Medium Priority

WBWG: M—Western Bat Working Group: Medium Priority

² This species was observed by County biologists Maggie Loy and Bobbie Stephenson during a Site visit conducted on March 27, 2014.

Table 2.4-7
On-Site Wetlands, Riparian Habitat, and Non-Wetland Waters

Vegetation Community	Jurisdiction Determination			Total (acres)
	ACOE/RWQCB/ CDFW/County (acres)	CDFW/County (acres)	CDFW-Only (acres)	
Coast live oak woodland	—	—	4.82	4.82
Freshwater marsh	0.07	—	—	0.07 a
Mulefat scrub	—	0.19	—	0.19
Southern coast live oak riparian forest	—	5.16	—	5.16
Southern willow scrub	0.16	2.33	—	2.49
Southern willow scrub/tamarisk	—	0.30	—	0.30
Total	0.23	7.99	4.82	13.04
<i>Non-wetland waters (ephemeral and intermittent)</i> ¹	5.33	—	—	5.33
<i>RPO wetland buffer</i> ²	—	—	—	30.2

¹ The non-wetland waters are under the jurisdiction of ACOE/RWQCB/CDFW only. They are an overlay and not counted toward total acreage.

² RPO wetland buffers are under County jurisdiction and are an overlay and not counted toward the total acreage.

Table 2.4-8
Off-Site Wetlands, Riparian Habitat, and Non-Wetland Waters (Deer Springs Road)

Option A			
Vegetation Community	Jurisdiction Determination		
	ACOE/RWQCB/CDFW/ County (acres)	CDFW/County (acres)	CDFW-Only (acres)
Mulefat scrub	0.03	—	—
Southern willow scrub	0.10	—	—
Disturbed wetland	0.14	—	—
Southern coast live oak riparian forest	—	1.36	—
Total	0.13	1.36	—
Non-wetland waters (ephemeral and intermittent) ¹	0.09	—	—
RPO wetland buffer ²	3.7		
Option B			
Vegetation Community	Jurisdiction Determination (Acres)		
	ACOE/RWQCB/CDFW/County	CDFW/County	CDFW-Only
Mulefat scrub	—	—	—
Southern willow scrub	0.10	—	—
Disturbed wetland	0.14 (not RPO)	—	—
Southern coast live oak riparian forest	—	1.36	—
Total	0.27	1.36	—
Non-wetland waters (ephemeral and intermittent) ¹	0.09	—	—
RPO wetland buffer ²	3.7		

¹ The disturbed wetland and non-wetland waters are under the jurisdiction of ACOE/RWQCB/CDFW only. They are an overlay and not counted toward total acreage.

² RPO wetland buffers are under County jurisdiction and are an overlay and not counted toward the total acreage.

Table 2.4-9
Additional Off-Site Wetlands, Riparian Habitat, and Non-Wetland Waters

Vegetation Community	Jurisdiction Determination		
	ACOE/RWQCB/CDFW/ County (acres)	CDFW/County (acres)	CDFW-Only (acres)
<i>Camino Mayor</i>			
Southern willow scrub	—	0.05	—
Non-wetland waters (ephemeral and intermittent) ¹	0.06	—	—
<i>Mesa Rock Road</i>			
Non-wetland waters (ephemeral and intermittent) ¹	—	—	—
<i>Sarver Lane</i>			
Coast live oak woodland (including disturbed)	—	—	0.95
Non-wetland waters (ephemeral and intermittent) ¹	0.05	—	—
<i>Sewer Improvements²</i>			
Southern willow scrub	3.32	—	—
Arundo-dominated riparian	0.26	—	—
<i>Mar Vista²</i>			
Coast live oak woodland	<0.01	—	—
<i>I-15 Interchange</i>			
Coast live oak woodland	0.14	—	—
Total	3.83	0.05	0.95
RPO wetland buffer ³	1.2		

¹ The non-wetland waters are under the jurisdiction of ACOE/RWQCB/CDFW only.

² A formal delineation was not conducted for the off-site sewer improvements, nor the Mar Vista and I-15 Interchange improvements. For purposes of this analysis, all riparian habitat is assumed to be under the jurisdiction of all three resource agencies and the County.

³ RPO wetland buffers are under County jurisdiction and are an overlay and not counted toward the total acreage.

Table 2.4-10
Data Station Point Summary

Data Station (Sample ID No.)	Wetland Determination Field Indicators			Vegetation Community	Jurisdiction
	Vegetation	Hydric Soils	Hydrology		
1			✓	Coast live oak riparian forest	ACOE/RWQCB non-wetland waters; CDFW/County wetlands
2			✓	Coast live oak riparian forest	ACOE/RWQCB non-wetland waters; CDFW/County wetlands
3			✓	Coast live oak riparian forest	ACOE/RWQCB non-wetland waters; CDFW/County wetlands
4a			✓	Southern willow scrub/tamarisk scrub	CDFW/County wetlands
4b				Southern willow scrub/tamarisk scrub	CDFW/County wetlands

**Table 2.4-10
Data Station Point Summary**

Data Station (Sample ID No.)	Wetland Determination Field Indicators			Vegetation Community	Jurisdiction
	Vegetation	Hydric Soils	Hydrology		
5	✓	✓	✓	Southern willow scrub	ACOE/RWQCB/CDFW/ County wetlands
7a			✓	Southern willow scrub	ACOE/RWQCB non- wetland waters; CDFW/County wetlands
7b				Developed	None

**Table 2.4-11
Interstate 15 Bridge Dimensions**

	Total Approximate Bridge Width (East to West)	Total Approximate Bridge Length (North to South)	Total Approximate Opening Distance Between I-15 North and I-15 South (East to West)	Total Approximate Max Height of Bridges (pavement to bridge bottom)	Comments
Camino Del Rey	237 feet (ft)	140 ft	63 ft	60 ft	Five-strand barbwire fencing installed in the east to west direction on both the north and south sides of Camino del Rey. Fencing terminates at Camino del Rey and Highway 395 intersection.
Gopher Canyon Road	245 ft	148 ft	95 ft	60 ft	No fencing exists under bridge crossing.
Lawrence Welk Lane	240 ft	110 ft	100 ft	40 ft	Five-strand barbwire fencing installed in the east to west direction on both the north and south sides of Lawrence Welk Lane.
Deer Springs Road	180 ft	50 ft	n/a	60 ft	Deer Springs Road bridge crosses over I-15. 6-foot-tall chain-link fence installed in north/south direction on east and west sides of I-15.
Mesa Rock Road	212 ft	130 ft	63 ft	50 ft	6-foot-tall chain-link fence installed in east/west direction on north and south sides of Mesa Rock Road.

Table 2.4-12
Culvert Dimensions Adjacent to Newland Sierra Project Site

ID	Location	Type	Width	Height	Length	Substrate
CU-1	I-15	Round concrete culvert	4 feet (ft)	4 ft	Estimated (est.) 350 ft	concrete
CU-2	I-15	Round concrete culvert	2 ft	2 ft	Est. 350 ft	concrete
CU-3	I-15	Round corrugated metal culvert	2 ft	2 ft	Est. 350 ft	metal
CU-4	I-15	Round corrugated metal culvert	4 ft	4 ft	Est. 350 ft	metal
CU-5	I-15	Round corrugated metal culvert	2 ft	2 ft	Est. 350 ft	metal
CU-6	I-15	Round corrugated metal culvert	2 ft	2 ft	Est. 350 ft	metal
CU-7	I-15	Round corrugated metal culvert	3 ft	3 ft	Est. 350 ft	metal
CU-8	I-15	Round corrugated metal culvert	4 ft	4 ft	Est. 350 ft	metal/leaves/dirt
CU-9	I-15	Round concrete culvert	4 ft	4 ft	Est. 350 ft	concrete
CU-10	Champagne Boulevard	Half-round concrete culvert	4 ft	4 ft	30 ft	dirt/leaves
CU-11	Deer Springs Road	Half-round, corrugated metal culvert	1 ft	1 ft	30 ft	dirt
CU-12	Deer Springs Road	Corrugated metal round	1.5 ft	1.5 ft	30 ft	dirt
CU-13	Deer Springs Road	Corrugated metal round	2 ft	2 ft	30 ft	dirt
CU-14	Deer Springs Road	Corrugated metal round	2.5 ft	2.5 ft	30 ft	dirt
CU-15	Deer Springs Road	Corrugated metal round	2.5 ft	2.5 ft	30 ft	metal

Table 2.4-13
Direct Permanent Impacts to Observed County Group 1 Species and/or State Species of Special Concern

	Species	Existing Suitable Habitat (acres)	Permanent Impacts to Suitable Habitat (acres)	Percent of Suitable Habitat Impacted
Amphibian	Western spadefoot toad	n/a ¹	n/a	n/a
Reptiles	Belding's orange-throated whiptail	1,965.7	764.2	39%
	Red-diamond rattlesnake	1,965.7	764.2	39%
	Coronado Island skink	1,973.9	766.4	39%
	Blainville's horned lizard	1,965.7	764.2	39%
	Coast patch-nosed snake	1,953.3	763.3	39%
Birds	Bell's sage sparrow	1,869.3	720.6	39%
	Coastal California gnatcatcher	79.7	54.5	68%
	Cooper's hawk – nesting	59.0	47.5	81%
	Cooper's hawk – foraging	1,976.4	767.3	39%
	Red shouldered hawk – nesting	59.0	47.5	81%
	Red shouldered hawk – foraging	1,976.4	767.3	39%
	Sharp-shinned hawk – foraging	1,976.4	767.3	39%
	Turkey vulture – foraging	1,976.4	767.3	39%
	Northern harrier – foraging	76.1	36.5	48%
	Yellow warbler	8.2	2.1	26%

Table 2.4-13
Direct Permanent Impacts to Observed County Group 1 Species and/or
State Species of Special Concern

	Species	Existing Suitable Habitat (acres)	Permanent Impacts to Suitable Habitat (acres)	Percent of Suitable Habitat Impacted
Mammals	Northwestern San Diego pocket mouse	1,944.2	756.9	39%
	San Diego desert woodrat	1,937.2	748.1	39%

¹ Because breeding habitat for western spadefoot toad is a small subset of the vegetation communities on Site, habitat was not modeled.

Table 2.4-14
Off-Site Direct Permanent Impacts to Observed County Group 1 Species and/or
State SSC Species (acres)

	Species	Deer Springs Road– Option A (acres)	Deer Springs Road– Option B (acres)	Camino Mayor (acres)	Mesa Rock Road (acres)	Sarver Lane (acres)	Sewer (acres)	I-15 Interchange (acres)	Mar Vista (acres)
Reptiles	Coastal whiptail	8.6	10.0	2.5	0.3	2.9	0.2	2.5	0.01
	Blainville's horned lizard	8.6	10.0	2.5	0.3	2.9	0.2	2.5	0.01
	Coast patch-nosed snake	7.6	8.6	2.5	0.3	2.9	0.2	2.5	0.01
	Red-diamond rattlesnake	8.6	10.0	2.5	0.3	2.9	0.2	2.5	0.01
Birds	Bell's sage sparrow	1.5	1.9	1.9	0.3	2.6	--	0.4	--
	Coastal California gnatcatcher	1.3	1.6	--	0.3	--	--	0.4	--
	Cooper's hawk – nesting	4.3	4.6	--	--	0.1	--	0.1	0.3
	Cooper's hawk – foraging	12.1	14.0	3.2	0.3	2.9	0.5	2.6	0.3
	Red shouldered hawk – nesting	4.3	4.6	--	--	0.1	--	0.1	0.3
	Red shouldered hawk – foraging	12.1	14.0	3.2	0.3	2.9	0.5	2.6	0.3
	Sharp-shinned hawk – foraging	12.1	14.0	3.2	0.3	2.9	0.5	2.6	0.3
	Turkey vulture – foraging	12.1	14.0	3.2	0.3	2.9	0.5	2.6	0.3
	Northern harrier – foraging	4.1	4.6	0.6	--	0.3	0.5	2.0	0.01
	Yellow warbler	0.9	0.9	0.1	--	--	0.3	--	--

Table 2.4-14
Off-Site Direct Permanent Impacts to Observed County Group 1 Species and/or
State SSC Species (acres)

	Species	Deer Springs Road–Option A (acres)	Deer Springs Road–Option B (acres)	Camino Mayor (acres)	Mesa Rock Road (acres)	Sarver Lane (acres)	Sewer (acres)	I-15 Interchange (acres)	Mar Vista (acres)
Mammals	Northwestern San Diego pocket mouse	5.5	6.4	2.5	0.3	2.8	0.2	2.4	0.01
	San Diego desert woodrat	6.5	7.3	2.5	0.3	2.9	0.2	1.4	0.01

Table 2.4-15
Summary of Direct Impacts to County List A and List B Species and
Significance Prior to Mitigation

Species	CRPR ¹	Approximate Number of Individuals within Project Site	Approximate Number of Individuals within On-Site Development Footprint	Estimated Percentage of Occurrences Impacted On Site	Significance Prior to Mitigation
<i>County List A</i>					
Summer holly (<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i>)	1B.2	1,356	196 ²	14%	Significant
Ramona horkelia (<i>Horkelia truncata</i>)	1B.3	62	62	100%	Significant
<i>Brodiaea orcuttii</i> Orcutt's brodiaea	1B.1	50	0	0%	Less than Significant
<i>County List B</i>					
<i>Salvia munzii</i> Munz's Sage	2.3	4	0	0%	Less than Significant

¹ See Table 2.4-5 for CRPR code.

² This total includes one plant that is located within a temporary 15-foot-wide construction area. Although vegetation within this area would be restored, and the impact is considered temporary, impacts to special-status plants within the temporary area are considered permanent.

Table 2.4-16

Summary of Direct Impacts to County List D Species and Significance Prior to Mitigation

Species	CRPR	Approximate Number of Individuals within Project Site	Approximate Number of Individuals within On-Site Development Footprint	Estimated Percentage of Occurrences Impacted On Site	Significance Prior to Mitigation
Chaparral rein orchid (<i>Piperia cooperi</i>)	4.2	5	5	100%	Less than Significant
Engelmann oak (<i>Quercus engelmannii</i>)	4.2	28	18	64%	Less than Significant
Ashy spike-moss (<i>Selaginella cinerascens</i>)	4.1	3	1	33%	Less than Significant

¹ See Table 2.4-5 for CRPR code.

Table 2.4-17

On-Site Temporary Direct Impacts to Vegetation Communities and Land Cover Types

General Vegetation Community/Land Cover Type	Temporary Impacts (Acres)
<i>Coastal Scrub</i>	
Diegan coastal sage scrub*	2.6
Coastal sage – chaparral transition*	0.1
<i>Subtotal</i>	2.7
<i>Chaparral</i>	
Granitic southern mixed chaparral*	5.8–6.3 ¹
Scrub oak chaparral*	<0.1
<i>Subtotal</i>	5.8-6.3
<i>Non-Native Communities and Land Covers</i>	
Disturbed habitat	0.2
Total²	8.7–9.2¹
<i>Other</i>	
RPO wetland buffers ^{3, 4}	<0.1

* Vegetation community is considered special-status by the County of San Diego and requires mitigation (County of San Diego 2010a).

¹ A portion of these temporary impacts are associated with the off-site Deer Springs Road improvements and include 1.7 acres (Option A) or 2.2 acres (Option B).

² Totals may not add due to rounding.

³ The Resource Protection Ordinance (RPO) wetland buffers (75-foot buffer) are an overlay and not counted toward the overall acreage.

⁴ This is an RPO resource and is described further in the RPP.

Table 2.4-18
Permanent Direct Impacts to Vegetation Communities and Land Cover Types

General Vegetation Community/ Land Cover Type	Existing Acres	Development/ Access Roads (acres)	Fuel Management Zones (acres)	Total Impacts (acres)
<i>Coastal Scrub</i>				
Diegan coastal sage scrub (including disturbed) *	68.2	18.1	29.0	45.6
Coastal sage scrub – Baccharis dominated (including disturbed)	2.0	0.2	1.4	1.5
Flat-topped buckwheat – disturbed*	1.7	—	—	0
Coastal sage – chaparral transition*	7.8	5.0	2.6	7.4
<i>Subtotal</i>	79.7	23.2	33	54.5
<i>Chaparral</i>				
Granitic southern mixed chaparral* (including disturbed)	1,700.7	307.3	319.6	626.9
Mafic southern mixed chaparral*	58.8	0.8	—	0.8
Scrub oak chaparral*	44.3	33.4	5.8	39.2
<i>Subtotal</i>	1,803.8	341.5	325.4	666.9
<i>Woodland</i>				
Coast live oak woodland*	9.1	5.9	0.6	6.5
<i>Riparian¹</i>				
Freshwater marsh*	0.1	—	—	—
Southern coast live oak riparian forest*	5.2	—	1.9	1.9
Mulefat scrub*	0.2	<0.1	0.1	0.1
Southern willow scrub*	2.5	0.1	—	0.1
Southern willow scrub/tamarisk scrub*	0.3	—	—	—
<i>Subtotal</i>	8.3	0.1	2.0	2.1
<i>Grassland</i>				
Non-native grassland*	16.1	12.5	2.8	15.3
<i>Non-Native Communities and Land Covers</i>				
Eucalyptus woodland	0.5	—	—	—
Intensive agriculture	<0.0	—	<0.1	<0.0
Orchard and vineyards	2.0	<0.1	0.9	1.0
Urban/developed	9.2	9.1	0.1	9.2
Disturbed habitat	57.0	14.2	6.8	21.0
<i>Subtotal</i>	68.7	23.3	7.8	31.1
Total²	1,985.6	406.6	369.9	776.6
<i>Other</i>				
RPO wetland buffers ³	30.2	4.4	4.3	8.7

* Vegetation community is considered special status by the County and requires mitigation (County of San Diego 2010a).

¹ These are a Resource Protection Ordinance (RPO) resource and are described further in the Resource Protection Plan.

² Totals may not add due to rounding.

³ The RPO wetland buffers (75-foot-wide buffer) are an overlay and not counted toward the overall acreage.

Table 2.4-19
Deer Springs Road Off-Site Permanent Direct Impacts to
Vegetation Communities and Land Cover Types

General Vegetation Community/Land Cover Type	Option A (acres)	Option B (acres)
<i>Coastal Scrub</i>		
Coastal sage – chaparral transition*	1.3	1.6
<i>Chaparral</i>		
Granitic southern mixed chaparral* (including disturbed)	1.2	1.8
<i>Woodland</i>		
Coast live oak woodland*	2.1	2.2
<i>Riparian</i>		
Southern coast live oak riparian forest*	0.8	0.8
Mulefat scrub	0.03	0.03
Southern Willow Scrub	0.1	0.1
<i>Subtotal</i>	0.9	0.9
<i>Grassland</i>		
Non-native grassland*	1.1	1.5
<i>Non-Native Communities and Land Covers</i>		
Agriculture	1.9	2.0
Disturbed habitat	2.9	3.2
Eucalyptus woodland	1.3	1.6
Orchard and vineyards	1.3	1.3
Urban/developed	28.2	28.8
Intensive agriculture	0.9	0.9
Extensive agriculture	4.4	4.4
<i>Subtotal</i>	40.9	42.2
Total¹	47.5	50.2
<i>Other</i>		
RPO wetland buffers ^{2, 3}	3.7	3.7

* Vegetation community is considered special-status by the County and requires mitigation (County of San Diego 2010a).

¹ Totals may not add due to rounding.

² This is a Resource Protection Ordinance (RPO) resource and is described further in the Resource Protection Plan.

³ The RPO wetland buffers (75-foot-wide buffer) are an overlay and not counted toward the overall acreage.

Table 2.4-20
Additional Off-Site Permanent Direct Impacts to
Vegetation Communities and Land Cover Types

General Vegetation Community/ Land Cover Type	Camino Mayor	Mesa Rock Road	Sarver Lane	Sewer Improvements	Mar Vista	South Santa Fe	I-15 Interchange	Total Additional Off-Site
<i>Coastal Scrub</i>								
Diegan coastal sage scrub (including disturbed)*	—	0.3	—	—	—	—	0.2	0.5

Table 2.4-20
Additional Off-Site Permanent Direct Impacts to
Vegetation Communities and Land Cover Types

General Vegetation Community/ Land Cover Type	Camino Mayor	Mesa Rock Road	Sarver Lane	Sewer Improvements	Mar Vista	South Santa Fe	I-15 Interchange	Total Additional Off-Site
Coastal sage – chaparral transition*	—	—	—	—	—	—	0.1	0.1
<i>Chaparral</i>								
Granitic southern mixed chaparral* (including disturbed)	1.9	—	2.6	—	—	—	—	4.5
<i>Woodland</i>								
Coast live oak woodland (including disturbed)*	—	—	0.6	—	—	—	<0.1	0.6
<i>Riparian</i>								
Southern willow scrub*	0.1	—	—	0.3	—	—	—	0.4
Arundo-dominated riparian	—	—	—	0.1	—	—	—	0.1
<i>Grassland</i>								
Non-native grassland*	—	—	<0.1	—	—	—	1.0	1.1
<i>Non-native Communities and Land Covers</i>								
Intensive agriculture	—	—	0.5	—	—	—	—	0.5
Extensive agriculture	—	—	0.1	—	—	—	—	0.1
Eucalyptus woodland	—	—	—	—	0.3	—	0.1	0.4
Orchard and vineyards	0.6	—	—	—	—	—	—	0.6
Urban/developed	0.2	1.6	1.8	—	0.8	0.3	7.2	12.0
Disturbed habitat	0.6	—	0.3	0.2	<0.1	—	1.0	1.9
Non-native woodland	—	—	0.2	—	—	—	—	0.2
<i>Subtotal</i>	1.4	1.6	2.9	0.2	1.1	0.3	8.4	15.7
Total ¹	3.4	1.9	6.0	0.6	1.1	0.3	9.8	23.0
<i>Other</i>								
RPO wetland buffers ^{2,3}	0.3	—	—	—	0.2	—	0.6	1.1

* Vegetation community is considered special-status by the County and requires mitigation (County of San Diego 2010a).

¹ Totals may not add due to rounding.

² This is an RPO resource and is described further in Section 4.2.5 and the RPP.

³ The RPO wetland buffers (75-foot buffer) are an overlay and not counted toward the overall acreage.

Table 2.4-21
On-Site Permanent Impacts to Wetlands, Riparian Habitat, and Non-Wetland Waters

Vegetation Community	Permanent Impacts (acres)			Total Impacts (acres)
	ACOE/RWQCB/CDFW/County	CDFW/County	CDFW Only	
Wetlands and Riparian Habitat				
Coast live oak woodland	—	—	3.30	3.30
Freshwater marsh	—	—	—	—

Table 2.4-21
On-Site Permanent Impacts to Wetlands, Riparian Habitat, and Non-Wetland Waters

Vegetation Community	Permanent Impacts (acres)			Total Impacts (acres)
	ACOE/RWQCB/CDFW/County	CDFW/County	CDFW Only	
Mulefat scrub	—	0.09	—	0.09
Southern coast live oak riparian forest	—	1.91	—	1.91
Southern willow scrub	—	0.13	—	0.13
Southern willow scrub/tamarisk	—	—	—	—
Total	—	2.13	3.30	5.43
<i>Non-wetland waters (ephemeral and intermittent) ¹</i>	1.41	n/a	n/a	1.41

¹ The non-wetland waters are under the jurisdiction of ACOE/RWQCB/CDFW only. They are mapped as an overlay and not counted toward total acreage.

Table 2.4-22
Temporary Off-Site Impacts to Wetlands, Riparian Habitat, and Non-Wetland Waters

Jurisdictional Resource	Deer Springs Road—Option A (acres)	Deer Springs Road—Option B (acres)	Camino Mayor (acres)	Sarver Lane (acres)	Mar Vista (acres)	I-15 Interchange (acres)
<i>ACOE/RWQCB/CDFW</i>						
Non-wetland waters (ephemeral and intermittent)	0.01	<0.01	0.01	0.04	—	—
Disturbed wetland (not RPO)	0.14	0.14	—	—	—	—
<i>ACOE/RWQCB/CDFW/County</i>						
Southern willow scrub	0.04	0.04	—	—	—	—
Mulefat scrub	<0.01	<0.01	—	—	—	—
Coast live oak woodland	—	—	—	—	<0.01	0.12
<i>CDFW Only</i>						
Coast live oak woodland (including disturbed)	—	—	—	0.39	—	—
Southern coast live oak riparian forest	0.52	0.52	—	—	—	—
<i>CDFW/County</i>						
Southern willow scrub	—	—	<0.01	—	—	—
<i>Total Jurisdictional Resources</i>	0.72	0.72	0.01	0.43	<0.01	0.12

Table 2.4-23
Off-Site Permanent Impacts to Wetlands, Riparian Habitat, and Non-Wetland Waters

Jurisdictional Resource	Deer Springs Road		Camino Mayor (acres)	Sarver Lane (acres)	Sewer Improvements (acres)	I-15 Interchange (acres)	Total
	Option A (acres)	Option B (acres)					
ACOE/RWQCB/CDFW							
Non-wetland waters (ephemeral and intermittent)	0.08	0.08	0.06	<0.01	—	—	0.14
ACOE/RWQCB/CDFW/County							
Southern willow scrub	0.06	0.06	—	—	0.35	—	0.41
Arundo dominated riparian	—	—	—	—	0.14	—	0.14
Mulefat scrub	0.03	0.03	—	—	—	—	0.03
Coast live oak woodland	—	—	—	—	—	0.02	0.02
CDFW Only							
Coast live oak woodland (including disturbed)	—	—	—	0.56	—	—	0.56
CDFW/County							
Southern coast live oak riparian forest	0.83	0.83	—	—	—	—	0.83
Southern willow scrub	—	—	0.06	—	—	—	0.06
Total Jurisdictional Resources	0.83	0.84	0.12	0.56	0.49	0.02	2.02
RPO Buffer ¹	2.75	2.75	0.29	—	—	0.57	3.85
Total Off-site Impacts (Option A)		2.02					
Total Off-site Impacts (Option B)		2.02					

¹ Additional impacts to RPO buffer would result from improvements at Mar Vista (0.24 acre)

Table 2.4-24
North County MSCP Preserve Areas Within 5-Mile Buffer Area Compared to On-Site Open Space Blocks

ID Number	Acres	ID Number	Acres	ID Number	Acres
<i>Block 1</i>	<i>870.2</i>	<i>Block 2</i>	<i>153.9</i>	<i>Block 3</i>	<i>185.0</i>
1	345.1	26	13.7	51	15.5
2	81.8	27	280.4	52	5.8
3	40.1	28	17.3	53	7.9
4	122.6	29	21.8	54	26.0
5	144.0	30	36.6	55	22.8
6	33.2	31	62.1	56	25.3
7	17.3	32	13.9	57	65.6
8	38.8	33	37.1	58	8.9
9	145.0	34	29.7	59	7.4
10	21.2	35	8.3	60	15.7

Table 2.4-24
North County MSCP Preserve Areas Within 5-Mile Buffer Area
Compared to On-Site Open Space Blocks

ID Number	Acres	ID Number	Acres	ID Number	Acres
<i>Block 1</i>	<i>870.2</i>	<i>Block 2</i>	<i>153.9</i>	<i>Block 3</i>	<i>185.0</i>
11	556.0	36	14.6	61	41.3
12	241.3	37	11.4	62	23.6
13	23.8	38	11.4	63	17.3
14	21.7	39	10.0	64	72.2
15	44.8	40	12.1	65	110.8
16	86.8	41	33.7	66	25.5
17	80.0	42	18.6	67	3.6
18	66.8	43	89.7	68	6.4
19	42.3	44	6.4	69	2.7
20	50.4	45	22.5	70	23.7
21	44.6	46	12.7	71	15.8
22	106.7	47	15.9	72	21.7
23	31.3	48	15.3	73	26.0
24	50.0	49	85.3	–	–
25	187.3	50	177.2	–	–

Table 2.4-25
Comparable Open Space/Preserves

Site	Area	Location
Pascoe Parcel of Del Dios Preserve (San Diego County Parks)	153 acres	North County Inland San Diego County
Helix–Lambron Parcel of Del Dios Preserve (San Diego County Parks)	60 acres	North County Inland San Diego County
Escondido Creek Preserve (San Diego County Parks) Roughly six separate properties	346 acres	North County Inland San Diego County
San Luis Rey Preserve (San Diego County Parks) Three separate parcels	460 acres	North County Inland San Diego County
Stoneridge Preserve (San Diego County Parks) Two separate parcels	248 acres	East County San Diego
San Ramon	95 acres	Palos Verdes Peninsula
Forrestal Nature Preserve	155 acres	Palos Verdes Peninsula
Montebello Hills	260–320 acres	Montebello

Table 2.4-26
Consistency of the Newland Sierra Project with the Draft North County Plan Planning Agreement Conservation Objectives

Conservation Objective ¹	Applicability/Compliance
Provide for the protection of species, natural communities, and ecosystems on a landscape level.	The proposed project, with mitigation, would provide for protection and conservation of special-status species and natural communities. Through the preservation and long-term management of 1,420.9 acres of on-site and off-site open space of multiple species and multiple communities with connection to off-site pre-approved mitigation areas (PAMAs), the proposed project would allow for protection of species, natural communities, and ecosystems at a landscape level.
Preserve the diversity of plant and animal communities throughout the planning area.	The proposed project would conserve and provide long-term habitat management for 1,420.9 acres of biological open space designed to capture the range of plant and animal diversity found on Site, which would contribute to the preserved biodiversity in the draft North San Diego County Planning Area. All of the native vegetation communities and habitat types that occur on the project Site are represented within the proposed on-site biological open space. In addition to California gnatcatcher movement corridors and coastal sage scrub conserved by the project, the on-site and off-site biological open space would preserve communities like Mafic southern mixed chaparral and diverse riparian communities along a segment of Gopher Canyon Creek, which would contribute to the diversity of plant and animal communities preserved in the North County Planning Area. The proposed biological open space would also capture an array of landscape features and microhabitats such as rock outcrops and varying landforms (ridgelines, valleys, and slopes) across a range of topographic gradients and differing aspects, which would contribute to the plant and animal communities preserved in the North County Plan planning area.
Protect threatened, endangered, or other special-status plant and animal species, and minimize and mitigate the take or loss of proposed Covered Species.	The proposed project, with mitigation, would provide for protection and conservation of special-status plant and animal species, thereby contributing to the conservation of the planned North County Plan, consistent with the draft North County Plan conservation strategy. Specifically, the proposed project would provide conservation of populations and/or suitable habitat, for the following draft North County Plan covered species: summer holly, sticky dudleya, felt-leaved monardella, Engelmann oak, orange-throated whiptail, Blainville's horned lizard, red-diamond rattlesnake, northern harrier, California gnatcatcher, southern California rufous-crowned sparrow, Bell's sage sparrow, pallid bat, and cougar.
Identify and designate biologically sensitive habitat areas.	Consistent with federal, state, and County of San Diego (County) standards, biological studies were conducted on the project Site between 2000 and 2017, which contributes to the biological database and knowledge for nearly 2,000 acres in the draft North County Plan Planning Area. Field surveys, mapping, and documentation has been conducted for vegetation communities, rare plants, jurisdictional waters and wetlands, nesting raptors, reptiles, and wildlife crossing and culverts, and focused surveys for burrowing owl (<i>Athene cunicularia</i>), least Bell's vireo (<i>Vireo bellii pusillus</i>), southwestern willow flycatcher (<i>Empidonax traillii extimus</i>), coastal California gnatcatcher (<i>Polioptila californica californica</i>), and Harbison's dun skipper (<i>Euphyes vestris harbisoni</i>).
Preserve habitat and contribute to the recovery of Covered Species.	The proposed project, with mitigation, would provide for protection and conservation of special-status plant and animal species, thereby contributing to the recovery of the draft North County Plan covered species, consistent

Table 2.4-26
Consistency of the Newland Sierra Project with the Draft North County Plan Planning Agreement Conservation Objectives

Conservation Objective ¹	Applicability/Compliance
	with the draft North County Plan conservation strategy. Specifically, the proposed project would provide conservation of populations and/or suitable habitat, for the following draft North County Plan Covered Species: summer holly, sticky dudleya, felt-leaved monardella, Engelmann oak, orange-throated whiptail, western spadefoot, Blainville's horned lizard, red-diamond rattlesnake, northern harrier, California gnatcatcher, southern California rufous-crowned sparrow, Bell's sage sparrow, pallid bat, and cougar.
Reduce the need to list additional species.	The long-term conservation of large areas of open space resulting from the proposed project would contribute to building the draft North County Plan reserve system and build upon and buffer existing adjacent preserve areas within the PAMA. By implementing the proposed project consistent with the draft North County Plan conservation strategy, the project would contribute to reducing the need to list draft North County Plan covered Species that are currently not listed.
Set forth species-specific goals and objectives.	For the covered species, the draft North County Plan describes the general species goals as follows: "Conserve the ecosystem functions and values, appropriate natural communities, and opportunities for genetic exchange needed for the Covered Species to persist in the Plan Area" (County of San Diego 2009). As described above under separate objectives, the proposed project would provide conservation of populations and/or suitable habitat, for the covered species to contribute toward meeting the species-specific goals of the draft North County Plan.
Set forth specific habitat-based goals and objectives expressed in terms of amount, quality, and connectivity of habitat.	The proposed project, with mitigation, would provide for protection and conservation of covered species habitat and natural communities, consistent with the conservation strategy of the draft North County Plan, thereby contributing to and not precluding the ability of the County to meet the goals and objectives of the draft North County Plan. Through the preservation and long-term management of 1,420.9 acres of on-site and off-site biological open space within the draft North County Plan the proposed hardline area on Site and PAMA in the off-site mitigation parcel, multiple covered species and natural communities would be protected in an interconnected system of biological open space, consistent with the goals and objectives of the draft North County Plan.

¹ County of San Diego 2008a

Table 2.4-27
Summary of Impacts, Mitigation, and Open Space for Vegetation Communities and Jurisdictional Areas (Acres)

Habitat Types/Vegetation Communities	On-Site Existing Acreage	Total On-Site Impacts ¹	Total Off-Site Impacts ²	Mitigation Ratio	Mitigation Required	On-Site Open Space ³	Off-Site Mitigation Area	Mitigation Excess/ (Deficit)
<i>Coastal Scrub</i>								
Diegan coastal sage scrub	68.2	45.6	0.5	2:1	92.2	22.6	106.4	36.8

Table 2.4-27
Summary of Impacts, Mitigation, and Open Space for
Vegetation Communities and Jurisdictional Areas (Acres)

Habitat Types/Vegetation Communities	On-Site Existing Acreage	Total On-Site Impacts ¹	Total Off-Site Impacts ²	Mitigation Ratio	Mitigation Required	On-Site Open Space ³	Off-Site Mitigation Area	Mitigation Excess/ (Deficit)
(including disturbed)*								
Coastal sage scrub – Baccharis dominated (including disturbed)	2.0	1.5	—	2:1	3.0	0.5	—	(2.5)
Flat-topped buckwheat – disturbed*	1.7	0	—	2:1	0	1.7	—	1.7
Coastal sage – chaparral transition*	7.8	7.4	1.7	2:1	18.2	0.4	—	(17.8)
<i>Subtotal</i>	<i>79.7</i>	<i>54.5</i>	<i>2.2</i>	<i>N/A</i>	<i>113</i>	<i>25.2</i>	<i>106.4</i>	<i>18.2</i>
<i>Chaparral</i>								
Chamise chaparral ⁴ *	—	—	—	—	—	—	19.7	19.7
Granitic southern mixed chaparral (including disturbed)*	1,700.7	626.9	6.3	0.5:1	316.6	1,073.8	—	757.2
Mafic southern mixed chaparral*	58.8	0.8	—	3:1	2.4	58.0	—	55.6
Scrub oak chaparral*	44.3	39.2	—	0.5:1	19.6	5.1	—	(14.5)
<i>Subtotal</i>	<i>1,803.8</i>	<i>666.9</i>	<i>6.3</i>	<i>N/A</i>	<i>338.6</i>	<i>1,136.9</i>	<i>19.7</i>	<i>818.0</i>
<i>Woodland</i>								
Coast live oak woodland*	9.1	6.5	2.8	3:1	27.9	2.6	—	(25.3)
Engelmann Oak Woodland - Open ⁴ *	—	—	—	N/A	—	—	29.0	29.0
<i>Subtotal</i>	<i>9.1</i>	<i>6.5</i>	<i>2.8</i>	<i>N/A</i>	<i>26.1</i>	<i>2.6</i>	<i>29.0</i>	<i>3.7</i>
<i>Riparian</i>								
Freshwater marsh*	0.1	—	—	3:1	—	0.1	—	0.1
Southern coast live oak riparian forest*	5.2	1.9	0.8	3:1	8.1	3.3	—	(4.8)
Mulefat scrub*	0.2	0.1	0.03	3:1	0.4	0.1	—	(0.3)
Southern sycamore-alder riparian woodland* ⁴	—	—	—	—	—	—	7.9	7.9
Southern willow scrub*	2.5	0.1	0.5	3:1	1.8	2.4	—	0.6

Table 2.4-27
Summary of Impacts, Mitigation, and Open Space for
Vegetation Communities and Jurisdictional Areas (Acres)

Habitat Types/Vegetation Communities	On-Site Existing Acreage	Total On-Site Impacts ¹	Total Off-Site Impacts ²	Mitigation Ratio	Mitigation Required	On-Site Open Space ³	Off-Site Mitigation Area	Mitigation Excess/ (Deficit)
Southern willow scrub/tamarisk scrub*	0.3	—	—	3:1	—	0.3	—	0.3
Arundo-dominated riparian	—	—	0.1	3:1	0.3	—	—	(0.3)
<i>Subtotal</i>	8.3	2.1	1.3	N/A	10.6	6.2	7.9	3.5
<i>Grassland</i>								
Valley needlegrass grassland ^{4*}	—	—	—	—	—	—	8.5	8.5
Non-native grassland*	16.1	15.3	2.6	0.5:1	9.0	0.8	33.8	25.7
<i>Subtotal</i>	16.1	15.3	2.6	N/A	9.0	0.8	42.3	34.2
<i>Non-native Communities and Land Covers</i>								
Agriculture	—	—	2.0	None	—	—	—	(2.0)
Eucalyptus woodland	0.5	—	2.0	None	—	0.5	3.2	1.7
Intensive agriculture	<0.0	<0.0	1.4	None	—	—	—	(1.4)
Extensive Agriculture	—	—	4.5	None	—	—	—	(4.5)
Orchard and vineyards	2.0	1.0	1.9	None	—	1.0	—	(1.9)
Urban/developed	9.2	9.2	40.8	None	—	—	0.1	(49.9)
Disturbed habitat	57.0	21.0	5.1	None	—	36.0	3.3	13.2
Non-native woodland	—	—	0.2	None	—	—	—	(0.2)
<i>Subtotal</i>	68.7	31.2	57.9	—	0	37.5	6.6	(35.5)
Total¹	1,985.6	776.6	473.2	N/A	497.3	1,209.1	211.8	923.6
<i>Other</i>								
RPO wetland buffer ⁵	30.2	8.7	3.9	N/A	N/A	N/A	28.09	N/A
Oak Root Zone ⁵	32.9	11.2	8.4	3:1	58.8	21.7	16.8	2.1
Non-wetland waters (ephemeral and intermittent) ⁵	5.33	1.41	0.16	1:1	1.59	3.92	—	N/A

¹ Totals may not add due to rounding.

² This includes impacts for Deer Springs Road Option B and all other off-site impacts.

³ The open space acreage includes the on-site temporary impacts since they will be restored and conserved in permanent open space.

⁴ These communities occur in the off-site Ramona mitigation site and are described in Appendix J.

⁵ These features are overlays to the vegetation community layer and are not counted toward the total existing acreage.

* Considered special-status by the County (2010b).

3:1 for riparian areas includes a 1:1 creation and 2:1 enhancement requirement

Table 2.4-28
Cumulative Projects Within the Biological Cumulative Study Area

Map Key	Project	Description	Location
<i>County of San Diego Projects</i>			
1	Campus Park	Mixed-use development, including 529 single-family residential (SFR) dwelling units, 555 multi-family residential (MFR) dwelling units, a Town Center (retail) of 62,000 square feet (sf), a 150,000 sf office building, a sports complex of 5.2 acres, and a small neighborhood park.	Just north of State Route (SR) 76, 0.25 mile east of Interstate (I) 15
2	Campus Park West	Mixed-use development, including approximately 355 MFR units, 400,000 sf Commercial, 50,000 sf Office Professional, 347,000 sf Light Industrial, and possible Civic uses.	Northeast quadrant of I-15 and SR-76
3	Pala Mesa Highlands	Maximum of 130 SFR. Density of 1.6 dwelling units per acre (DU/acre). Lot sizes vary from 5,500 sf to 23,500 sf. Two parks totaling 4.3 acres, trails, 36.5 acres of open space. Specific Plan Amendment to allow clustering.	West of Old Highway 395 between Pala Mesa Drive and Via Belamonte
4	Tedder Tentative Map	Split lot into 13 SFR lots, ranging in size from 1 to 6.43 acres net.	South side of Pala Mesa Drive, west of I-15 and east of Daisy Lane
5	Hukari Subdivision	Minor residential subdivision with road improvements. Four SFR lots plus one remainder lot (3.4 to 7.7 net acres each).	Northern terminus of Mountain View Road and West Lilac Road on west side of Bonsall
7	Los Willows Inn and Spa	Add additional units to a bed and breakfast.	532 Stewart Canyon Road
8	Reeve Tentative Parcel Map (TPM)	Minor residential subdivision. Three SFR lots (2 acres minimum).	2987 Sumac Road, Fallbrook
9	Evans TPM	Minor subdivision into two residential/agricultural parcels (2 and 2.1 acres). Private septic system.	West side of Sage Road between Sumac Road and Pala Road, Fallbrook
10	Bridge Pac West I TPM	Minor residential subdivision. Four SFR lots plus one remainder lot (2.04, 2.08, 2.12, 2.14, and remainder 7.08 net acres each).	3321 Sage Road, Fallbrook
11	Pala Mesa Resort	Specific Plan Amendment for modification and construction of new recreation and resort-related facilities. Addition of 186 resort rooms and wedding facility. Expansion of resort by 6 acres.	2001 Old Highway 395 at Tecalote Lane, north of SR-76 and immediately west of I-15, Fallbrook
23	Rosemary's Mountain/Palomar Aggregates Quarry	Aggregate rock quarry and processing plants for concrete and asphalt. Approximately 22 million tons of rock would be mined over 20 years. Realignment of SR-76 from the Site west to I-15. Reclamation plan to designate lower portion of Site as water storage reservoir after completion of mining activities.	North side of SR-76, 1.25 miles east of I-15
25	Prominence at Pala	Subdivide the property into 30 SFR and two open space lots ranging in size from 4 to 96 acres.	Pala Del Norte Road, 1/3 mile north of SR-76 and approximately 2 miles west of the Pala Indian Reservation

Table 2.4-28
Cumulative Projects Within the Biological Cumulative Study Area

Map Key	Project	Description	Location
26	Palomar College North Education Center District Master Plan	New community college campus to serve approximately 12,000 students to include classroom and administration buildings; parking; open space; athletic fields; and off-site road, water, and sewer improvements.	East side of I-15 between Pankey Road and Pala Mesa Heights Drive
27	Caltrans Realignment of SR-76	Realignment and widening of roadway, improvements to northbound I-15 on- and off-ramps.	From I-15 to west of Rice Canyon Road
28	San Luis Rey Municipal Water District (SLRMWD) Master Plan	Exploration of pipeline and water storage options.	SLRMWD service area and vicinity, north and south of SR-76 between I-15 and Pala Temecula Road
29	–	39 condo units.	Canonita Drive and Old Highway 395, Fallbrook
30	–	Eight SFR lots.	Aqueduct Road and Via Urner, Bonsall
31	–	Nine SFR lots.	Old Highway 395 and Via Urner, Bonsall
32	Marquart Ranch	Nine SFR lots. Includes improvements to Mesa Lilac Road and drainage improvements.	West Lilac Road and Mesa Lilac Road, Bonsall
47	De Jong/Pala Minor Subdivision	Minor residential subdivision. Three SFR lots (1.03, 2.06, and 2.31 net acres each).	Canonita Drive between I-15 and Tecalote Drive
69	Brown, Lee & Karen, TPM	Three lots.	3850 Gird Road
74	Leeds and Strauss Tentative Map	17 SFR lots.	North side of Olive Hill Road, near intersection with SR-76, Bonsall
76	Shamrock Partners TPM	Three lots.	Shamrock Road, Bonsall
77	Crook TPM	Five lots.	32179 Shamrock Road
78	Tabata Bonsall TPM	Four lots.	5546 Mission Road
81	Sumac TPM	Four lots.	3111 Sumac Road
82	Janikowski SFR	3,200 sf SFR.	9686 Pala Road (SR-76), Fallbrook, on north side of SR-76
83	Kratochvid TPM	Four lots.	Old Highway 395
84	Kohl TPM	Four lots plus remainder.	7641 Mount Ararat Way, Bonsall
85	Woodhead TPM	Four lots plus remainder	Mt. Ararat Way, Bonsall
86	Rockefeller TPM	Two lots.	9590 Lilac Way, Valley Center
87	McNulty TPM	Two lots.	32171 Dos Niñas
88	Stehly Caminito Quieto TPM	Four lots.	32009 Caminito Quieto at W. Lilac Road
89	Sanders TPM	Four lots plus remainder lot.	West Lilac Road, 1.25 miles west of Old Highway 395

Table 2.4-28
Cumulative Projects Within the Biological Cumulative Study Area

Map Key	Project	Description	Location
90	Pala Shopping Center	Addition of five commercial buildings to an existing commercial site with grocery store.	On Old Highway 395 just northwest of the intersection of I-15 and SR-76
91	Monserate Tentative Map	Seven SFR.	3624 Monserate Hill Road
92	Dimitri, Diffendale, Kirk TPM	Four lots.	Monserate Hill Road and Monserate Place
94	Singh Power Plant	Power generation facility.	4 miles northeast of I-15 on Pala Del Norte Road, north of SR-76
96	Meadowood	355 single-family dwelling units, 503 multi-family dwelling units, a 10-acre neighborhood park, and an elementary school.	Just north of SR-76, 0.25 mile east of I-15
99	Fallbrook (FB 21, 22, 23)	Seven Single Family Rural Residential, SR10 Class.	Northern border of San Diego County, next to Riverside County
100	Fallbrook (SR2)	Three Single-Family Rural Residential, SR10 Class.	East of I-15/Mission Road interchange
106	North County Environmental Resources Recycling Facility	Recycling facility for pre-sorted, non-contaminated wood and construction debris; 12,000 sf steel building, 100,000-gallon water tank, security, and truck scales.	25568 Mesa Rock Road, immediately east of I-15, north of SR-78
110	Valley Center – VC7, 11, 20A, 20B, 54, 61, 66	261 Single-Family Rural Residential, SR-2.	East of I-15, south of W. Lilac Road
112	Dai Dang Meditation Center	Permit would provide for development of the following buildings, totaling 22,796 sf: a meditation hall, residence quarters, and a main worship hall.	6326 Camino Del Rey
113	Dougherty Pet Resort (MUP 10-027)	Proposed 1,056 sf kennel with a rooftop grass deck and pedestrian bridge, enough for 40 dogs/cats.	1412 Windsong Lane
114	Gainer (MUP p08-052)	Approximately 10,368 sf horse stable for up to 18 horses, 10,800 sf covered riding arena, and improvement of the existing driveway.	6893 West Lilac Road
118	Champagne Lakes, Major Use Permit Modification	Modification for the relocation of 51 RV spaces and one mobile home space to include full hookups to 20 RV spaces, a new restroom, and an area screened by landscaping for vehicle storage.	8310 Nelson Way
119	Crossroads Church, Major Use Permit Modification for Pre-School	Modification proposes to install and operate relocatable pre-school classrooms. The classrooms would have a maximum of 100 students and operate from 6 a.m. to 6:30 p.m., Monday through Friday.	2406 N. Twin Oaks Valley Road

Table 2.4-28
Cumulative Projects Within the Biological Cumulative Study Area

Map Key	Project	Description	Location
120	Moody Creek Farms LLC Major Use Permit Modification (p79-134w)	Expansion of the footprint of the previously approved Major Use Permit to include stables, barns, riding rings and arenas, 0.75-mile horse training track, ranch manager's residence, farm employee housing, and accessory structures associated with the equestrian facility.	30185 and 30321 Camino De Los Caballos; 31257 Via Maria Elena
121	Vista Valley Country Club, Specific Plan Amendment and Major Use Permit	Total increase of 12,520 sf enclosed and 4,442 sf un-enclosed.	2262 Gopher Canyon Road
122	Hidden Meadows – Oak Woodlands Rezone	17.3 acres of General Commercial, 5.6 acres of Office/Professional, 7.7 acres of 10.9 DU/acre MFR, and 5.2 acres of 15.0 DU/acre MFR.	Within the northern Village Town Center of Valley Center
123	Mountain Gate Rezone for Tentative Map Time Extension	Tentative Map Time Extension and Rezone to make sure that only those uses consistent with the Specific Plan are permitted. Tentative Map authorized 147 single-family lots.	27319, 27321, and 27329 Mountain Meadow Road
127	Beauvais Tentative Map	Tentative Map to subdivide 23.2 acres into seven residential lots.	South of intersection of Bella Linda and Old Castle Road
128	Brisa Del Mar	Tentative Map for a residential subdivision of 206 acres into 27, 2-acre-minimum lots.	31002 Aqueduct Road; 7520, 7530, 7570, 7574, and 7650 Camino Del Rey
129	Canyon Villas Welk Tentative Map, Rezone and Site Plan (STP)	Rezone and Tentative Map (TM 5313) to subdivide 20.89 acres into 177 time share units.	28833, 28915 Champagne Boulevard; 8860 Welk View Drive
130	Charles Froehlich Tentative Map	Residential subdivision of two parent parcels, resulting in a total of six lots. The site is located on Double K Road within the Valley Center Community Planning Group in unincorporated San Diego County.	Sierra Roja and Double K
131	Circle P Lane Tentative Map (5468rpl3)	Major Subdivision of 11 proposed lots ranging from 1.03 to 2 gross acres on a 15.48-acre property with access via a private easement road from Mountain Meadows Road. The subject property is designated (2) Residential by the North County Metropolitan Subregional Plan.	10264 Circle P Lane; 27446 Mountain Meadow Road
132	Dabbs Tentative Map	Tentative Map on 38.4 acres (gross acres). The subdivision proposes nine lots. Each proposed lot would be 4 acres (net acres).	32006 Aqueduct Road
134	Golf Green Estates Site Plan	116-lot subdivisions of 6,000 sf parcels.	Old River Road and Camino Del Rey
136	McIntyre (TPM 5014)	Lilac Mountain Ranch: 22-lot/108 acres.	11278 Lilac Vista Drive

Table 2.4-28
Cumulative Projects Within the Biological Cumulative Study Area

Map Key	Project	Description	Location
138	Orchard Vista, Tentative Map, Rezone	Withdrawn.	13278 Orchard Vista Road
141	West Lilac Farms I & II	Approved Tentative Map for 28 single-family lots on 92.8 acres.	31817 Via Ararat Drive; 32542 Aqueduct Road
142	Boyer (TPM 20794)	Approved Tentative Parcel Map for three lots on 3 acres.	(blank)
143	Cunningham TPM, Two Lots	Two legal lots from Assessor's Parcel Numbers 172-140-62 and -64. Parcel 1 is 7.40 net acres and Parcel 2 is 17.6 net acres.	1221 Tarek Trail
144	Fitzpatrick TPM	Minor subdivision of 10.8-acre parcel currently being used for agriculture (avocado grove). Proposes to develop four residential lots ranging from 2.3 to 3.1 acres.	Tomsyl Road
145	Gangavalli TPM, Two Lots	Divide 5.05 net acres into two parcels measuring 2.51 acres gross (2.29 acres net) and 2.51 acres gross (2.45 acres net).	10418 King Sanday Lane
146	Goodnight Ranchos TPM, Two Lots	Divide 5 acres into two parcels measuring 2.45 acres net each. Parcels to have frontage on Circle R Lane.	30359 Circle R Lane
147	Harlow TPM	Three-lot subdivision.	12542 Betsworth Road
148	Hefner/Brown Four-Lot and Remainder TPM: Tentative Plan	Subdivide a +/-58-acre parcel into four lots plus a remainder (lots range from 7.4 to 13.1 net acres).	31460 Aqueduct Road
149	Kim Tentative Parcel Map	Four lots TPM with remainder parcel. Tentative parcel map application to subdivide a 46.72-acre parcel into four lots plus a remainder lot, ranging from 7.4 acres to 12.2 acres, for residential land use.	29640 Pamoosa Lane
150	Kirkorowicz TPM	Two-lot subdivision for creation of two single-family residences and associated driveways and septic.	Fairview Road
151	Matheson (TPM 21173)	12.83 acres into two residential lots of 4.013 and 8.259 net acres.	1202 Rancho Luiseno Road
152	McBride TPM, Two Lots	Two-lot residential subdivision.	29945 Spearhead Trail
154	Modelmoa TPM	Tentative Parcel Map to subdivide 21.1 acres into four parcels and a remainder.	30455 and 30463 Roadrunner Ridge South
155	Mustafa TPM	Tentative Parcel Map to subdivide 16.4 acres into four parcels and a remainder.	9770 Circle R Road
156	Nichols Whitman TPM	TPM for four lots.	10015 W Lilac Road
157	Rimsa TPM, Two Lots	Two SFR lots.	235 West Camino Calafia

Table 2.4-28
Cumulative Projects Within the Biological Cumulative Study Area

Map Key	Project	Description	Location
158	Rios (TPM 21143)	Minor subdivision to create two parcels.	12902 Mirar de Valle Road
159	Robinson TPM, Four Lots	Four SFR lots.	10127 Circle R Drive
161	Sanders TPM	Tentative Parcel Map: Standard four lots plus a reminder lot.	6993 W Lilac Road
163	Tran TPM	Four SFR lots.	29623 Valley of the King Road
164	Turner TPM	Four SFR lots.	29133 Sandy Hill Drive
166	Wild (TPM 21170)	Four SFR lots.	1560 Wild Acres Road
167	Yuan, Minor Subdivision + Remainder, TPM	Tentative Map to subdivide 89.88 acres into four parcels plus a remainder parcel.	Old River Road and Dentro de Lomas
168	Pfaff TPM, Three Lots	Tentative Parcel Map to divide a 7.79-acre parcel into three residential lots of 2.5, 2.1, and 2.7 net acres. Site contains an existing single-family residence on proposed Parcel 1 that would be retained.	32010 Caminito Quieto
170	Castle Creek Condominiums, General Plan Amendment, Specific Plan Amendment, TPM	General Plan Amendment, Specific Plan Amendment, and Tentative Map to change the existing Land Use Designations to (21) Specific Plan area to increase the density from 1.29 to 1.37 acres to allow a Tentative Map to subdivide the site into 63 dwelling units.	8790 Old Castle Road
171	Lilac Hills Ranch	Mix of residential, commercial, and institutional uses. 61,500 sf of specialty retail; 28,500 sf of office uses; 50-room country inn; 903 single-family detached homes; 375 multi-family homes; 468 age-qualified single-family homes; and civic facilities including fire station, parks, recreational center, and amenities.	Bounded by SR-76 to the north, Valley Center to the east, Escondido to the south, and I-15 and Old Highway 395 to the west

¹ Totals may not add due to rounding.

² This includes impacts for Option A and all other off-site impacts.

³ The open space acreage includes the on-site temporary impacts since they will be restored and conserved in permanent open space.

⁴ These communities occur in the off-site Ramona mitigation site and are described in Appendix J.

⁵ These features are overlays to the vegetation community layer and are not counted toward the total existing acreage.

* Considered special-status by the County (2010b).

3:1 for riparian areas includes a 1:1 creation and 2:1 enhancement requirement.

Table 2.4-29
Summary of Impacts and Mitigation for Special-Status Species, Vegetation Communities,
and Jurisdictional Areas

Section of Report Where Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
Guideline 4.1: <i>The project would have a substantial adverse effect, either directly or through habitat modifications, on a candidate, sensitive, or special-status species listed in local or regional plans, policies, or regulations, or by California Department of Fish and Game or U.S. Fish and Wildlife Service.</i>						
2.4.12.1	Impact W-1	Special-Status Wildlife, Listed Species	Short-term (i.e., temporary) direct	M-BIO-1 (biological monitoring to avoid unintentional construction impacts) M-BIO-2 (temporary construction fencing) M-BIO-3 (monitoring verification through preparation of a biological monitoring report) M-BIO-4 (reduction of invasive species through biological review of landscape plans) M-BIO-5 (avoidance by preconstruction surveys for nesting birds and setbacks) M-BIO-6 (revegetation plan for temporary vegetation impacts) M-BIO-7 (minimize night and outdoor lighting)	Less than significant	4.1, A
2.4.12.1	Impact W-2	Special-Status Wildlife, Listed Species	Long-term (i.e., permanent) direct	M-BIO-8A (habitat preservation and management of existing populations of sensitive species, suitable habitat, and special-status vegetation communities) M-BIO-8B (open space easement) M-BIO-8C (limited building zone easement) M-BIO-8D (resource management plan) M-BIO-8E (open space fencing and signage)	Less than significant	4.1, A

Table 2.4-29
Summary of Impacts and Mitigation for Special-Status Species, Vegetation Communities,
and Jurisdictional Areas

Section of Report Where Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
2.4.12.1	Impact SP-1	Special-Status Plant, County List A: <ul style="list-style-type: none"> • Summer holly • Ramona horkelia 	Short-term direct	M-BIO-1 (biological monitoring to avoid unintentional construction impacts) M-BIO-2 (temporary construction fencing) M-BIO-3 (monitoring verification through preparation of a biological monitoring report) M-BIO-9 (relocation of Ramona horkelia through implementation of a Mitigation and Monitoring Plan)	Less than significant	4.1, B
2.4.12.1	Impact SP-2	Special-Status Plant, County List A: <ul style="list-style-type: none"> • Summer holly • Ramona horkelia 	Long-term direct	M-BIO-1 (biological monitoring to avoid unintentional construction impacts) M-BIO-8A (habitat preservation and management of existing populations of sensitive species, suitable habitat, and special-status vegetation communities) M-BIO-9 (relocation of Ramona horkelia through implementation of a Mitigation and Monitoring Plan)	Less than significant	4.1, B
2.4.12.1	Impact W-3	Special-Status Wildlife, County Group 1 and/or SSC Species: <ul style="list-style-type: none"> • Cooper's hawk • Sharp-shinned hawk • Bell's sparrow • Red-shouldered hawk • Turkey vulture • Yellow warbler • Coastal California gnatcatcher 	Short-term direct	M-BIO-1 (biological monitoring to avoid unintentional construction impacts) M-BIO-2 (temporary construction fencing) M-BIO-3 (monitoring verification through preparation of a biological monitoring report) M-BIO-4 (reduction of invasive species through biological review of landscape plans)	Less than significant	4.1, B

Table 2.4-29
Summary of Impacts and Mitigation for Special-Status Species, Vegetation Communities,
and Jurisdictional Areas

Section of Report Where Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
		<ul style="list-style-type: none"> • Western spadefoot • Belding's orange-throated whiptail • Red-diamond rattlesnake • Blainville's horned lizard • Coast patch-nosed snake • San Diego desert woodrat • Coronado Island skink • San Diego pocket mouse 		M-BIO-5 (avoidance by preconstruction surveys for nesting birds and setbacks) M-BIO-6 (revegetation plan for temporary vegetation impacts) M-BIO-7 (minimize night and outdoor lighting)		
2.4.12.1	Impact W-4	Special-Status Wildlife, County Group 1 and/or SSC Species: Loss of suitable habitat	Long-term direct	M-BIO-8A (habitat preservation and management of existing populations of sensitive species, suitable habitat, and special-status vegetation communities) M-BIO-8B (open space easement) M-BIO-8C (limited building zone easement) M-BIO-8D (resource management plan) M-BIO-8E (open space fencing and signage)	Less than significant	4.1, B
2.4.12.1	Impact W-5	Special-Status Wildlife, County Group 2: Impacts to active nests or young of nesting	Short-term direct	M-BIO-5 (avoidance by preconstruction surveys for nesting birds and setbacks)	Less than significant	4.1, C
2.4.12.1	Impact W-6	Special-Status Wildlife, Loss of foraging habitat for raptors	Long-term direct	M-BIO-8A (habitat preservation and management of existing populations of sensitive species, suitable habitat, and special-status vegetation communities)	Less than significant	4.1, F

Table 2.4-29
Summary of Impacts and Mitigation for Special-Status Species, Vegetation Communities,
and Jurisdictional Areas

Section of Report Where Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
				M-BIO-8B (open space easement) M-BIO-8C (limited building zone easement) M-BIO-8D (resource management plan) M-BIO-8E (open space fencing and signage)		
2.4.12.1	Impact CWA-1	Existing Core Wildlife Area	Short-term direct	M-BIO-1 (biological monitoring to avoid unintentional construction impacts) M-BIO-2 (temporary construction fencing) M-BIO-3 (monitoring verification through preparation of a biological monitoring report) M-BIO-6 (revegetation plan for temporary vegetation impacts) M-BIO-7 (minimize night and outdoor lighting)	Less than significant	4.1, G
2.4.12.1	Impact CWA-2	Existing Core Wildlife Area	Long-term direct	M-BIO-8A (habitat preservation and management of existing populations of sensitive species, suitable habitat, and special-status vegetation communities) M-BIO-8B (open space easement) M-BIO-8C (limited building zone easement) M-BIO-8D (resource management plan) M-BIO-8E (open space fencing and signage)	Less than significant	4.1, G
2.4.12.1	Impact CWA-3	Existing Core Wildlife Area	Short-term indirect	M-BIO-1 (biological monitoring to avoid unintentional construction impacts) M-BIO-2 (temporary	Less than significant	4.1, G

Table 2.4-29
Summary of Impacts and Mitigation for Special-Status Species, Vegetation Communities,
and Jurisdictional Areas

Section of Report Where Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
				construction fencing) M-BIO-3 (monitoring verification through preparation of a biological monitoring report) M-BIO-6 (revegetation plan for temporary vegetation impacts) M-BIO-7 (minimize night and outdoor lighting)		
2.4.12.1	Impact SP-3	Special-Status Plant, County List A: <ul style="list-style-type: none"> • Summer holly • Ramona horkelia 	Short-term indirect	M-BIO-1 (biological monitoring to avoid unintentional construction impacts) M-BIO-2 (temporary construction fencing) M-BIO-3 (monitoring verification through preparation of a biological monitoring report)	Less than significant	4.1, H
2.4.12.1	Impact SP-4	Special-Status Plant, County List A: <ul style="list-style-type: none"> • Summer holly • Ramona horkelia • Rainbow manzanita (<i>Arctostaphylos rainbowensis</i>) 	Long-term indirect	M-BIO-4 (reduction of invasive species through biological review of landscape plans) M-BIO-8A (habitat preservation and management of existing populations of sensitive species, suitable habitat, and special-status vegetation communities) M-BIO-8B (open space easement) M-BIO-8C (limited building zone easement) M-BIO-8D (resource management plan) M-BIO-8E (open space fencing and signage) M-BIO-10 (regulated herbicide application to control invasive species) M-BIO-11 (implementation	Less than significant	4.1, H

Table 2.4-29
Summary of Impacts and Mitigation for Special-Status Species, Vegetation Communities,
and Jurisdictional Areas

Section of Report Where Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
				of a fire protection plan to minimize the potential exposure of the project Site to fire hazards)		
2.4.12.1	Impact W-7	Special-Status Wildlife Detected or Potentially Occurring (Table 2.4-6)	Short-term Indirect	M-BIO-1 (biological monitoring to avoid unintentional construction impacts) M-BIO-2 (temporary construction fencing) M-BIO-3 (monitoring verification through preparation of a biological monitoring report) M-BIO-4 (reduction of invasive species through biological review of landscape plans) M-BIO-5 (avoidance by preconstruction surveys for nesting birds and setbacks) M-BIO-6 (revegetation plan for temporary impacts) M-BIO-7 (minimize night and outdoor lighting)	Less than significant	4.1, H
2.4.12.1	Impact W-8	Special-Status Wildlife Detected or Potentially Occurring (Table 2.4-6)	Long-term Indirect	M-BIO-4 (reduction of invasive species through biological review of landscape plans) M-BIO-6 (revegetation plan for temporary vegetation impacts) M-BIO-8A (habitat preservation and management of existing populations of sensitive species, suitable habitat, and special-status vegetation communities) M-BIO-8B (open space easement) M-BIO-8C (limited building zone easement) M-BIO-8D (resource management plan)	Less than significant	4.1, H

Table 2.4-29
Summary of Impacts and Mitigation for Special-Status Species, Vegetation Communities,
and Jurisdictional Areas

Section of Report Where Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
				M-BIO-8E (open space fencing and signage) M-BIO-11 (implementation of a fire protection plan to minimize the potential exposure of the project Site to fire hazards)		
2.4.12.1	Impact W-9	Special-Status Wildlife, Impacts to active nests or young of nesting raptors	Short-term direct	M-BIO-5 (avoidance by preconstruction surveys for nesting birds and setbacks)	Less than significant	4.1, L
2.4.12.1	Impact W-10	Special-Status Wildlife, Loss of foraging habitat for raptors	Long-term direct	M-BIO-8A (habitat preservation and management of existing populations of sensitive species, suitable habitat, and special-status vegetation communities) M-BIO-8B (open space easement) M-BIO-8C (limited building zone easement) M-BIO-8D (resource management plan) M-BIO-8E (open space fencing and signage)	Less than significant	4.1, L
Guideline 4.2: <i>The project would have a substantial adverse effect on riparian habitat or another sensitive natural community identified in local or regional plans, policies, regulations, or by California Department of Fish and Game or U.S. Fish and Wildlife Service.</i>						
2.4.12.2	V-1	Special-status vegetation communities	Short-term direct	M-BIO-1 (biological monitoring to avoid unintentional construction impacts) M-BIO-2 (temporary construction fencing) M-BIO-3 (monitoring verification through preparation of a biological monitoring report) M-BIO-6 (revegetation plan for temporary impacts) M-BIO-7 (minimize night and outdoor lighting)	Less than significant	4.2, A

Table 2.4-29
Summary of Impacts and Mitigation for Special-Status Species, Vegetation Communities,
and Jurisdictional Areas

Section of Report Where Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
2.4.12.2	V-2	Special-status vegetation communities	Long-term direct	M-BIO-8A (habitat preservation and management of existing populations of sensitive species, suitable habitat, and special-status vegetation communities) M-BIO-8B (open space easement) M-BIO-8C (limited building zone easement) M-BIO-8D (resource management plan) M-BIO-8E (open space fencing and signage)	Less than significant	4.2, A
2.4.12.2	V-3	Jurisdictional resources	Short-term direct	M-BIO-6 (revegetation plan for temporary vegetation impacts)	Less than significant	4.2, B
2.4.12.2	V-4	Jurisdictional resources	Long-term direct	M-BIO-8A (habitat preservation and management of existing populations of sensitive species, suitable habitat, and special-status vegetation communities) M-BIO-8B (open space easement) M-BIO-8C (limited building zone easement) M-BIO-8D (resource management plan) M-BIO-8E (open space fencing and signage) M-BIO-12 (federal and state agency permits)	Less than significant	4.2, B
2.4.12.2	V-5	Special-status vegetation communities and jurisdictional resources	Short-term indirect	M-BIO-1 (biological monitoring to avoid unintentional construction impacts) M-BIO-2 (temporary construction fencing) M-BIO-3 (monitoring verification through preparation of a biological	Less than significant	4.2, D

Table 2.4-29
Summary of Impacts and Mitigation for Special-Status Species, Vegetation Communities,
and Jurisdictional Areas

Section of Report Where Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
				monitoring report) M-BIO-12 (federal and state agency permits)		
2.4.12.2	V-6	Special-status vegetation communities and jurisdictional resources	Long-term indirect	M-BIO-1 (biological monitoring to avoid unintentional construction impacts) M-BIO- 4 (reduction of invasive species through biological review of landscape plans) M-BIO-8A (habitat preservation and management of existing populations of sensitive species, suitable habitat, and special-status vegetation communities) M-BIO-8B (open space easement) M-BIO-8C (limited building zone easement) M-BIO-8D (resource management plan) M-BIO-8E (open space fencing and signage) M-BIO-10 (regulated herbicide application to control invasive species) M-BIO-11 (implementation of a fire protection plan to minimize the potential exposure of the project Site to fire hazards) M-BIO-12 (federal and state agency permits)	Less than significant	4.2, D

Table 2.4-29
Summary of Impacts and Mitigation for Special-Status Species, Vegetation Communities,
and Jurisdictional Areas

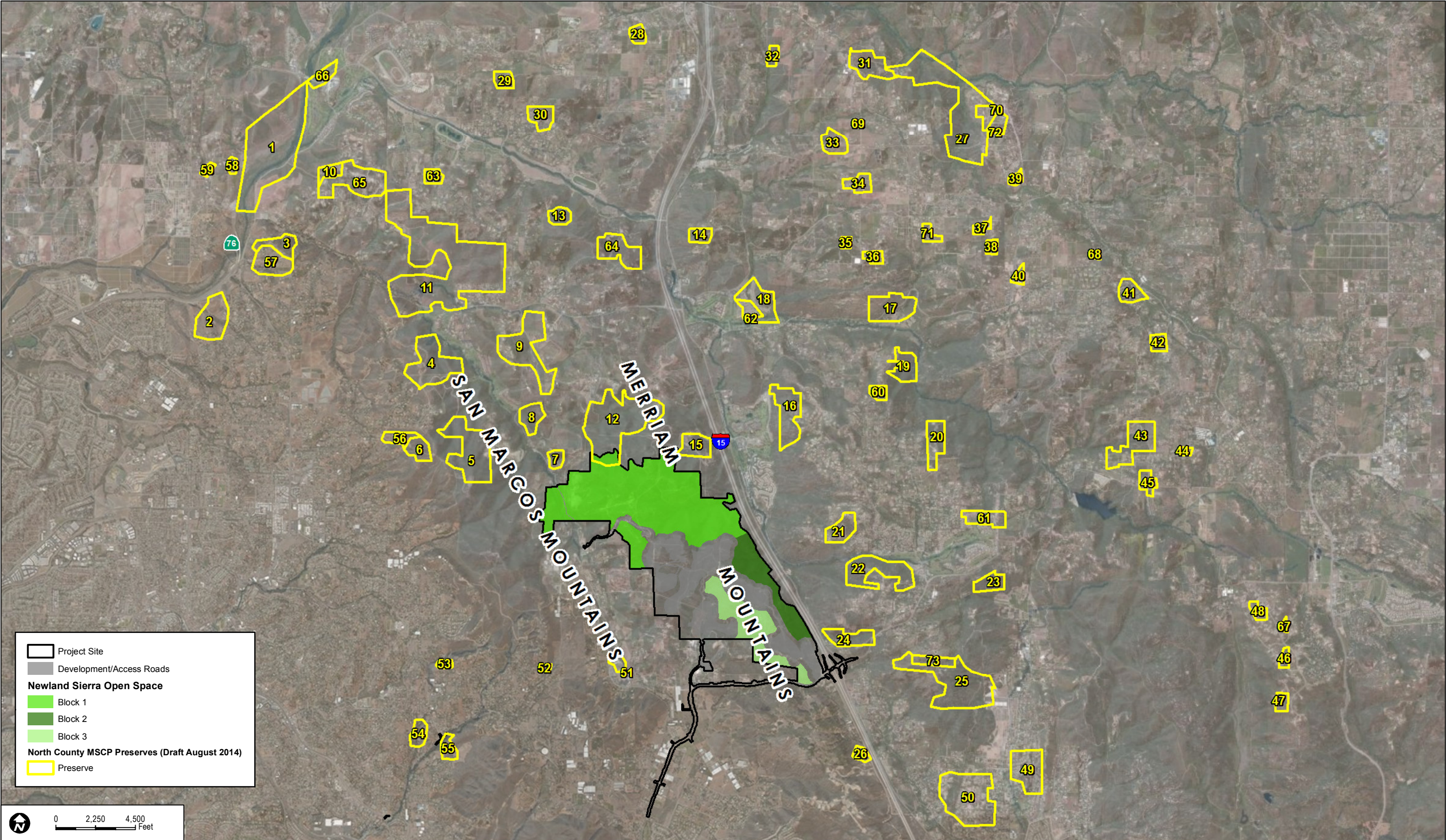
Section of Report Where Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
2.4.12.2	V-7	RPO wetlands and wetland buffers	Long-term direct	M-BIO-8A (habitat preservation and management of existing populations of sensitive species, suitable habitat, and special-status vegetation communities) M-BIO-8B (open space easement) M-BIO-8C (limited building zone easement) M-BIO-8D (resource management plan) M-BIO-8E (open space fencing and signage) M-BIO-12 (federal and state agency permits)	Less than significant	4.2, E
Guideline 4.3: The project would have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means.						
None						
Guideline 4.4: The project would interfere substantially with the movement of a native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.						
2.4.12.4	WM-1	Foraging and nesting habitat	Short-term direct	M-BIO-1 (biological monitoring to avoid unintentional construction impacts) M-BIO-2 (temporary construction fencing) M-BIO-3 (monitoring verification through preparation of a biological monitoring report) M-BIO-6 (revegetation plan for temporary vegetation impacts)	Less than significant	4.4, A
2.4.12.4	WM-2	Foraging and nesting habitat	Long-term direct	M-BIO-8A (habitat preservation and management of existing populations of sensitive species, suitable habitat, and special-status	Less than significant	4.4, A

Table 2.4-29
Summary of Impacts and Mitigation for Special-Status Species, Vegetation Communities,
and Jurisdictional Areas

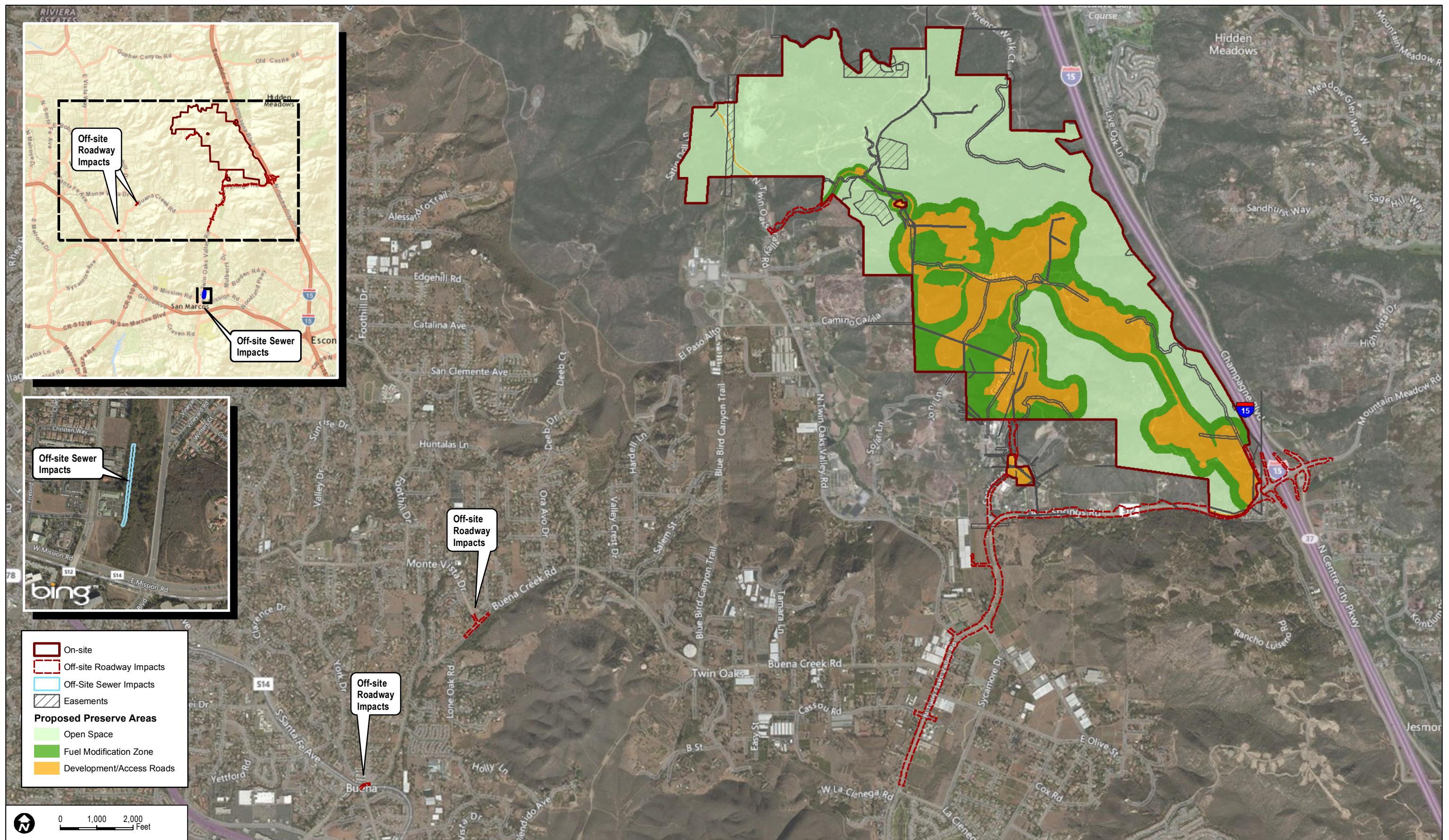
Section of Report Where Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
				vegetation communities) M-BIO-8B (open space easement) M-BIO-8C (limited building zone easement) M-BIO-8D (resource management plan) M-BIO-8E (open space fencing and signage)		
2.4.12.4	WM-3	Foraging and nesting habitat	Short- and long-term indirect	M-BIO-8A (habitat preservation and management of existing populations of sensitive species, suitable habitat, and special-status vegetation communities) M-BIO-8B (open space easement) M-BIO-8C (limited building zone easement) M-BIO-8D (resource management plan) M-BIO-8E (open space fencing and signage)	Less than significant	4.4, A
2.4.12.4	WM-4	Habitat connectivity	Long-term direct	M-BIO-8A (habitat preservation and management of existing populations of sensitive species, suitable habitat, and special-status vegetation communities) M-BIO-8B (open space easement) M-BIO-8C (limited building zone easement) M-BIO-8D (resource management plan) M-BIO-8E (open space fencing and signage)	Less than significant	4.4, B

Table 2.4-29
Summary of Impacts and Mitigation for Special-Status Species, Vegetation Communities,
and Jurisdictional Areas

Section of Report Where Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
2.4.12.4	WM-5	Wildlife behavior	Short- and long-term indirect	M-BIO-7 (minimize night and outdoor lighting) M-BIO-8A (habitat preservation and management of existing populations of sensitive species, suitable habitat, and special-status vegetation communities)	Less than significant	4.4, D
Guideline 4.5: <i>The project would conflict with one or more local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, and/or would conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state HCP.</i>						
2.4.12.5	P-1	RPO wetlands	Long-term direct	M-BIO-8A (habitat preservation and management of existing populations of sensitive species, suitable habitat, and special-status vegetation communities) M-BIO-12 (federal and state agency permits)	Less than significant	4.5, C
2.4.12.5	P-2	Migratory Bird Treaty Act	Short-term direct	M-BIO-5 (avoidance by preconstruction surveys for nesting birds and setbacks)	Less than significant	4.5, K

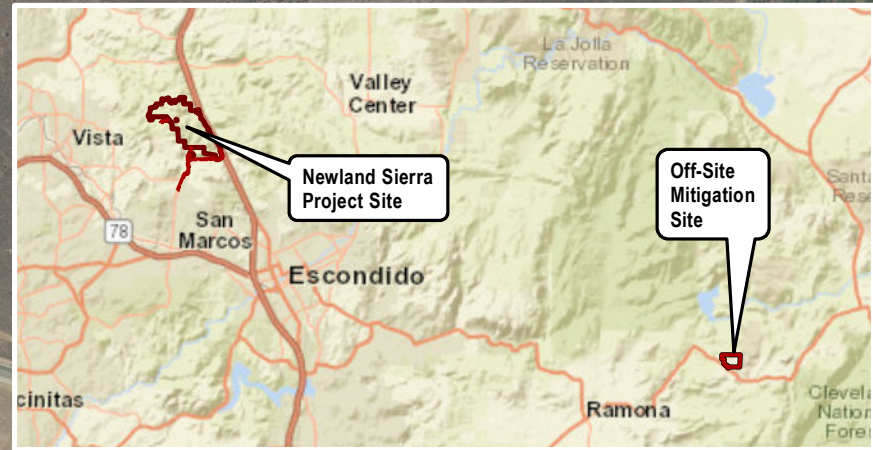



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
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 Off-Site Mitigation Site


Vegetation Communities/Land Covers:

 CC, Chamise Chaparral


 CSS, Diegan Coastal Sage Scrub


 DEV, Urban/Developed


 DH, Disturbed Habitat

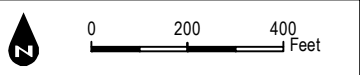
 EOWO, Open Engelmann Oak Woodland

 EUC, Eucalyptus Woodland

 NNG, Non-Native Grassland

 SARW, Southern Sycamore-Alder Riparian Woodland

 VGL, Valley Needlegrass Grassland



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AERIAL SOURCE: SANDAG IMAGERY 2014

Newland Sierra Project Environmental Impact Report

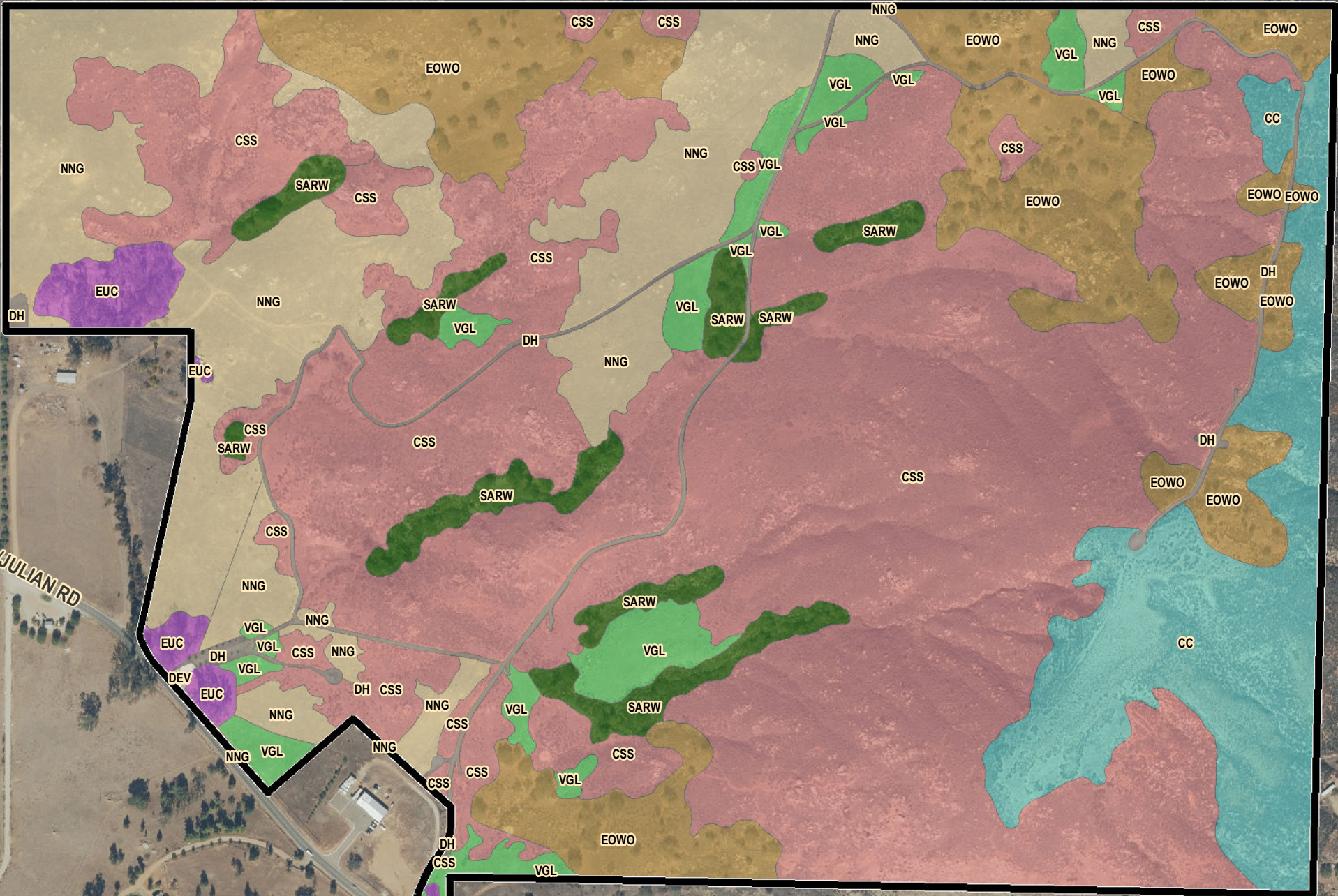
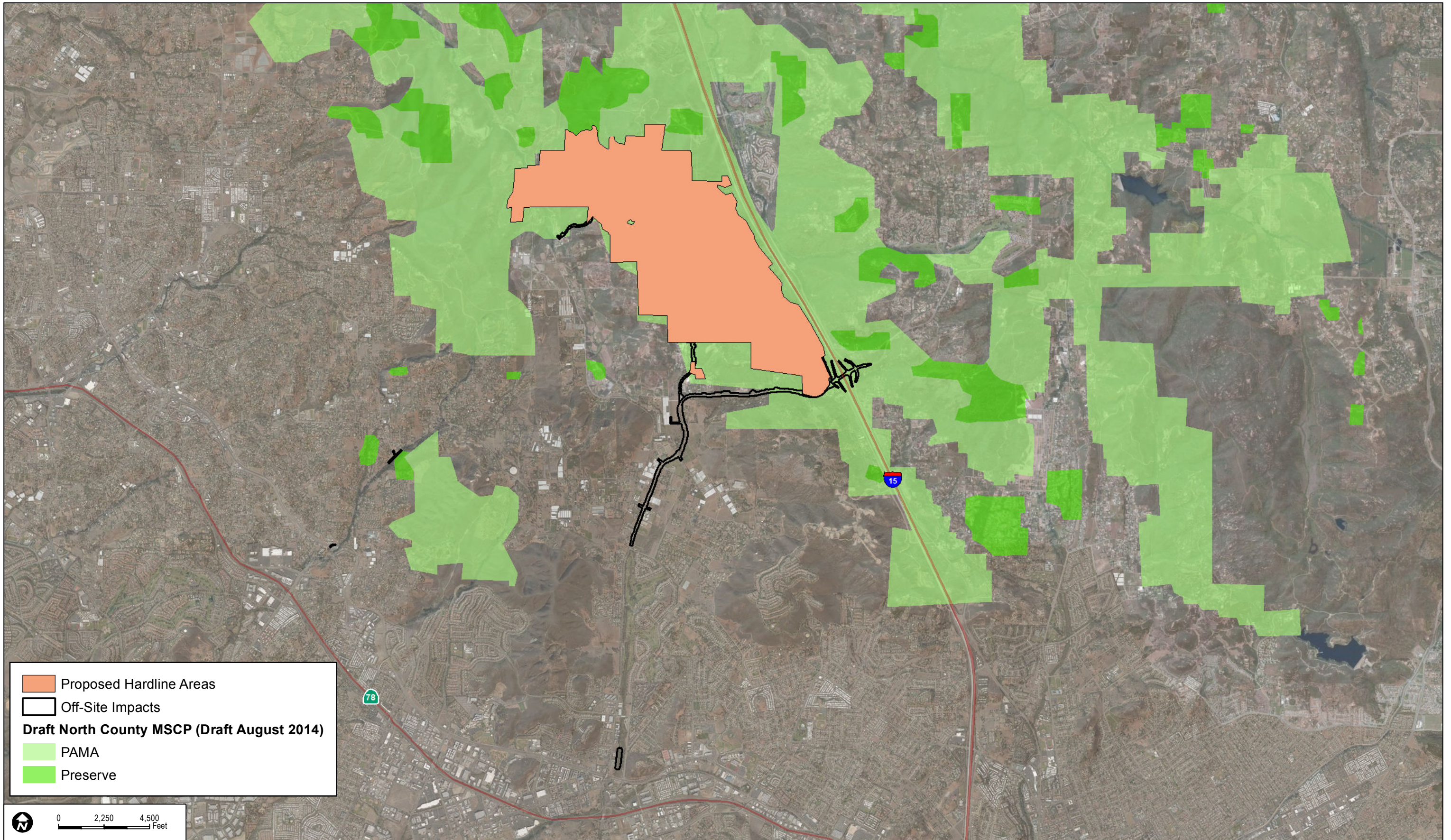


FIGURE 2.4-3
Biological Resources Map

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Project Site

On-site

Off-site

Vegetation Communities

AGR, Agriculture

CLOW, Coast live oak woodland

CSS, Diegan coastal sage scrub

CSS-CHP, Coastal sage - chaparral transition

CSSB, Coastal sage scrub - Baccharis dominated

DEV, Urban/developed

DH, Disturbed habitat

DW, Disturbed Wetland

E-AGR, Agriculture

EUC, Eucalyptus woodland

FWM, Freshwater marsh

I-AGR, Intensive agriculture

IA, Intensive agriculture

MFS, Mulefat scrub

NNG, Non-native grassland

NNW, Non-native Woodland

ORC, Orchard and vineyards

ORF, Southern coast live oak riparian forest

SMX, Southern mixed chaparral

SOC, Scrub oak chaparral

SWS, Southern willow scrub

SWS/TS, Southern willow scrub/tamarisk scrub

dBSC, Flat-topped buckwheat - disturbed

dCLOW, Coast Live Oak Woodland - disturbed

dCSS, Diegan coastal sage scrub - disturbed

dCSSB, Coastal sage scrub - Baccharis dominated - disturbed

dSMX, Southern mixed chaparral - disturbed

Oak Root Zones

Las Posas Soil Series

Wildlife Species

Coastal California gnatcatcher

Nuttall's woodpecker

Oak titmouse

Red-shouldered hawk

Sharp-shinned hawk

Yellow warbler

Desert woodrat (midden)

Blainville's horned lizard

Blainville's horned lizard (scat)

Coast patch-nosed snake

Coastal whiptail

Red diamond rattlesnake

Plant Species

Engelmann oak

Munz's sage

Ramona horkelia

Summer holly

ashy spike-moss

chaparral rein orchid

Engelmann oak

Orcutt's brodiaea

Ramona horkelia

Summer holly

An aerial photograph of a landscape with various biological resources overlaid. A large area on the left is outlined in red and filled with green diagonal hatching, representing the Project Site. Numerous small colored dots (yellow, blue, green, red) are scattered across the map, representing different species. Various labels like 'SMX', 'CSS', 'CLOW', 'SWS', 'DH', 'ORC', 'EUC', 'FWM', 'I-AGR', 'IA', 'MFS', 'NNG', 'NNW', 'SWS/TS', 'dBSC', 'dCLOW', 'dCSS', 'dCSSB', 'dSMX' are placed throughout the map, corresponding to the vegetation communities in the legend. A scale bar at the bottom left shows 0, 165, and 330 feet. A north arrow is also present.

An index map showing the location of Figure 2.4-5A within a larger project area. The map includes labels for 'FIGURE 2.4-5A', 'FIGURE 2.4-5B', 'FIGURE 2.4-5C', 'FIGURE 2.4-5D', and 'FIGURE 2.4-5D'. A red box highlights the area covered by Figure 2.4-5A.

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SOURCE: SANDAG Imagery 2014; Fuscoe Engineering 2017

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FIGURE 2.4-5A
Biological Resources

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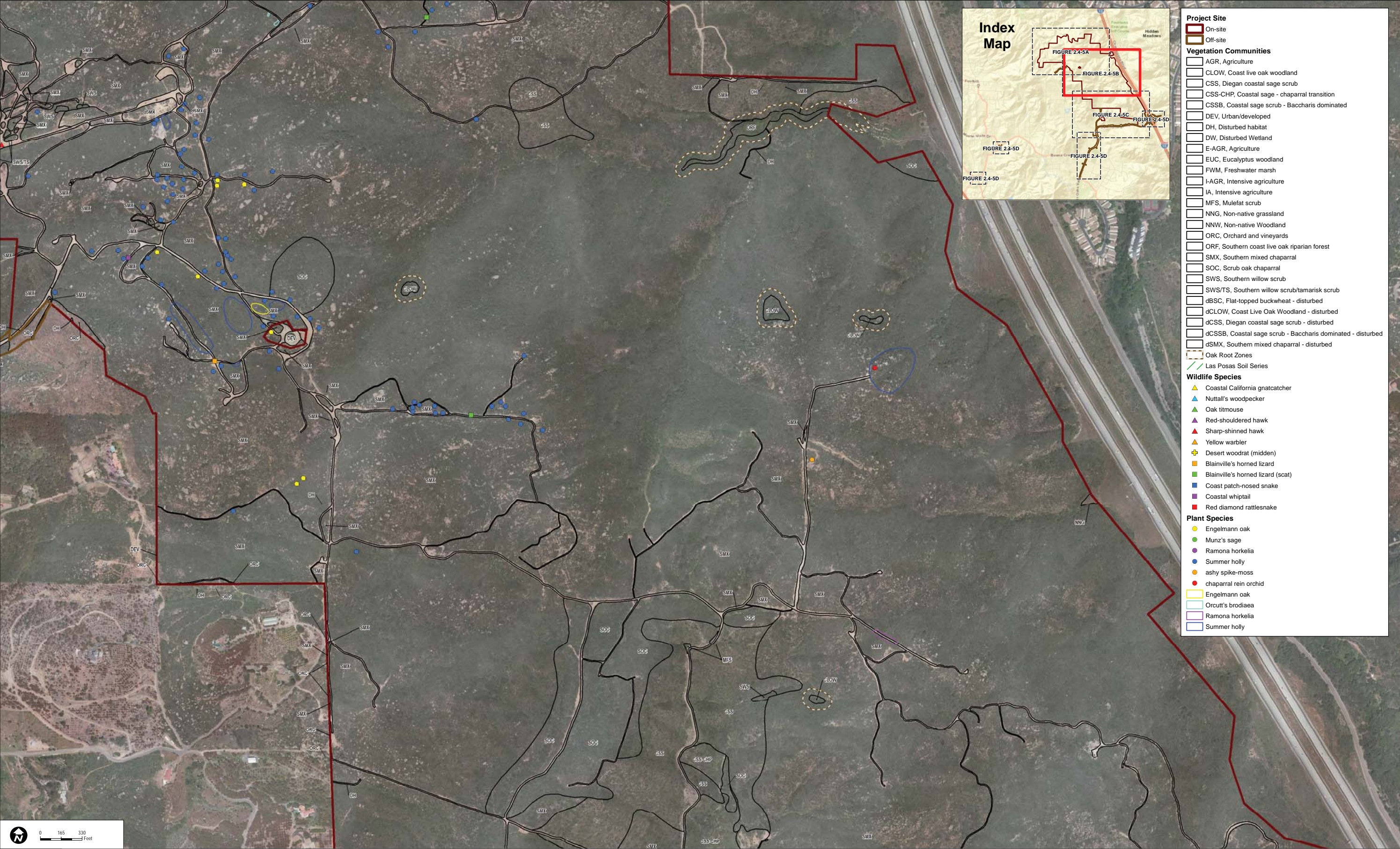
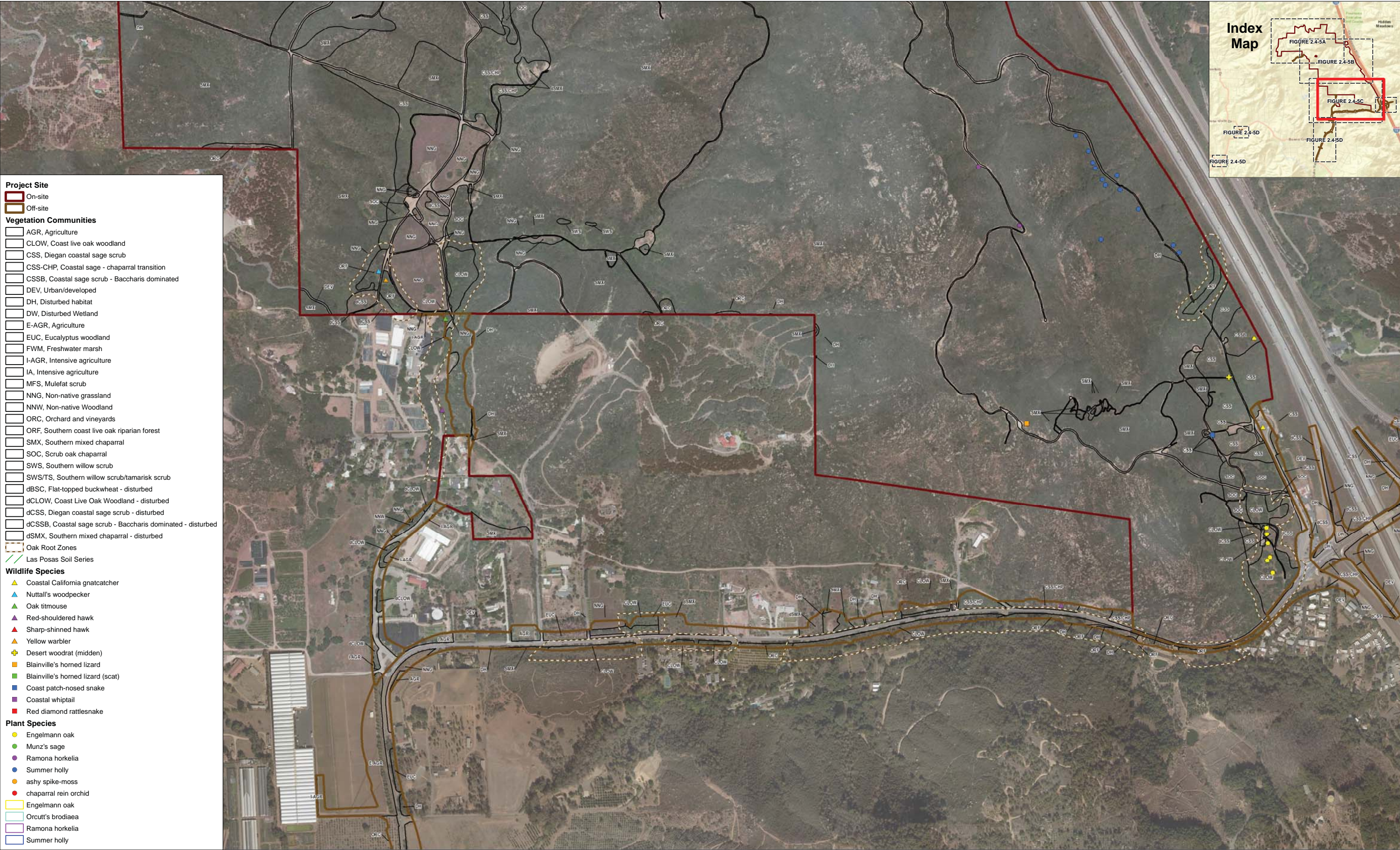


FIGURE 2.4-5B

Biological Resources

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Project Site

On-site

Off-site

Wildlife Species

Coastal California gnatcatcher

Nuttall's woodpecker

Oak titmouse

Red-shouldered hawk

Sharp-shinned hawk

Yellow warbler

Desert woodrat (midden)

Blainville's horned lizard

Blainville's horned lizard (scat)

Coast patch-nosed snake

Coastal whiptail

Red diamond rattlesnake

Plant Species

Engelmann oak

Munz's sage

Ramona horkelia

Summer holly

ashy spike-moss

chaparral rein orchid

Engelmann oak

Orcutt's brodiaea

Ramona horkelia

Summer holly

Vegetation Communities

AGR, Agriculture

CLOW, Coast live oak woodland

CSS, Diegan coastal sage scrub

CSS-CHP, Coastal sage - chaparral transition

CSSB, Coastal sage scrub - Baccharis dominated

DEV, Urban/developed

DH, Disturbed habitat

DW, Disturbed Wetland

E-AGR, Agriculture

EUC, Eucalyptus woodland

FWM, Freshwater marsh

I-AGR, Intensive agriculture

IA, Intensive agriculture

MFS, Mulefat scrub

NNG, Non-native grassland

NNW, Non-native Woodland

ORC, Orchard and vineyards

ORF, Southern coast live oak riparian forest

SMX, Southern mixed chaparral

SOC, Scrub oak chaparral

SWS, Southern willow scrub

SWS/TS, Southern willow scrub/tamarisk scrub

dBSC, Flat-topped buckwheat - disturbed

dCLOW, Coast Live Oak Woodland - disturbed

dCSS, Diegan coastal sage scrub - disturbed

dCSSB, Coastal sage scrub - Baccharis dominated - disturbed

dSMX, Southern mixed chaparral - disturbed

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SOURCE: SANDAG IMAGERY 2014; FUSCOE ENGINEERING 2016

Newland Sierra Project Environmental Impact Report

FIGURE 2.4-5D

Biological Resources

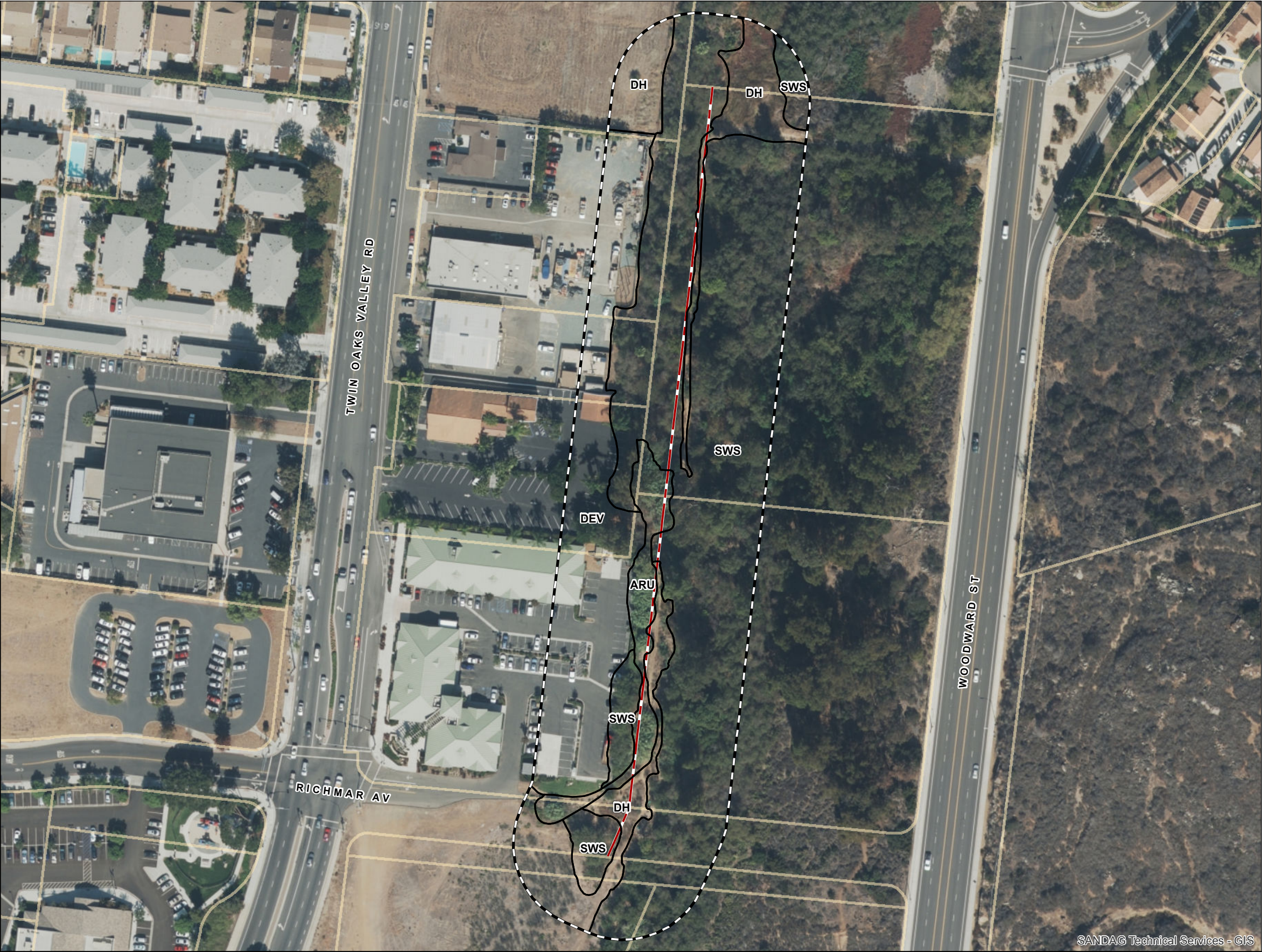
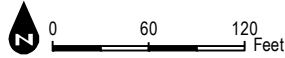
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- Proposed Sewer Line
- 100-Ft Buffer Of 30-Ft Sewer Easement
- Vegetation Mapping

Vegetation Communities/Land Covers

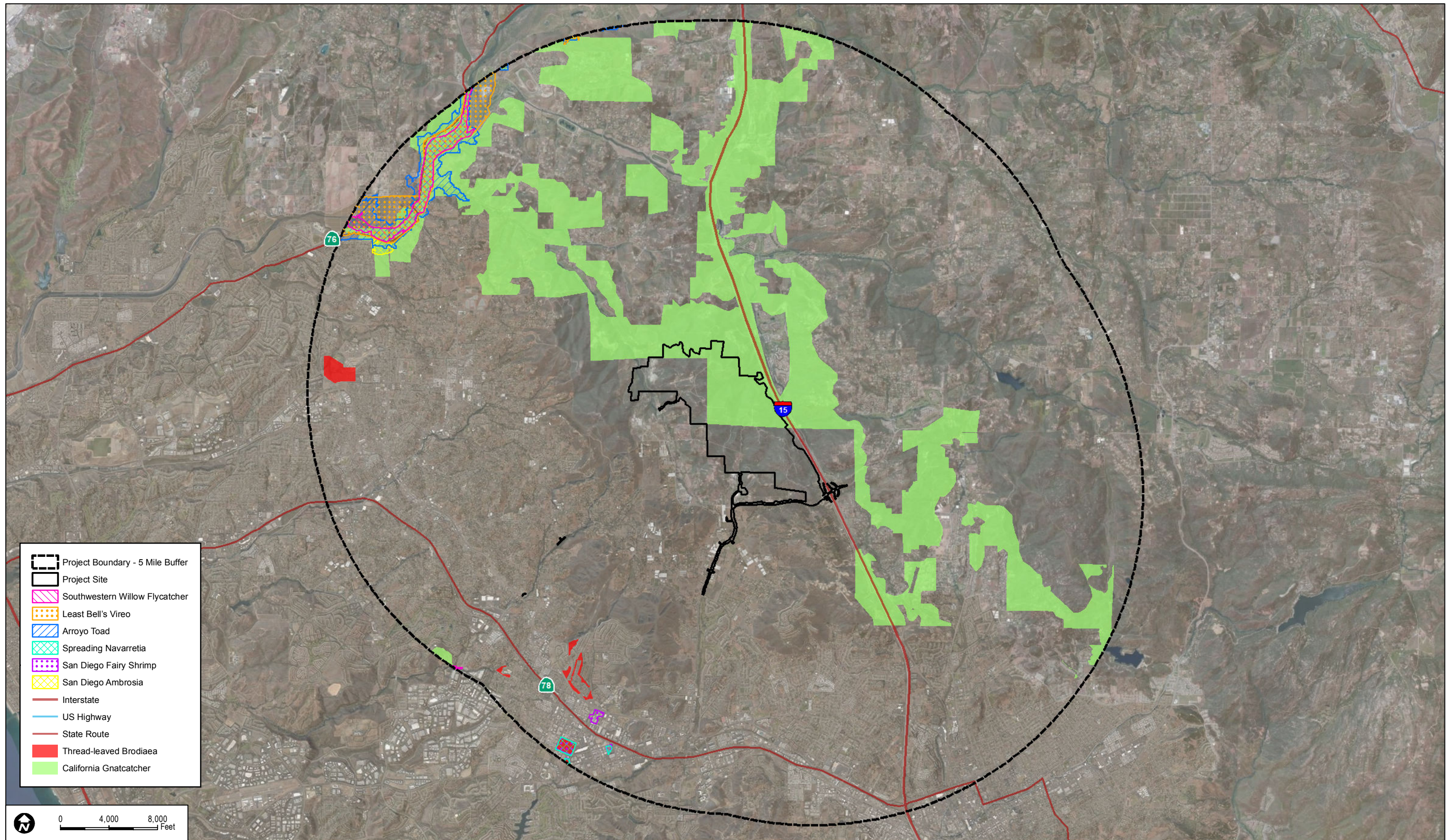
- ARU, Arundo Dominated Riparian
- DEV, Urban Developed Ornamental
- DH, Disturbed Habitat
- SWS, Southern Willow Scrub



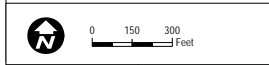
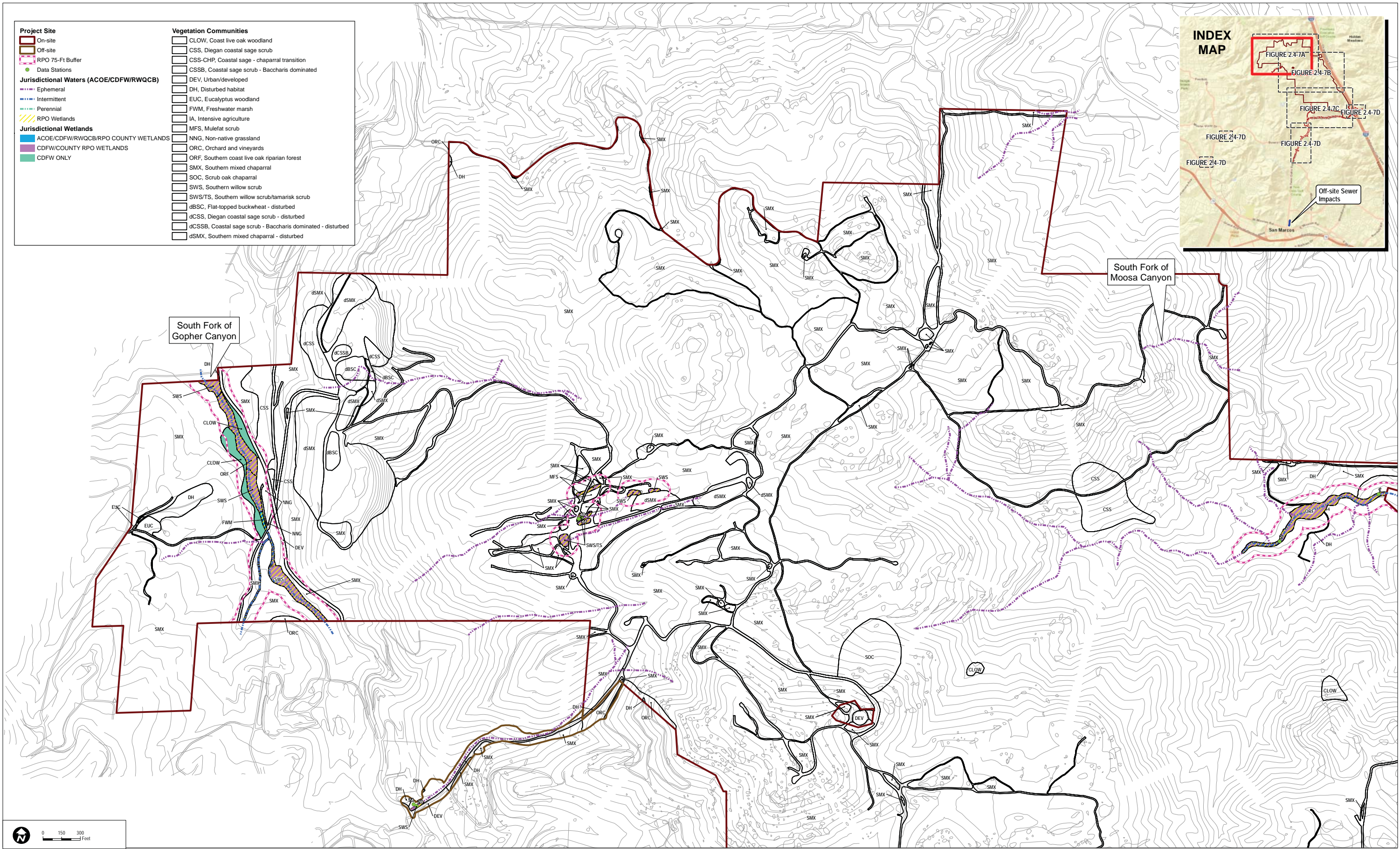
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FIGURE 2.4-5E
Biological Resources for Off-Site Wastewater Upgrade East of Twin Oaks Valley Road

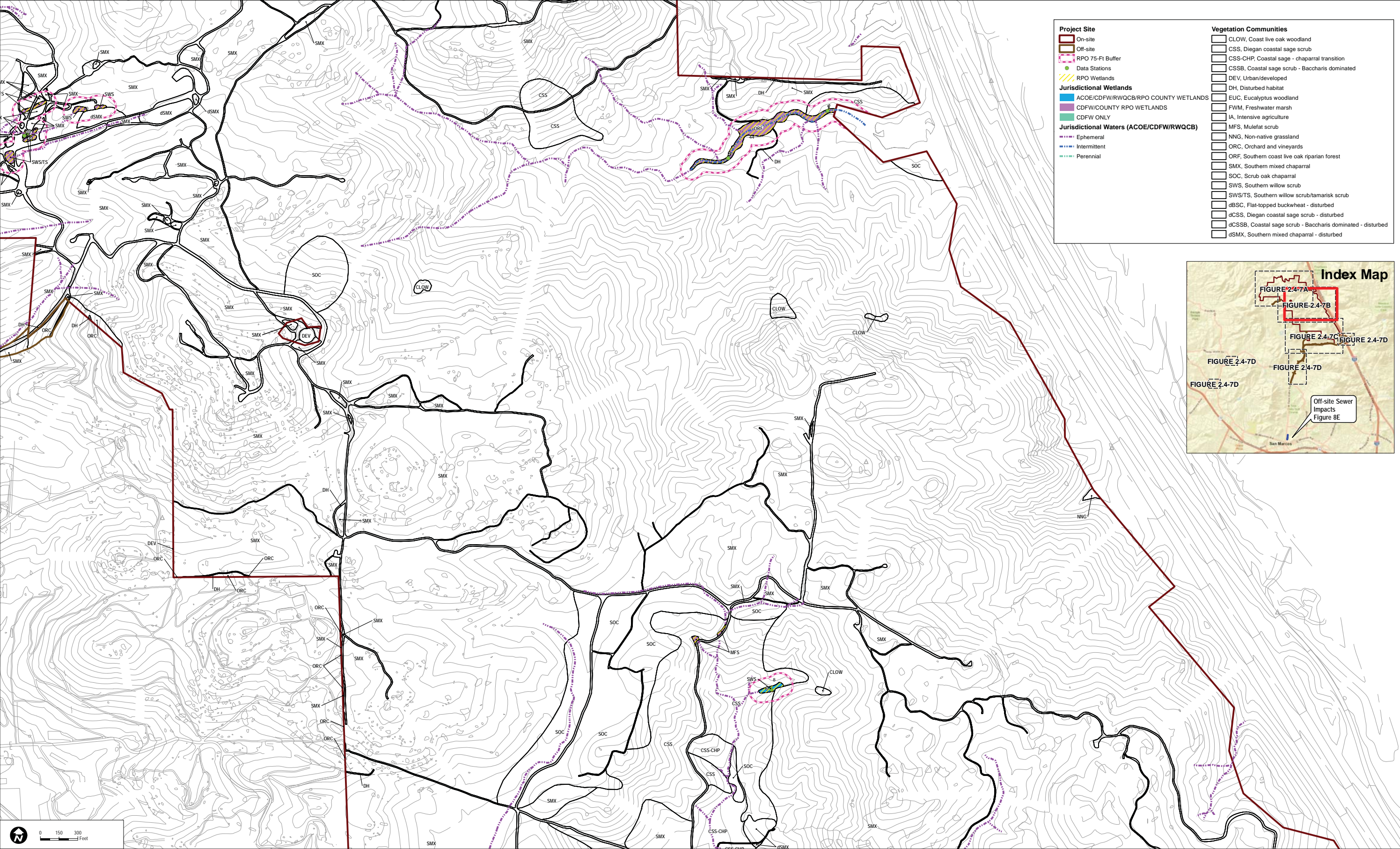
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Project Site

- On-site
- Off-site
- RPO 75-Ft Buffer
- Data Stations
- RPO Wetlands

Jurisdictional Wetlands

- ACOE/CDFW/RWQCB/RPO COUNTY WETLANDS
- CDFW/COUNTY RPO WETLANDS
- CDFW ONLY

Jurisdictional Waters (ACOE/CDFW/RWQCB)

- Ephemeral
- Intermittent
- Perennial

Vegetation Communities

- CLOW, Coast live oak woodland
- CSS, Diegan coastal sage scrub
- CSS-CHP, Coastal sage - chaparral transition
- CSSB, Coastal sage scrub - Baccharis dominated
- DEV, Urban/developed
- DH, Disturbed habitat
- EUC, Eucalyptus woodland
- FWM, Freshwater marsh
- IA, Intensive agriculture
- MFS, Mulefat scrub
- NNG, Non-native grassland
- ORC, Orchard and vineyards
- ORF, Southern coast live oak riparian forest
- SMX, Southern mixed chaparral
- SOC, Scrub oak chaparral
- SWS, Southern willow scrub
- SWS/TS, Southern willow scrub/tamarisk scrub
- dBSC, Flat-topped buckwheat - disturbed
- dCSS, Diegan coastal sage scrub - disturbed
- dCSSB, Coastal sage scrub - Baccharis dominated - disturbed
- dSMX, Southern mixed chaparral - disturbed

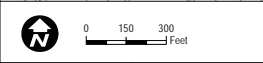
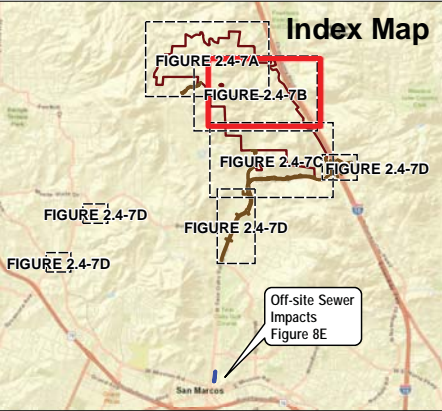
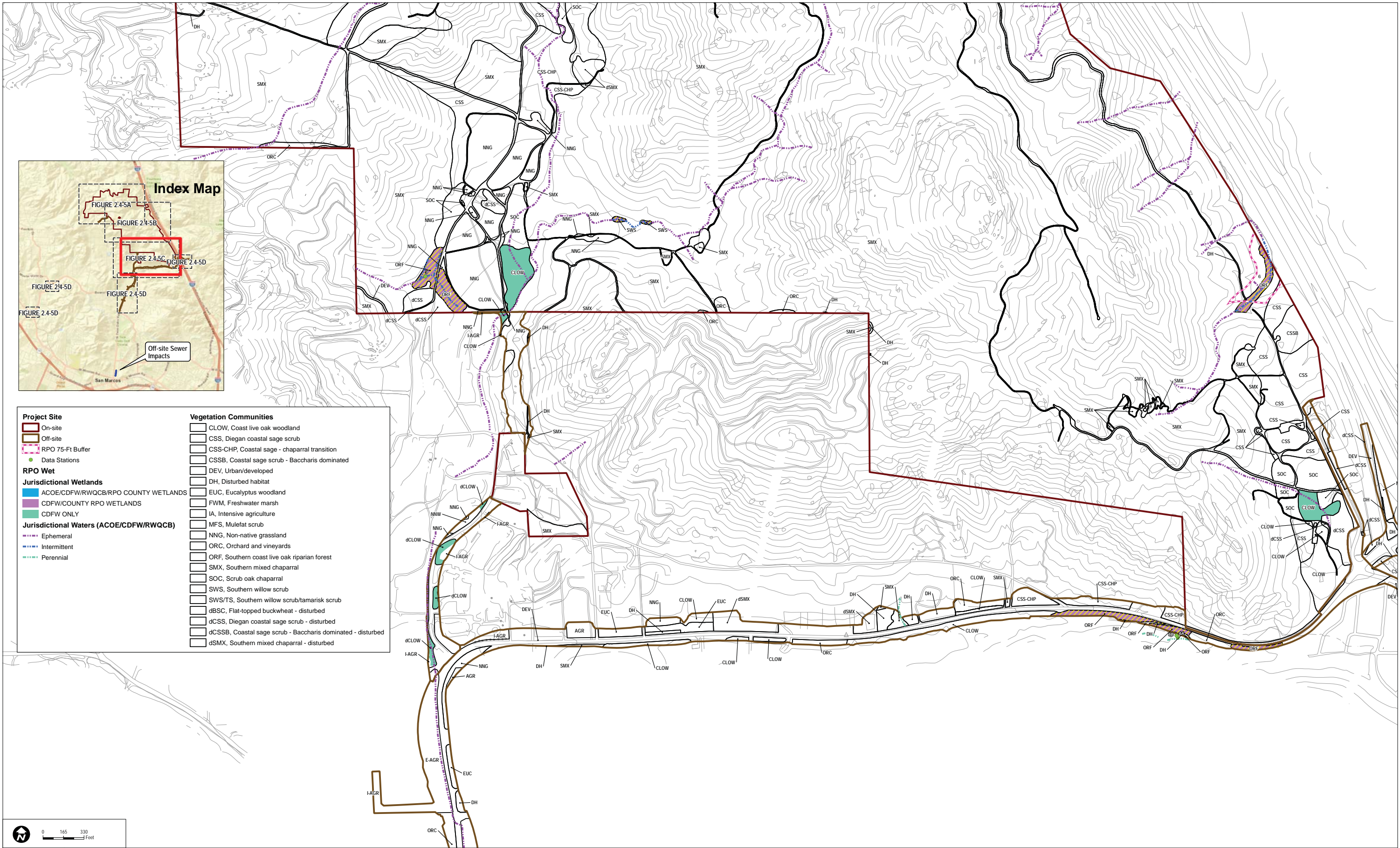
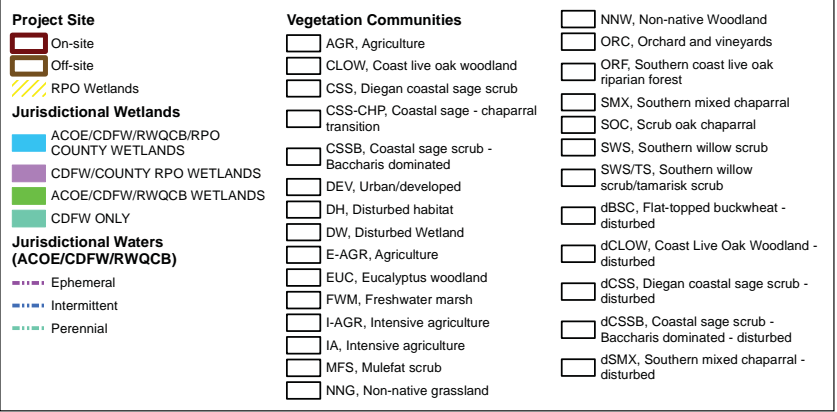


FIGURE 2.4-7B
Jurisdictional Resources

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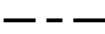
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 100-Ft Buffer Of 30-Ft Sewer Easement

 Proposed Sewer Line

 Vegetation Mapping

Jurisdictional Wetlands

 ACOE/CDFW/RWQCB WETLANDS

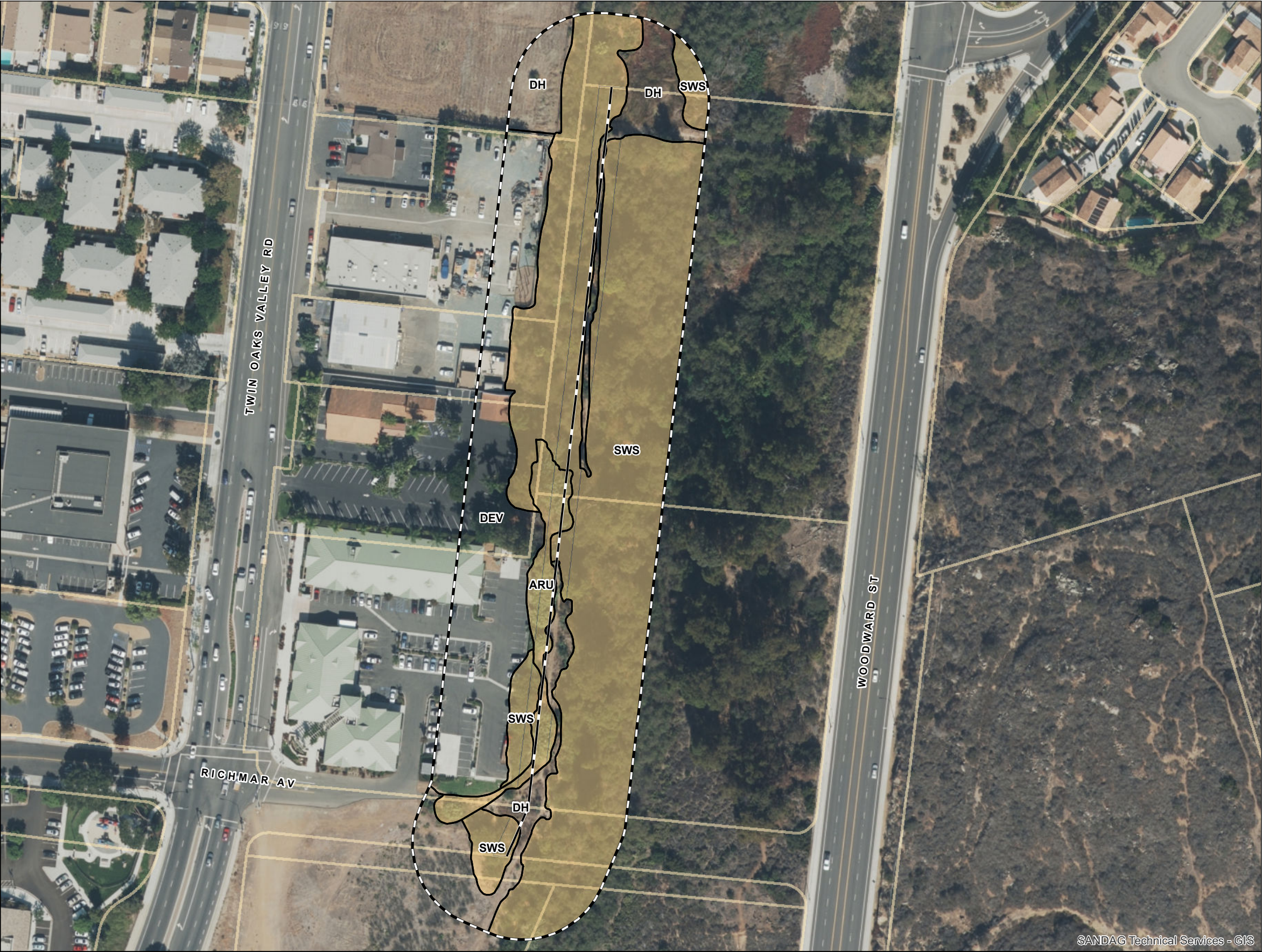
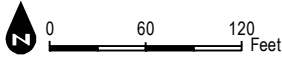
Vegetation Communities/Land Covers

ARU, Arundo Dominated Riparian

DEV, Urban Developed Ornamental

DH, Disturbed Habitat

SWS, Southern Willow Scrub



SANDAG Technical Services - GIS

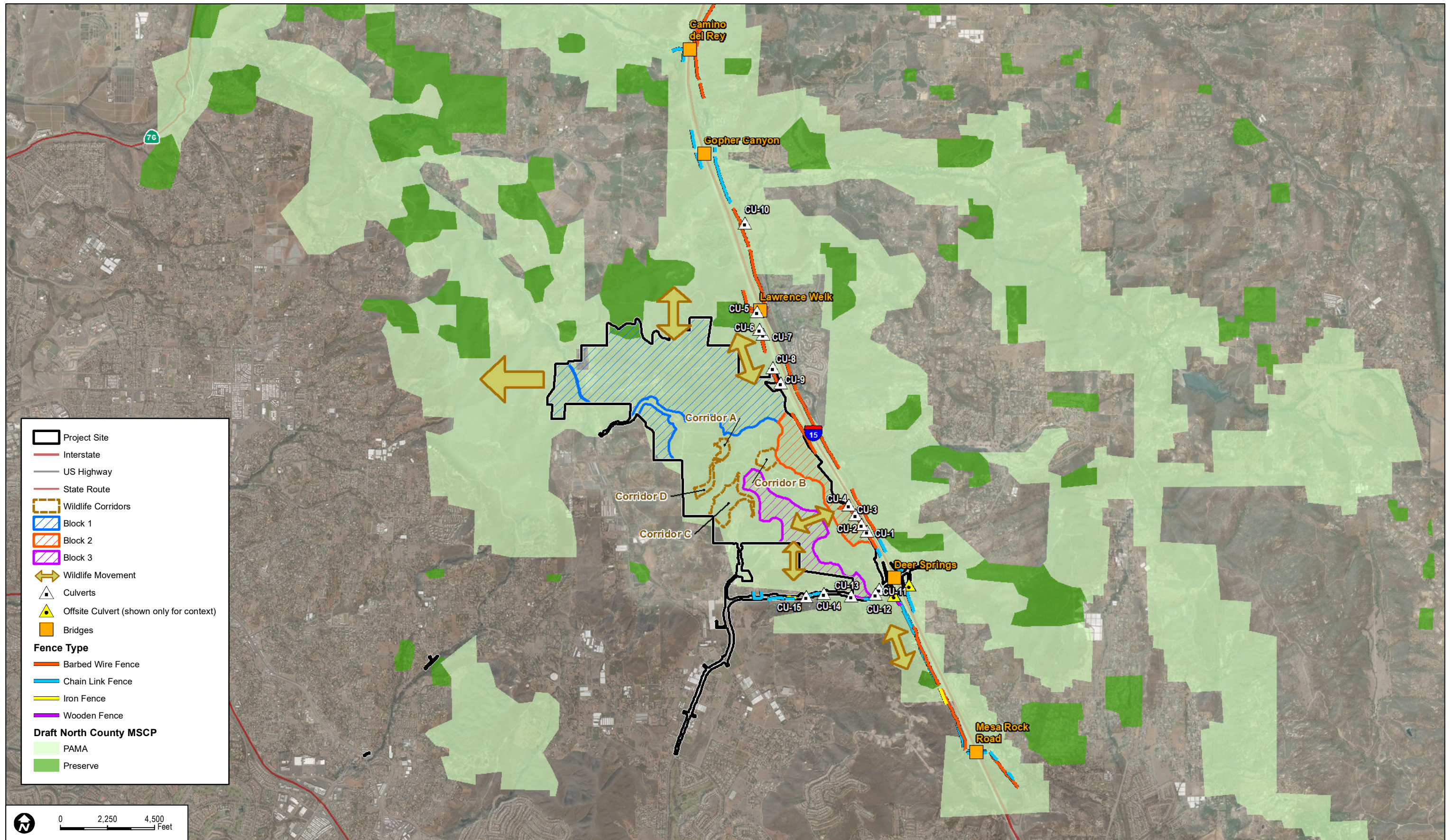
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SOURCE: AERIAL-SANDAG IMAGERY 2014

Newland Sierra Project Environmental Impact Report

FIGURE 2.4-7E
Jurisdictional Resources for Off-Site Wastewater Upgrade East of Twin Oaks Valley Road

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Project Site

On-site

Off-site

Vegetation Communities

AGR, Agriculture

CLOW, Coast live oak woodland

CSS, Diegan coastal sage scrub

CSS-CHP, Coastal sage - chaparral transition

CSSB, Coastal sage scrub - Baccharis dominated

DEV, Urban/developed

DH, Disturbed habitat

DW, Disturbed Wetland

E-AGR, Agriculture

EUC, Eucalyptus woodland

FWM, Freshwater marsh

I-AGR, Intensive agriculture

IA, Intensive agriculture

MFS, Mulefat scrub

NNG, Non-native grassland

NNW, Non-native Woodland

ORC, Orchard and vineyards

ORF, Southern coast live oak riparian forest

SMX, Southern mixed chaparral

SOC, Scrub oak chaparral

SWS, Southern willow scrub

SWS/TS, Southern willow scrub/tamarisk scrub

dBSC, Flat-topped buckwheat - disturbed

dCLOW, Coast Live Oak Woodland - disturbed

dCSS, Diegan coastal sage scrub - disturbed

dCSSB, Coastal sage scrub - Baccharis dominated - disturbed

dSMX, Southern mixed chaparral - disturbed

Oak Root Zones

Las Posas Soil Series

Wildlife Species

Coastal California gnatcatcher

Nuttall's woodpecker

Oak titmouse

Red-shouldered hawk

Sharp-shinned hawk

Yellow warbler

Desert woodrat (midden)

Western spadefoot

Blainville's horned lizard

Blainville's horned lizard (scat)

Coast patch-nosed snake

Coastal whiptail

Red diamond rattlesnake

Plant Species

Engelmann oak

Munz's sage

Ramona horkelia

Summer holly

ashy spike-moss

chaparral rein orchid

Engelmann oak

Orcutt's brodiaea

Ramona horkelia

Summer holly

Project Impacts

Permanent Impact

Temporary Impact

Temporary Construction Easement

Open Space

Index Map

DUDEK

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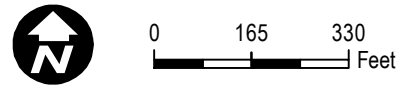
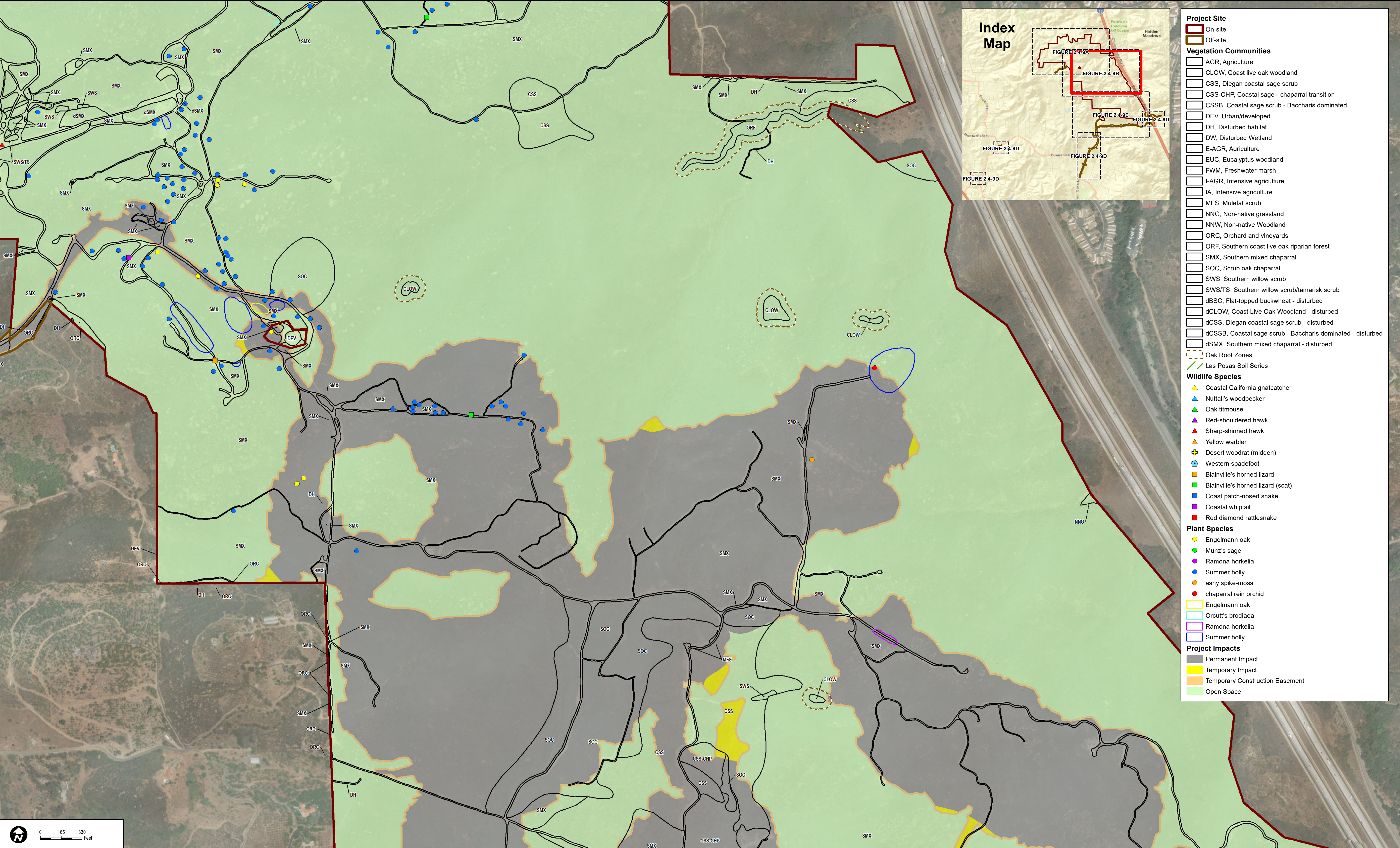
SOURCE: SANDAG Imagery 2014; Fuscoe Engineering 2017

Newland Sierra Project Environmental Impact Report

FIGURE 2.4-9A

Impacts to Biological Resources

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SOURCE: SANDAG Imagery 2014; Fuscoe Engineering 2017

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FIGURE 2.4-9B
Impacts to Biological Resources

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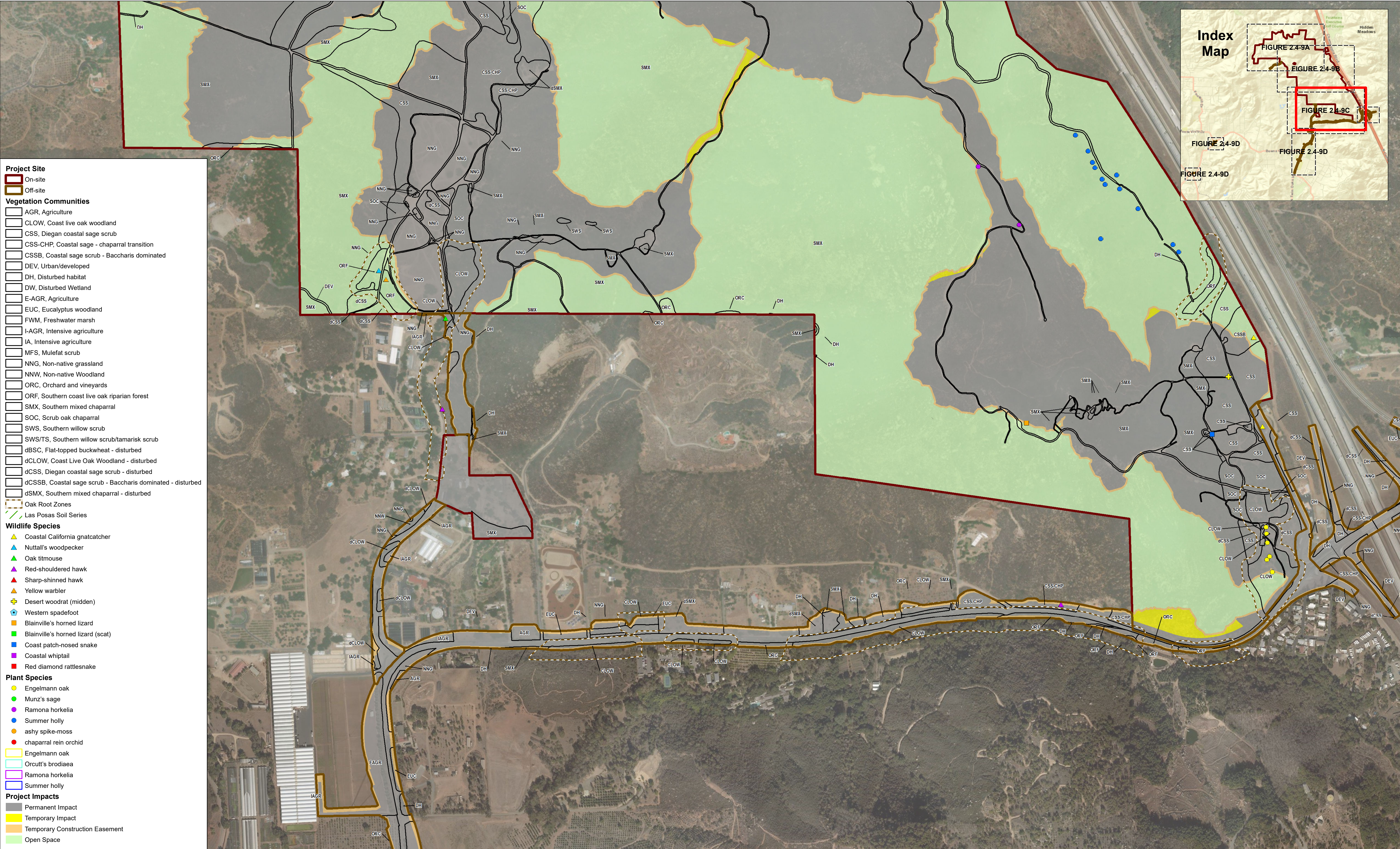


FIGURE 2.4-9C
Impacts to Biological Resources

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Project Site

On-site

Off-site

Wildlife Species

Coastal California gnatcatcher

Nuttall's woodpecker

Oak titmouse

Red-shouldered hawk

Sharp-shinned hawk

Yellow warbler

Desert woodrat (midden)

Western spadefoot

Blainville's horned lizard

Blainville's horned lizard (scat)

Coast patch-nosed snake

Coastal whiptail

Red diamond rattlesnake

Plant Species

Engelmann oak

Munz's sage

Ramona horkelia

Summer holly

ashy spike-moss

chaparral rein orchid

Engelmann oak

Orcutt's brodiaea

Ramona horkelia

Summer holly

Vegetation Communities

AGR, Agriculture

CLOW, Coast live oak woodland

CSS, Diegan coastal sage scrub

CSS-CHP, Coastal sage - chaparral transition

CSSB, Coastal sage scrub - Baccharis dominated

DEV, Urban/developed

DH, Disturbed habitat

DW, Disturbed Wetland

E-AGR, Agriculture

EUC, Eucalyptus woodland

FWM, Freshwater marsh

I-AGR, Intensive agriculture

IA, Intensive agriculture

MFS, Mulefat scrub

NNG, Non-native grassland

NNW, Non-native Woodland

ORC, Orchard and vineyards

ORF, Southern coast live oak riparian forest

SMX, Southern mixed chaparral

SOC, Scrub oak chaparral

SWS, Southern willow scrub

SWS/TS, Southern willow scrub/tamarisk scrub

dBSC, Flat-topped buckwheat - disturbed

dCLOW, Coast Live Oak Woodland - disturbed

dCSS, Diegan coastal sage scrub - disturbed

dCSSB, Coastal sage scrub - Baccharis dominated - disturbed

dSMX, Southern mixed chaparral - disturbed

Project Impacts

Permanent Impact

Temporary Impact

Temporary Construction Easement

Open Space

DUDEK

7608-01

SOURCE: SANDAG IMAGERY 2014; FUSCOE ENGINEERING 2016


Newland Sierra Project Environmental Impact Report

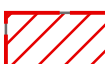
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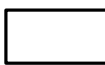
Impacts to Biological Resources

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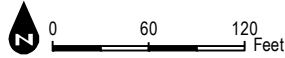
100-Ft Buffer Of 30-Ft Sewer Easement
- 

30-Ft Off-Site Sewer Permanent Impact
- 

Vegetation Mapping

Vegetation Communities/Land Covers

- ARU, Arundo Dominated Riparian
- DEV, Urban Developed Ornamental
- DH, Disturbed Habitat
- SWS, Southern Willow Scrub



SANDAG Technical Services - GIS

FIGURE 2.4-9E
Impacts to Biological Resources for Off-Site Wastewater Upgrade East of Twin Oaks Valley Road

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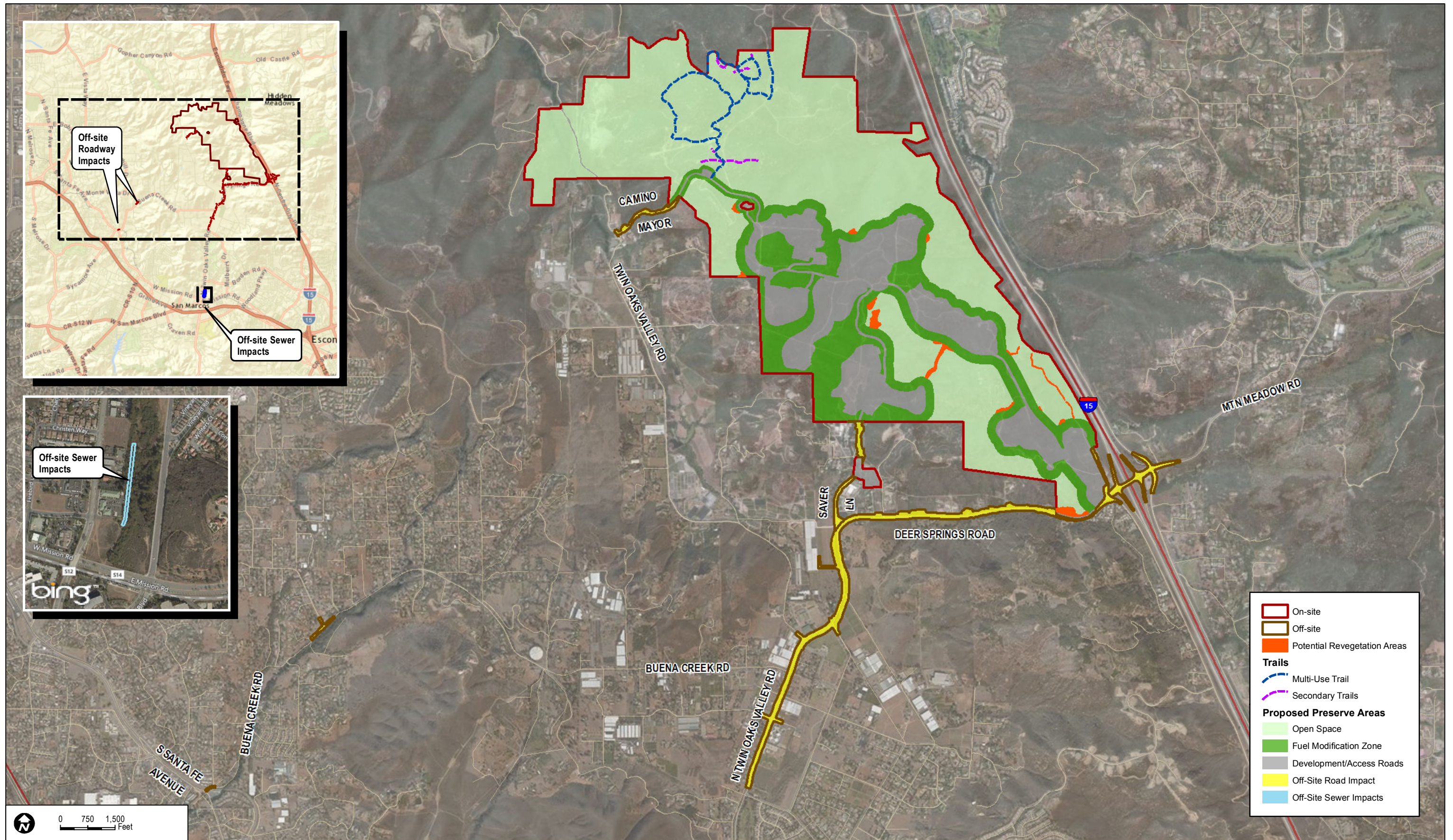
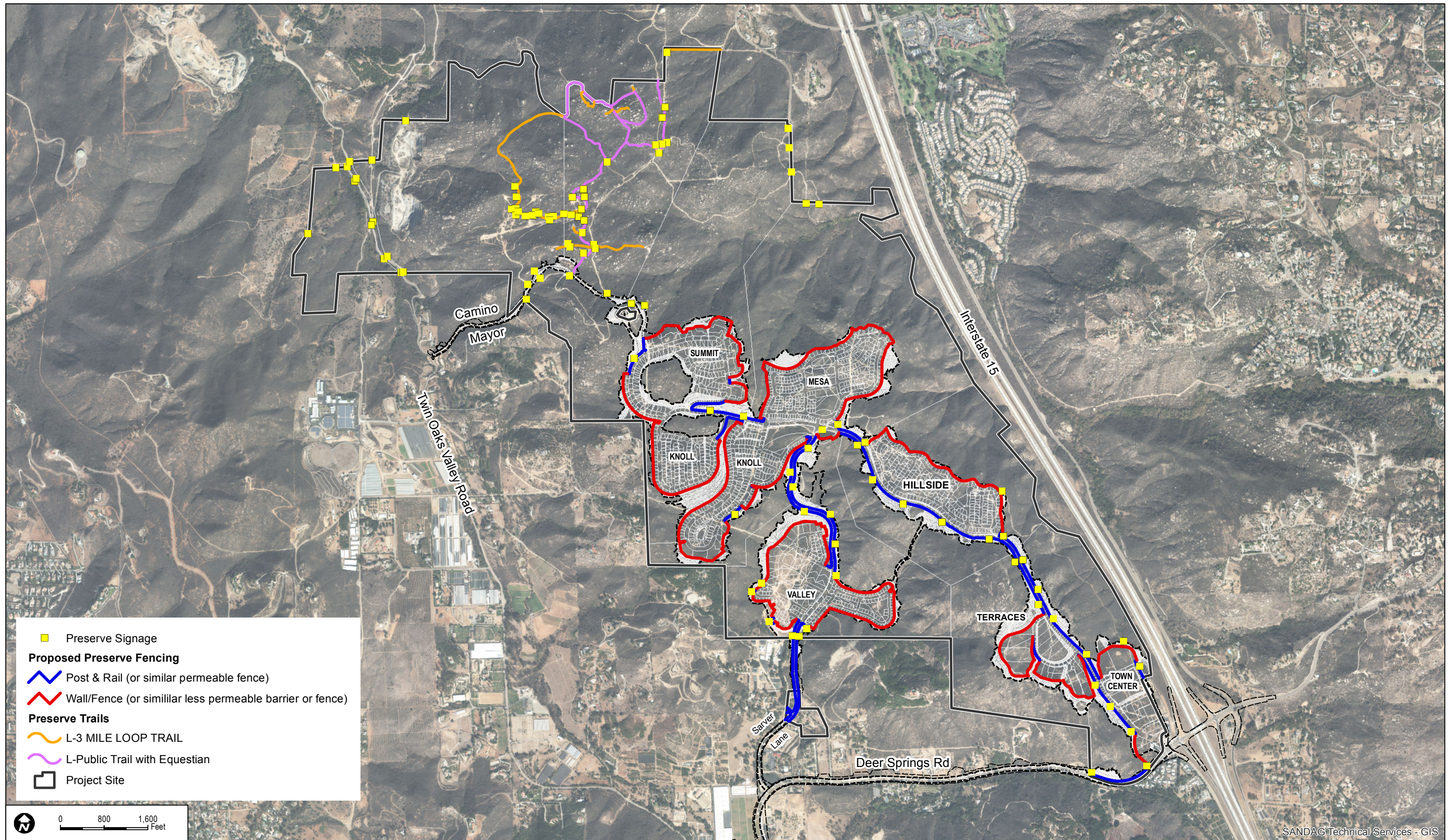


FIGURE 2.4-10
Proposed Uses

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