

2.4 Biological Resources

This subchapter describes existing biological conditions within the Proposed Project site and vicinity, identifies associated regulatory requirements and evaluates potential impacts (including cumulative impacts) and mitigation measures related to implementation of the Proposed Project. A Biological Technical Report was prepared for the Project by HELIX (2015d), which was prepared in conformance with the County Guidelines for Determining Significance and Report Format and Content Requirements – Biological Resources (County 2010a) and is summarized below; the complete report is included as Appendix E of this EIR.

2.4.1 Existing Conditions

2.4.1.1 Existing Setting

Land Uses

The northern portion of the Proposed Project site is comprised of southern mixed chaparral, non-native grassland and non-native woodland transitioning into steep hills supporting avocado orchards. The southern and western portions of the site also are comprised of steep hills supporting avocado orchards and some citrus. These hills transition into mostly gently sloping land in the eastern portion of the site, consisting primarily of grassland habitat but also supporting native and non-native woodlands, as well as some riparian habitat.

The Proposed Project site is located within the North County Metro Segment of the Draft North County Subarea Plan. The majority of the site is outside any proposed Pre-Approved Mitigation Area (PAMA). The Project site's southern boundary is adjacent to the approved Harmony Grove development which is designated as take-authorized and dedicated preserve within the Draft North County Subarea Plan. A small portion (11.7 acres) in the southeastern corner of the Project site is designated as proposed PAMA connecting to off-site open space within Harmony Grove. The proposed PAMA on-site is within existing intensive agriculture, open water and eucalyptus forest and no development is proposed over this area. Land uses in the surrounding area include a mixture of rural residential, agriculture and undeveloped uses. Residential development occurs to the north, east and west, with rural/agricultural uses to the south and the immediate north. The City of San Marcos adjoins the western boundary and is fully developed with large-lot residential uses in this area.

Biological Surveys

General biological surveys of the Proposed Project site were conducted, according to County Requirements, by HELIX on October 18, 2011, February 17, 2012 and November 21, 2012. General biological data, including vegetation mapping and species inventories, have been updated based on results of subsequent surveys. The new addition of the Tentative Map was surveyed on February 17, 2012 and the sewer options alternative alignments were surveyed on July 22, 2014. Offsite improvements associated with the Project and included in the survey and impact evaluation include improvements to Hill Valley Drive, Mt. Whitney Road, and Country Club Drive, as well as the off-site sewer options alternative alignments.

A rare plant survey and habitat assessments for coastal California gnatcatcher (*Polioptila californica californica*) and least Bell's vireo (*Vireo bellii pusillus*) were conducted on May 2, 2013. Based on the habitat assessments, protocol surveys for these two bird species were completed. In accordance with U.S. Fish and Wildlife Service (USFWS) protocol, three surveys for coastal California gnatcatcher were completed in June and July 2013, and eight surveys for least Bell's vireo were completed in May through July 2013.

A wetland jurisdictional delineation was performed by HELIX on February 17, February 29 and November 27, 2012, with additional data collection on July 22, 2013. In addition, the Project site was examined for evidence of vernal pools during all biological surveys.

All portions of the Project site were surveyed for potential resources and evaluated for Project impacts as described in Chapter 1.0 of this EIR. More information on the extent of these surveys is provided in the Biological Technical Report for this Project (Appendix E).

Habitats

More than half the site (130.2 acres) is in active agricultural use, including 110.1 acres of avocado (*Persea americana*) and citrus (*Citrus* sp.) orchards, 8.8 acres of intensive agriculture, and 21.3 acres of extensive agriculture. The orchards are located primarily on the steep slopes on site. Non-native grassland is also abundant on site, with most of the grassland located in the central and eastern portions of the site. Over one-half of the non-native grassland was at one time planted and irrigated with agricultural groves. Native vegetation present on site includes southern mixed chaparral, coast live oak woodland (including disturbed), southern riparian forest, herbaceous wetland, freshwater marsh, Diegan coastal sage scrub, southern willow scrub, southern riparian woodland (including disturbed), and mule fat scrub. Eucalyptus forest and woodland, non-native vegetation, disturbed wetland, tamarisk scrub, disturbed habitat, and developed areas also occur on site.

A total of 21 vegetation communities or land uses were mapped on site (Table 2.4-1, *Existing On-site Habitats/Vegetation Communities*, and Figures 2.4-1a and 2.4-1b, *Vegetation and Sensitive Resources Map*). Sensitive habitat is defined as land that supports unique vegetation communities or the habitats of rare or endangered species or subspecies of animals or plants as defined by Section 15380 of the State CEQA Guidelines. Sensitive vegetation communities on site include southern riparian forest, southern riparian woodland (including disturbed), southern willow scrub, mule fat scrub, freshwater marsh, herbaceous wetland, disturbed wetland, open water/pond, coast live oak woodland (including disturbed), Diegan coastal sage scrub, southern mixed chaparral and non-native grassland. Although not considered a sensitive habitat per se, extensive agriculture comprised of pasture/field also requires mitigation for impacts as it is considered foraging habitat for raptors and other species.

Southern Riparian Forest and Woodland

Southern riparian forests and woodlands are comprised of winter-deciduous trees that require water near the soil surface. Willow cottonwood (*Populus* sp.) and western sycamore (*Platanus racemosa*) form a dense medium height woodland or forest in moist canyons and drainage

bottoms. Associated understory species include mule fat (*Baccharis salicifolia*), stinging nettle (*Urtica dioica* ssp. *holosericea*) and wild grape (*Vitis girdiana*). The differences between woodlands and forests are physiognomic rather than compositional. Woodlands have less canopy cover than forests. In forests, the canopies of individual tree species do overlap so that a canopy cover exceeding 100 percent may occur in the upper tree stratum. In woodlands, there may be large canopy gaps within the upper tree stratum.

Species in these vegetation communities within the Project site include arroyo willow (*Salix lasiolepis*), black willow (*S. gooddingii*), mule fat and western sycamore. Non-native species also are present, including Mexican fan palm (*Washingtonia robusta*), giant reed (*Arundo donax*) and eucalyptus (*Eucalyptus* sp.). Areas with an abundance of non-native species are mapped as a disturbed phase of this habitat. Southern riparian forest and southern riparian woodland on the Project site are California Department of Fish and Wildlife (CDFW) habitat and County of San Diego Resource Protection Ordinance (RPO) wetland but not U.S. Army Corps of Engineers (USACE) jurisdictional. Further discussion is provided below under “Jurisdictional Wetlands/Waters.”

A total of 2.50 acres of southern riparian forest is present in the central portion of the site along a drainage that flows from the west to the east to Surrey Lane. A total of 0.29 acre of southern riparian woodland, including 0.05 acre that is disturbed, is present along the drainage course in the southeastern corner of the site.

Southern Willow Scrub

Southern willow scrub consists of dense, broadleaved, winter-deciduous stands of trees dominated by shrubby willows in association with mule fat, and scattered emergent cottonwood (*Populus* sp.) and western sycamores. This vegetation community occurs on loose, sandy or fine, gravelly alluvium deposited near stream channels during flood flows. Frequent flooding maintains this early seral community, preventing succession to a riparian woodland or forest (Holland 1986). In the absence of periodic flooding, this early seral type would be succeeded by southern cottonwood or western sycamore riparian forest.

On site, this habitat type is composed of arroyo willow and mule fat and some scattered Mexican fan palms. A total of 0.15 acre of southern willow scrub is present in six locations along drainage courses and as small, isolated stands in the southern, central, and north portions of the site. The majority of southern willow scrub on the Project site is CDFW jurisdictional and RPO wetland. Further discussion is provided below under “Jurisdictional Wetlands/Waters.”

Mule Fat Scrub

Mule fat scrub is a stunted, shrubby riparian scrub community dominated by mule fat and interspersed with small willows. This vegetation community occurs along intermittent stream channels with a fairly coarse substrate and moderate depth to the water table. This community may be maintained by frequent flooding, the absence of which would lead to a cottonwood or sycamore dominated riparian woodland or forest (Holland 1986). In other places, the limited

hydrology may be unsuitable for anything more mesic than mule fat scrub. The latter is the likely explanation for the mule fat scrub on the Proposed Project site.

A few small patches (totaling 0.02 acre) of monotypic mule fat stands occur near the southern property boundary. These stands are not associated with any observed surface hydrology, but are located peripherally along a drainage course. They are thought to be the result of and sustained by artificial hydrology (i.e., runoff from agricultural irrigation). Mule fat scrub on the Proposed Project site is CDFW jurisdictional and RPO wetland.

Freshwater Marsh

Coastal and valley freshwater marsh is dominated by perennial, emergent monocots, 5 to 13 feet tall, forming incomplete to completely closed canopies. This vegetation type occurs along the coast and in coastal valleys near river mouths and around the margins of lakes and springs, and freshwater or brackish marshes. These areas are semi- or permanently flooded yet lack a significant current (Holland 1986). Dominant species include cattails (*Typha* sp.) and bulrushes (*Schoenoplectus* sp.), along with umbrella sedges (*Cyperus* sp.), rushes (*Juncus* sp.) and spike-sedge (*Eleocharis* sp.).

Species in this vegetation community within the Proposed Project site include southern cattail (*Typha domingensis*). A total of 0.12 acre of this vegetation type occurs along some of the larger drainages. Freshwater marsh on the Project site is under the jurisdiction of the USACE and CDFW and is RPO wetland.

Herbaceous Wetland

Herbaceous wetland is a low-growing, herbaceous community that is dominated by a variety of native wetland species. It typically occurs in seasonally wet areas with heavy soils. Dominant species usually include wrinkled rush (*Juncus rugulosus*), toad rush (*Juncus bufonius*) and wetland grasses. Other common species of this habitat include cocklebur (*Xanthium strumarium*) and western goldenrod (*Euthamia occidentalis*).

Herbaceous wetland on the Proposed Project site is dominated by wrinkled rush, Mexican rush (*Juncus mexicanus*), saltgrass (*Distichlis spicata*) and western ragweed (*Ambrosia psilostachya*). A total of 0.35 acre of herbaceous wetland is present on site. The majority of herbaceous wetland on the Project site is under the jurisdiction of the USACE and CDFW and is RPO wetland. Further discussion is provided below under “Jurisdictional Wetlands/Waters.”

Disturbed Wetland

This vegetation community is dominated by exotic wetland species that invade areas that have been previously disturbed or undergone periodic disturbances. These non-natives become established more readily following natural or human-induced habitat disturbance than the native wetland flora. Characteristic species of disturbed wetlands include bristly ox-tongue (*Helminthotheca echioides*), cocklebur and dock (*Rumex* spp.).

The dominant species in this community on the Proposed Project site include annual beard grass (*Polypogon monspeliensis*) and Mexican fan palm, along with a low cover of native wetland species. A total of 0.13 acre of disturbed wetland occurs on site, consisting of a small, 0.08-acre disturbed wetland is present north of Mt. Whitney Road. Disturbed wetland on the Project site is under the jurisdiction of the CDFW, and portions are considered RPO wetland, as further discussed below under “Jurisdictional Wetlands/Waters.”

Open Water/Pond

A freshwater pond is present in the southeastern portion of the Proposed Project site, comprising 0.51 acre. The pond is an impoundment of Waters of the U.S. (WUS) streambed and is, therefore, USACE and CDFW jurisdictional. This feature also is RPO wetland. The adjacent equestrian center does not supplement the pond with imported water.

Tamarisk Scrub

Tamarisk scrub is typically comprised of shrubs and/or small trees of exotic tamarisk species (*Tamarix* spp.), but may also contain willows (*Salix* spp.), salt bushes (*Atriplex* spp.), catclaw acacia (*Acacia greggii*) and saltgrass. This habitat typically occurs along intermittent streams in areas where high evaporation rates increase the salinity level of the soil. Tamarisk is a phreatophyte, a plant that can obtain water from an underground water table. Because of its deep root system and high transpiration rates, tamarisk can substantially lower the water table to below the root zone of native species, thereby competitively excluding them. As a prolific seeder, it may rapidly displace native species within a drainage course (Holland 1986).

Species in this vegetation community within the Proposed Project site include mostly monotypic stands of tamarisk. The 0.04 acre of tamarisk scrub that is present on site is not USACE or CDFW jurisdictional based on its landscape position, which is on a hillside and not part of any drainage. It also is not RPO wetland.

Coast Live Oak Woodland (Including Disturbed)

Coast live oak woodland is an open to dense evergreen woodland or forest community, dominated by coast live oak (*Quercus agrifolia*), that may reach a height of 35 to 80 feet. The shrub layer consists of toyon (*Heteromeles arbutifolia*), blue elderberry (*Sambucus nigra* ssp. *caerulea*), spreading snowberry (*Symphoricarpos mollis*), fuchsia-flowered gooseberry (*Ribes speciosum*) and poison oak (*Toxicodendron diversilobum*). A dense herbaceous understory is dominated by miner’s lettuce (*Claytonia perfoliata* var. *perfoliata*) and chickweed (*Stellaria media*). This community occurs along the coastal foothills of the Peninsular Ranges, typically on north-facing slopes and shaded ravines (Holland 1986).

A total of 11.1 acres of coast live oak woodland, including 4.1 acres that are disturbed, is present in the central and southeastern portions of the Project site).

Diegan Coastal Sage Scrub (including Disturbed)

Coastal sage scrub is one of the two major shrub types that occur in southern California, occupying xeric sites characterized by shallow soils (the other is chaparral). Four distinct coastal sage scrub geographical associations (northern, central, Venturan and Diegan) are recognized along the California coast. Despite the fact that it has been greatly reduced from its historical distribution, the Diegan association is the dominant coastal sage scrub in coastal southern California from Los Angeles to Baja California, Mexico (Holland 1986). Diegan coastal sage scrub was listed as the third most extensive vegetation community in the County in 1965. It has been suggested that nearly 72 percent of the County's original sage scrub habitat has been destroyed or modified, primarily a result of urban expansion.

Diegan coastal sage scrub may be dominated by a variety of species depending upon soil type, slope, and aspect. Typical species found within Diegan coastal sage scrub include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum* ssp. *fasciculatum*), laurel sumac (*Malosma laurina*) and black sage (*Salvia mellifera*).

Diegan coastal sage scrub (including disturbed) is considered a sensitive habitat by the USFWS, CDFW, and the County, and is given the highest inventory priority in the California Natural Diversity Database (CNDDDB). This habitat type can support a number of federally and state listed and rare plants, as well as several bird, reptile and insect species that are federally listed, including the coastal California gnatcatcher.

A total of 1.8 acres of Diegan coastal sage scrub are present on the Proposed Project site, with the majority occurring in the north-central portion.

Southern Mixed Chaparral (including Disturbed)

Southern mixed chaparral is comprised of broad-leaved sclerophyllous shrubs that can reach 6 to 10 feet in height and form dense often nearly impenetrable stands with poorly developed understories. In this mixed chaparral, the shrubs are generally tall and deep rooted, with a well-developed soil litter layer, high canopy coverage, low light levels within the canopy, and lower soil temperatures. This vegetation community occurs on dry, rocky, often steep north-facing slopes with little soil. As conditions become more mesic, broad-leaved sclerophyllous shrubs that resprout from underground root crowns become dominant. Depending upon relative proximity to the coast, southern mixed chaparral is dominated by chamise (*Adenostoma fasciculatum*), mission manzanita (*Xylococcus bicolor*), coast white lilac (*Ceanothus verrucosus*), Ramona lilac (*Ceanothus tomentosus*), white-stem wild-lilac (*Ceanothus leucodermis*), big-berry manzanita (*Arctostaphylos glauca*) and scrub oak (*Quercus dumosa*). This vegetation community provides important habitat for wide-ranging species such as mule deer (*Odocoileus hemionus*) and mountain lion (*Felis concolor*). This vegetation community is considered sensitive.

A total of 8.0 acres of granitic southern mixed chaparral occurs within the northwestern corner of the Proposed Project site, as well as along the western border near the center of the site and just north of Mt. Whitney Road.

Eucalyptus Forest and Woodland

The eucalyptus forest present on site has an overstory dominated by red gum (*Eucalyptus camaldulensis*) in association with Mexican fan palm. This community supports a sparsely vegetated understory that includes numerous upland species such as Bermuda grass (*Cynodon dactylon*), smilo grass (*Stipa miliaceum*), bristly ox-tongue, salt heliotrope (*Heliotropium curassavicum*), western ragweed, and coast live oak, as well as scattered wetland species such as Mexican fan palm and hastate orache (*Atriplex prostrata*). Hydric soils and wetland hydrology indicators were absent. This community is not under the jurisdiction of the USACE or CDFW and is not RPO wetland. Red gum is a non-native species that is commonly found in disturbed areas; it is also widely cultivated in California and is the most widely planted species of eucalyptus (Hickman, ed. 1993). In some cases on the Proposed Project site, a eucalyptus forest overstory contains an herbaceous wetland understory; the latter of which is USACE and CDFW jurisdictional and RPO wetland.

Eucalyptus woodland occurs as a few scattered stands of eucalyptus in the southern portion of the Proposed Project site. Other species observed in this habitat include lemonadeberry (*Rhus integrifolia*), Peruvian pepper tree (*Schinus molle*) and Brazilian pepper tree (*Schinus terebinthifolius*).

A total of 7.2 acres of eucalyptus forest and 3.5 acres of eucalyptus woodland are present along the drainage course in the southeastern portion of the Proposed Project site, as well as in the northwestern corner of the site.

Non-native Grassland

Non-native grassland is a dense to sparse cover of annual grasses, often associated with native annual forbs. This association occurs on gradual slopes with deep, fine-textured, usually clay soils. Most of the introduced annual species that comprise non-native grassland originated from the Mediterranean region of Europe, an area with a climate similar to that in California and a long history of agriculture. These two factors have contributed to the successful invasion and establishment of these species and the replacement of native grasslands by annual-dominated non-native grassland (Jackson 1985).

Non-native grassland covers 63.9 acres of the Proposed Project site, primarily in the eastern half of the central portion of the site with characteristic species consisting of oats (*Avena* sp.), ripgut grass (*Bromus diandrus*), red brome (*Bromus madritensis*), soft chess (*Bromus hordaceus*), western ragweed, Italian ryegrass (*Festuca perennis*), barley (*Hordeum* sp.) and black mustard (*Brassica nigra*). Portions of grassland habitat on site are dominated by non-native broadleaf species rather than grasses, including species such as black mustard and cheeseweed (*Malva parviflora*).

Non-native Vegetation

Non-native vegetation is a category describing stands of naturalized trees and shrubs (e.g., acacia [*Acacia* sp.], peppertree [*Schinus* sp.]), many of which also are used in landscaping. A total of

1.5 acres of non-native vegetation is present as landscaping around the existing house in the southeastern portion of the Proposed Project site, as well as a small stand in the northwestern corner of the site and other small, scattered stands.

Orchard

Orchards are considered active, intensive agricultural uses. Orchards on site are primarily avocado, although a few citrus trees also are present. A total of 100.2 acres of orchard is present in the hills along the western half of the site.

Intensive Agriculture

Intensive agriculture includes dairies, nurseries and chicken ranches. An equestrian center in the southeastern corner of the Proposed Project site constitutes 8.8 acres of intensive agriculture.

Extensive Agriculture

Extensive agriculture includes fields, pastures and row crops. A total of 21.3 acres of extensive agriculture, in the form of pastures for the equestrian center, is present in the southeastern corner of the Proposed Project site.

Disturbed Habitat

Disturbed habitat includes land cleared of vegetation (e.g., dirt roads), land containing a preponderance of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance (previously cleared or abandoned landscaping), or land showing signs of past or present animal usage that removes any capability of providing viable habitat.

Disturbed habitat totals 2.4 acres on site and is comprised of an unvegetated horse corral, bare dirt areas surrounding existing development and previously disturbed soils supporting only non-native forbs such as cheeseweed, black mustard and dwarf nettle (*Urtica urens*). These areas occur only in the southwestern corner of the Proposed Project site and constitute poor quality habitat.

Developed Land

Developed land exists where permanent structures and/or pavement has been placed (preventing the growth of vegetation) or where landscaping is clearly tended and maintained. Within the Proposed Project site, 4.1 acres of developed land includes one single-family residence near the western end of Eden Valley Lane, an unoccupied single-family residence in the southeastern corner of the site, a landscaped area on the western border of the equestrian center and a portion of a paved road in the northern portion of the site.

Jurisdictional Wetlands/Waters

The Proposed Project site contains jurisdictional drainages subject to regulation by the USACE, CDFW and County. The site does not contain any vernal pools. The USACE regulates wetlands and Waters of the U.S. protected under Section 404 of the CWA; the CDFW regulates certain drainages and/or wetlands protected under the Fish and Game Code; and the County regulates wetlands through its RPO. On-site drainages were evaluated for potential jurisdictional status.

Impacts to wetlands would require consultation and approvals from federal and state agencies, including a Section 404 Permit from USACE, 401 Certification from the San Diego RWQCB and a 1602 Streambed Alteration Agreement (SAA) from CDFW.

USACE Jurisdiction

Through implementation of the CWA, the USACE claims jurisdiction over waterways that are, or drain to, “Waters of the United States,” or “waters.” The definition of “waters” includes (but is not limited to) inland waters; lakes, rivers, and streams that are navigable; tributaries to these waters; and wetlands adjacent to these waters or their tributaries. The jurisdictional limit of non-wetland waters (i.e., creeks and drainages) is the ordinary high water mark. The jurisdictional limit of wetlands is the upper limit of the wetland. Delineations of wetland limits were conducted for the Proposed Project according to the procedures found in the Wetlands Delineation Manual (USACE 1987).

USACE wetlands must satisfy criteria to three parameters: vegetation, soils, and hydrology. If any single parameter does not contain a positive wetland indicator, the site is not a USACE jurisdictional wetland. Projects may be permitted on an individual basis or may be covered under one of several approved nationwide permits. Individual permits are required when more than 300 linear feet of drainages, more than 0.5 acre of wetlands, or any vernal pools would be impacted.

A jurisdictional delineation was performed on site according to USACE wetland delineation guidelines. All areas with depressions or drainage channels were evaluated for the presence of Waters of the U.S., including jurisdictional wetlands. If an area was suspected of being a wetland, vegetation and hydrology indicators were noted, and a soil pit was dug and described. The area was then determined to be a federal (USACE) wetland if it satisfied the three wetland criteria (vegetation, hydrology, and soil). In most cases, two sample points were evaluated, one inside the suspected wetland, and one where the hydrology and/or vegetation criteria were not satisfied. Drainages lacking evidence of wetland hydrology (i.e., inundation for more than five percent of the growing season) were considered non-wetland WUS.

USACE jurisdictional areas on site include freshwater marsh, herbaceous wetland, open water/pond and non-wetland WUS/streambed. A total of 1.64 acres of USACE jurisdictional areas is present on the Proposed Project site, including 0.45 acre of wetlands and 1.19 acres of non-wetland WUS (Table 2.4-2, *Existing On-site USACE Jurisdictional Areas*, and Figures 2.4-2a and 2.4-2b, *Waters of the U.S.*).

CDFW Jurisdiction

Under Section 1600 of the California Fish and Game Code, a project applicant may not substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel or bank of any river, stream or lake, or deposit or dispose of debris, waste or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream or lake, unless CDFW receives written notification regarding the activity. After said notification is complete, the CDFW must determine whether the activity may substantially adversely affect an existing fish and wildlife resource. If it determines that the activity may have that effect, CDFW must provide a draft agreement (SAA) to the project applicant, describing the fish and wildlife resources that may be threatened and identifying measures to protect those resources. The Project Applicant would be required to apply for and receive approval of that SAA from CDFW.

A field determination of CDFW jurisdictional boundaries is based on the presence of a channel with a bed and bank(s) and potential riparian vegetation. Jurisdiction usually extends to the top of bank or the outer edge of riparian vegetation, whichever is wider.

CDFW jurisdictional areas present on the Proposed Project site total 7.05 acres, comprised of 5.65 acres of vegetated habitat (including coast live oak woodland, disturbed wetland, freshwater marsh, herbaceous wetland, mule fat scrub, southern riparian forest, southern riparian woodland and southern willow scrub) and 1.40 acres of open water/pond and streambed (Table 2.4-3 and Figures 2.4-3a and 2.4-3b).

San Diego County RPO Wetlands

The County's RPO is more inclusive than the USACE's criteria. Under the RPO, a wetland must only meet one of the following criteria in order to be classified as a wetland: (1) at least periodically the land supports predominantly hydrophytes (plants whose habitat is water or very wet places); (2) the substratum is predominantly undrained hydric soils, or (3) an ephemeral or perennial stream is present, whose substratum is predominantly non-soil and such lands contribute substantially to the biological functions or values of wetlands in the drainage system.

San Diego County RPO wetlands on the Proposed Project site total 3.99 acres and are comprised of freshwater marsh, herbaceous wetland, mule fat scrub, open water/pond, southern riparian forest, southern riparian woodland, southern willow scrub and disturbed wetland (Table 2.4-4, *Existing On-Site RPO Wetlands*, and Figures 2.4-4a and 2.4-4b, *County of San Diego RPO Wetlands*).

A total of 3.06 acres of on-site areas that was considered to fall under CDFW jurisdiction does not qualify as RPO wetlands, including 2.05 acre of coast live oak woodland, 0.89 acre of non-vegetated streambed, 0.08 acre of disturbed wetland, 0.02 acre of herbaceous wetland and 0.02 acre of southern willow scrub.

Streambeds on site does not qualify as RPO wetlands because they do not support hydrophytic vegetation, do not have hydric soil, and do not have a non-soil substratum.

Coast live oak woodland on site does not qualify as RPO wetlands as the habitat is dominated by coast live oak, an upland-rated species, and the understory does not support a predominance of hydrophytic vegetation. In addition, these areas also do not contain hydric soils.

The disturbed wetland, occurring on site in Neighborhood 2, does not meet RPO wetland criteria as the area is a human-induced wetland area resulting from upstream and adjacent irrigated orchards, is small and isolated from other wetland areas, has negligible biological functions, is not a vernal pool, and does not support wetland-dependent sensitive species. In addition, the unvegetated channel running through this area contains the same soils as the adjacent upland habitat.

The herbaceous wetland, occurring around Sampling Point 11 in Neighborhood 4, does not meet RPO wetland criteria as the area is a human-induced wetland resulting from upstream and adjacent irrigated orchards, is small and isolated from other wetland areas, has negligible biological functions, is not a vernal pool, and does not support wetland-dependent sensitive species. In addition, the connecting channel is an unvegetated dirt channel that does not support hydrophytic vegetation, does not have hydric soil, and does not have a non-soil substrate.

The southern willow scrub, occurring in the northern portion of the site in Neighborhood 4, is a human-induced wetland area resulting from adjacent orchard runoff, is small and isolated from other wetland areas, is not associated with a spring or a channel, has negligible biological functions, is not a vernal pool, and does not support wetland-dependent sensitive species. As such, this area does not meet RPO wetland criteria.

Plant Species

HELIX observed a total of 187 plant species within the Proposed Project site during surveys to date, of which 94 (50 percent) are non-native species (refer to Appendix A of the Biological Technical Report [EIR Appendix E] for a complete list of identified plants species). The predominance of non-native species is indicative of the fact that most of the site is in active agricultural use or contains non-native grasslands.

Sensitive Plant Species on Site

Sensitive species are those considered unusual or limited in that they are: (1) only found in the San Diego region; (2) a local representative of a species or association of species not otherwise found in the region; or (3) severely depleted within their ranges or within the region. No rare plants were observed on site.

Sensitive Plants with Potential to Occur on Site

Sensitive plant species with potential to occur on site are included in Appendix C of the Biological Technical Report (EIR Appendix E). None of the plant species with potential to occur on site has a high potential.

No sensitive plant species has been observed on site. Sensitive plant species reported by the CNDDDB in the vicinity include Del Mar manzanita (*Arctostaphylos grandulosa* ssp. *crassifolia*) and San Diego thorn-mint (*Acanthomintha ilicifolia*). Del Mar manzanita occurs within maritime chaparral. Since that vegetation community is not present, its potential to occur on site is very low. San Diego thorn-mint occurs on friable clay soils, often in open areas within grasslands. Since clay soils are not present on site, its potential to occur is very low.

Animal Species

A total of 91 animal species have been observed or otherwise detected on site during biological surveys, including 11 invertebrate, 1 amphibian, 4 reptile, 65 bird and 10 mammal species (Appendix B of the Biological Technical Report [EIR Appendix E]).

Sensitive Animal Species

Ten sensitive animal species (Cooper's hawk [*Accipiter cooperii*], grasshopper sparrow [*Ammodramus savannarum*], red-shouldered hawk [*Buteo lineatus*], turkey vulture [*Cathartes aura*], northern harrier [*Circus cyaneus*], white-tailed kite [*Elanus leucurus*], prairie falcon [*Falco mexicanus*], yellow warbler [*Setophaga petechia*], western bluebird [*Sialia mexicana*] and southern mule deer [*Odocoileus hemionus fuliginata*]) were observed or otherwise detected on site (refer to Figures 2.4-1a and 2.4-1b) and are further discussed below.

Cooper's hawk (*Accipiter cooperii*)

Status: State Watch List; County Group 1

Distribution: Occurs year-round throughout San Diego County's coastal slope where stands of trees are present

Habitat(s): Oak groves, mature riparian woodlands and eucalyptus stands or other mature forests

Status on site: One individual observed on multiple days in riparian forest and oak woodland habitats in the northeastern portion of the site.

Grasshopper sparrow (*Ammodramus savannarum*)

Status: State Species of Special Concern; County Group 1

Distribution: Scattered in small numbers throughout San Diego County year-round

Habitat(s): Grassland

Status on site: One individual observed in grassland in the south-central portion of the site.

Red-shouldered hawk (*Buteo lineatus*)

Status: County Group 1

Distribution: In San Diego County, observed throughout coastal slope

Habitat(s): Riparian woodland, oak woodland, orchards, eucalyptus groves or other areas with tall trees

Status on site: This species was observed flying over the northwestern and southern portions of the site.

Turkey vulture (*Cathartes aura*)

Status: County Group 1

Distribution: Observed throughout San Diego County with the exception of extreme coastal San Diego where development is heaviest

Habitat(s): Foraging habitat includes most open habitats with breeding occurring in crevices among boulders

Status on site: One individual was observed soaring over grassland in the northeastern portion of the site.

Northern harrier (*Circus cyaneus*)

Status: State Species of Special Concern; County Group 1

Distribution: In San Diego County, distribution primarily scattered throughout lowlands but can also be observed in foothills, mountains and desert

Habitat(s): Open grassland and marsh

Status on site: At least two individuals (one male and one female) were observed foraging over grassland in the east-central portion of the site.

White-tailed kite (*Elanus leucurus*)

Status: State Fully Protected; County Group 1

Distribution: Primarily occurs throughout coastal slopes of San Diego County

Habitat(s): Riparian woodlands and oak or sycamore groves adjacent to grassland

Status on site: One individual observed foraging over grassland in the northeastern portion of the site, as well as perching in southern riparian forest.

Prairie falcon (*Falco mexicanus*)

Status: Federal Bird of Conservation Concern; State Watch List; County Group 1

Distribution: Observed year-round in San Diego County but more commonly during winter

Habitat(s): Nesting occurs on cliff or bluff ledges or occasionally in old hawk or raven nests; foraging occurs in grassland or desert habitats

Status on site: One individual was observed perching on a fence post in the southern portion of the site. This individual was observed on a single day and the species was not observed again during subsequent surveys.

Yellow warbler (*Setophaga petechia*)

Status: State Species of Special Concern; County Group 2

Distribution: Observed throughout much of San Diego County during the breeding season with rare sightings in winter

Habitat(s): Riparian woodland

Status on site: At least one individual was observed on the Project site by County staff on March 11, 2013.

Western bluebird (*Sialia mexicana*)

Status: County Group 2

Distribution: Occurs throughout much of San Diego County, but concentrated in foothills and mountains

Habitat(s): Montane coniferous and oak woodlands, as well as urban areas with mature trees and wide lawns

Status on site: One pair of individuals was observed perching on the fence line bordering the northeastern portion of the site.

Southern mule deer (*Odocoileus hemionus fuliginata*)

Listing: County Group 2

Distribution: Southern Riverside County (Tahquitz Valley), south on the coastal slope to the vicinity of San Quintin, Baja California, Mexico

Habitat: Coastal sage scrub, riparian and montane forests, chaparral, grasslands, croplands, and open areas if there is at least some scrub cover present. Crepuscular activity and movements are along routes that provide the greatest amount of protective cover.

Status on site: Two individuals (one male and one female) were observed in the northwestern portion of the site within the avocado orchard. It is assumed that the deer came on site from the west, as this is the only side of the site that connects to off-site native habitat, and the deer were observed heading east down the hillside in the northwestern corner of the site toward on-site grassland. Large mammal bedding sites (presumably those of deer) were noted in the northern portion of the site near the creek.

The Proposed Project site does not contain any designated Critical Habitat for any federally listed species. The nearest Critical Habitat is designated for the coastal California gnatcatcher and is approximately one mile to the west of the site.

Sensitive Animals with Potential to Occur

Sensitive animal species with potential to occur on site are included in Appendix D of the Biological Technical Report (EIR Appendix E). The California horned lark (*Eremophila alpestris actia*) and San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) have high potential to occur on site. Focused surveys conducted in 2013 for coastal California gnatcatcher and least Bell's vireo were negative (Konecny Biological Services 2013 [Appendix F of the Biological Technical Report]).

Habitat Connectivity and Wildlife Corridors

There are two types of wildlife corridors: local and regional. Local corridors provide animals with access to resources such as food, water and shelter. Animals can use these corridors to travel from riparian to upland habitats and back. Regional corridors allow for animal movement between large core areas of habitat that are regionally important. They include major creeks and rivers, ridges, valleys and large swaths of undeveloped land.

The Proposed Project site does not function as a regional wildlife corridor. The Project site is situated at the western edge of existing development. There is little opportunity for wildlife

movement to the east and north due to urban sprawl within the cities of San Marcos and Escondido, and further impeded by SR-78 and Mission Road. Construction of the Harmony Grove Village development further limits wildlife connectivity to the south of the site. Although the Project site is used by a variety of wildlife species, it is not considered a regional corridor as connectivity to the north, south and east is limited and the site does not provide connection to open space in these areas. Wildlife movement occurs locally within the site and connects to off-site habitat along the western site boundary, which abuts existing rural residential development interspersed with chaparral-covered hillsides. This off-site habitat is not within the future North County Multiple Species Conservation Program (NCMSCP) proposed PAMA. The Project site does not contain biological resources that are critical for regional movement of wildlife. There is evidence (tracks, beds, and observations) that the site provides local wildlife movement corridors leading from the west.

2.4.1.2 Regulatory Setting

Biological resources within the Proposed Project site are subject to regulatory review by the federal government, state of California and County. The federal government administers non-marine plant- and wildlife-related issues through the USFWS, while the USACE administers WUS (including wetland and non-wetland) issues. California law relating to wetland, water-related and wildlife issues is administered by CDFW.

Coordination efforts for the Proposed Project to date consist of a pre-application meeting with staff from the County PDS on August 13, 2012, a site visit with County PDS staff on June 6, 2013 and a batching meeting with staff from USFWS, CDFW, and County PDS on November 26, 2013, as well as additional meetings with County PDS staff.

Laws and regulations that apply to the Proposed Project include the federal Endangered Species Act (ESA), federal CWA, California Fish and Game Code, NCCP for Coastal Sage Scrub and County RPO.

Federal

Federal Endangered Species Act

Administered by the USFWS, the federal ESA provides the legal framework for the listing and protection of species (and their habitats) that are identified as being endangered or threatened with extinction. Actions that jeopardize endangered or threatened species and the habitats upon which they rely are considered a 'take' under the ESA. Section 9(a) of the ESA defines take as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." 'Harm' and 'harass' are further defined in federal regulations and case law to include actions that adversely impair or disrupt a listed species' behavioral patterns.

The USFWS identifies critical habitat for endangered and threatened species. Critical habitat is defined as areas of land that are considered necessary for endangered or threatened species to recover. The ultimate goal is to restore healthy populations of listed species within their native habitat so they can be removed from the list of threatened or endangered species. Once an area

is designated as critical habitat pursuant to the federal ESA, all federal agencies must consult with the USFWS to ensure that any action they authorize, fund, or carry out is not likely to result in destruction or adverse modification of the critical habitat. None of the Project site is located within designated critical habitat and the Project would therefore not impact critical habitat.

Sections 7 and 10(a) of the federal ESA regulate actions that could jeopardize endangered or threatened species. Section 7 describes a process of federal interagency consultation for use when federal actions may adversely affect listed species. A biological assessment is required for any major construction activity if it may affect listed species. In this case, take can be authorized via a letter of biological opinion issued by the USFWS for non-marine related listed species issues. A Section 7 consultation (formal or informal) is required when there is a nexus between endangered species' use of the site and impacts to USACE jurisdictional areas. Section 10(a) allows issuance of permits for incidental take of endangered or threatened species with preparation of a Habitat Conservation Plan (HCP). The term "incidental" applies if the taking of a listed species is incidental to, and not the purpose of, an otherwise lawful activity. An HCP demonstrating how the taking would be minimized and how steps taken would ensure the species' survival must be submitted for issuance of Section 10(a) permits. A Section 7 or 10(a) permit would not be required for the proposed Project, as no federally listed species or critical habitat occur on site.

Migratory Bird Treaty Act

All migratory bird species that are native to the United States or its territories are protected under the federal Migratory Bird Treaty Act (MBTA), as amended under the Migratory Bird Treaty Reform Act of 2004 (FR Doc. 05-5127). The MBTA is generally protective of migratory birds but does not actually stipulate the type of protection required. In common practice, the MBTA is now used to place restrictions on disturbance of active bird nests during the nesting season (generally February 1 to September 1). In addition, the USFWS commonly places restrictions on disturbances allowed near active raptor nests.

Rivers and Harbors Act of 1899 and CWA

Federal wetland regulation (non-marine issues) is guided by the Rivers and Harbors Act of 1899 and the CWA. The Rivers and Harbors Act deals primarily with discharges into navigable waters, while the purpose of the CWA is to restore and maintain the chemical, physical, and biological integrity of all WUS. Permitting for projects filling WUS (including wetlands) is overseen by the USACE under Section 404 of the CWA. Projects could be permitted on an individual basis or be covered under one of several approved Nationwide Permits. Individual Permits are assessed individually based on the type of action, amount of fill, etc. and typically require substantial time (often longer than six months) to review and approve, while Nationwide Permits are pre-approved if a project meets appropriate conditions.

State

California Endangered Species Act

The California ESA is similar to the federal ESA in that it contains a process for listing of species and regulating potential impacts to listed species. California ESA Section 2081 authorizes the CDFW to enter into a memorandum of agreement for the take of listed species for scientific, educational, or management purposes.

Native Plant Protection Act

The Native Plant Protection Act (NPPA) enacted a process by which plants are listed as rare or endangered. The NPPA regulates collection, transport, and commerce in listed plants. The California ESA follows the NPPA and covers both plants and animals designated as endangered or threatened with extinction. Plants listed as rare under NPPA were also designated rare under the California ESA.

California Fish and Game Code

The California Fish and Game Code (Sections 1600 through 1603) requires a CDFW agreement for projects affecting riparian and wetland habitats through issuance of a SAA.

Natural Communities Conservation Planning Act

The California Natural Communities Conservation Planning (NCCP) Act of 1991 (Section 2835) allows the CDFW to authorize interim take of species covered by plans in agreement with NCCP guidelines. An NCCP initiated by the state of California focuses on conserving coastal sage scrub, and in concert with the USFWS and the federal ESA, is intended to avoid the need for future federal and state listing of coastal sage scrub dependent species. The County became a participant in the NCCP in 1993 for projects located within the planning area for the Coastal Sage Scrub NCCP with the intent to "...provide for regional protection and perpetuation of natural wildlife diversity while allowing compatible land use and appropriate development and growth." The NCCP process guidelines were established as interim guidelines until formal subregional plans were approved. An NCCP 4(d) take permit is required for the Project to demonstrate compliance with the NCCP Act. The draft NCMSCP would be the subregional plan for this portion of the County when adopted. The Project area is not within the proposed PAMA and therefore the Project's on-site open space areas would not become part of the NCMSCP Preserve.

County

Habitat Loss Permit Ordinance

The NCCP Act (Section 2835) allows CDFW to authorize take of species covered by plans in agreement with NCCP guidelines. An NCCP initiated by the State of California under Section 4(d) of the federal ESA focuses on conserving coastal sage scrub in order to avoid the

need for future federal and state listing of coastal sage scrub-dependent species. Findings in support of issuance of a habitat loss permit under Section 4(d) of the federal ESA would need to be made if Section 4(d) is relied upon for this Proposed Project (Section 86.104 of the County of San Diego Code 8365 (N.S.) and Section 4.2.g of the Coastal Sage Scrub Natural Communities Conservation Plan Process Guidelines). These findings need to show that the Proposed Project's loss of Diegan coastal sage scrub would not exceed the County's five percent loss limit. It would also have to demonstrate that the habitat loss would not preclude connectivity between areas of high habitat values, or preclude or prevent the preparation of a subregional NCCP. Additionally, the findings must show that the habitat loss has been minimized and mitigated to the maximum extent practicable in accordance with Section 4.3 of the NCCP Process Guidelines, and that the habitat loss would not appreciably reduce the likelihood of survival and recovery of listed species in the wild. Finally, the habitat loss must be incidental to otherwise lawful activities. The County regulates coastal sage scrub habitat loss through the Habitat Loss Permit (HLP) Ordinance (October 22, 1997). An HLP application must be filed with the County if the Draft NCMSCP plan has not been adopted. An HLP requires concurrence from USFWS and CDFW. Approval is based on Findings made pursuant to the County's HLP Ordinance, as required by the NCCP Process Guidelines.

Resource Protection Ordinance

The County regulates natural resources (among other resources) via the RPO, the regulations of which cover wetlands, wetland buffers, sensitive plants and animals, sensitive habitats, and habitats containing sensitive animals or plants as sensitive biological resources. Sensitive habitat lands are identified by the RPO as lands that "support unique vegetation communities, or habitats of rare or endangered species or sub-species of animals or plants as defined by Section 15380 of the CEQA Guidelines." It is the intent of the RPO to increase the preservation and protection of the County's unique topography, natural beauty, biological diversity, and natural and cultural resources.

RPO wetlands are defined by the RPO as lands having one or more of the following attributes:

- At least periodically, the land supports a predominance of hydrophytes (plants whose habitat is water or very wet places);
- The substratum is predominantly undrained hydric soil; or
- An ephemeral or perennial stream is present, whose substratum is predominately non-soil and such lands contribute substantially to the biological functions or values of wetlands in the drainage system.

According to the RPO, the following are not considered RPO wetlands:

- Lands which have attribute(s) specified above, solely due to man-made structures (e.g., culverts, ditches, road crossings, or agricultural ponds), provided that the Director of PDS determines that they:
 - Have negligible biological function or value as wetlands;
 - Are small and geographically isolated from other wetland systems;

- Are not vernal pools; and
 - Do not have substantial or locally important populations of wetland dependent sensitive species.
- Lands that have been degraded by past legal land disturbance activities, to the point that they meet the following criteria as determined by the Director of PDS:
 - Have negligible biological function or value as wetlands even if restored to the extent feasible; and,
 - Do not have substantial or locally important populations of wetland dependent sensitive species.

The site contains 3.99 acres of RPO wetlands (Table 2.4-4), including freshwater marsh, herbaceous wetland, mule fat scrub, disturbed wetlands, open water/pond, southern riparian forest, southern riparian woodland (including disturbed) and southern willow scrub.

2.4.2 Analysis of Project Effects and Determination as to Significance

2.4.2.1 Special Status Species

Guidelines for the Determination of Significance

A significant impact to special status species would occur if the Proposed Project would:

1. Impact one or more individuals of a species listed as federally or state endangered or threatened.
2. Impact the survival of a local population of any County Group A or B plant species, a County Group 1 animal species, or a species listed as a state Species of Special Concern.
3. Impact the regional long-term survival of a County Group C or D plant species or a County Group 2 animal species.
4. Impact arroyo toad aestivation, foraging or breeding habitat.
5. Impact golden eagle habitat, foraging or nesting habitat.
6. Result in a loss of functional foraging habitat for raptors.
7. 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, though 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.
8. 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.

9. Impact occupied burrowing owl habitat.
10. Impact occupied cactus wren habitat, or formerly occupied coastal cactus wren habitat that has been burned by wildfire.
11. Impact occupied Hermes copper butterfly habitat.
12. Impact nesting success of the following sensitive bird species through grading, clearing, fire fuel modification and/or other noise generating activities such as construction:
 - Coastal cactus wren
 - Coastal California gnatcatcher
 - Least Bell's vireo
 - Southwestern willow flycatcher
 - Tree-nesting raptors
 - Ground-nesting raptors
 - Golden eagle
 - Light-footed clapper rail

Guideline Source

These guidelines are based on the County Guidelines for Determining Significance – Biological Resources (2010a).

Analysis

Federally and State Endangered and Threatened Species (Guideline No. 1)

No federally or state listed species were observed or detected on the Proposed Project site. In addition, no Critical Habitat of such species occurs within or adjacent to the site. Accordingly, **no impacts to endangered or threatened species would occur.**

State Species of Concern, County Group A and B Plant Species, and County Group 1 Animal Species (Guideline No. 2)

The Proposed Project would impact 53.8 acres of non-native grassland and 20.5 acres of extensive agriculture (pasture), which are habitats for seven County Group 1 animal species observed on site, including Cooper's hawk, red-shouldered hawk, northern harrier, white-tailed kite, turkey vulture, prairie falcon and grasshopper sparrow. **Impacts to such habitat would be significant. (Impact BI-1a)**

County Group C and D Plant Species and County Group 2 Animal Species (Guideline No. 3)

The Proposed Project would impact habitat of three County Group 2 animal species, including southern mule deer, yellow warbler and western bluebird. These impacts would not affect the local long-term survival of these species. While mule deer can occur throughout the property,

there is no regional or significant movement corridor through the Proposed Project site, which is bordered to the north, south and east by a combination of residential development and orchards. A road crossing would affect a small amount of yellow warbler habitat (southern riparian forest), while the remaining habitat for this species would be unaffected. Yellow warbler is a fairly common breeding summer resident in the county, as well as a common migrant. Western bluebird is a common resident of foothills and mountains in the county. Habitat for western bluebird occurs scattered throughout the site, some of which would be preserved in open space. Accordingly, Project implementation would not affect the local long-term survival of these species, and **impacts would be less than significant.**

Arroyo Toad (Guideline No. 4)

The site contains no habitat suitable for the arroyo toad. Accordingly, **no impacts to the arroyo toad would occur.**

Golden Eagle (Guideline No. 5)

The nearest golden eagle nest is approximately three miles to the south of the Proposed Project site. However, there have been no recent sightings of territorial eagles at this nest location. The Project site does not contain nesting habitat and it is not within any known golden eagle territory. While there is adequate eagle foraging habitat (open non-native grassland) on site, the surrounding habitat fragmentation and the distance from known eagle territories would indicate that the site has low value for golden eagle. The surrounding area is primarily urbanized so new nesting in the vicinity is unlikely. The USFWS was also contacted and they confirmed that they had no information of additional eagle activity near the site. Therefore, **impacts to golden eagle habitat would be less than significant.**

Raptor Foraging Habitat (Guideline No. 6)

The Proposed Project site supports raptor foraging habitat, including non-native grassland and extensive agriculture. Impacts to 53.8 acres of non-native grassland and 20.5 acres of extensive agriculture (pasture/field) would occur. **Such impacts to raptor foraging habitat would be significant. (Impact BI-1b)**

Core Wildlife Areas (Guideline No. 7)

The Proposed Project site is not part of a core wildlife area of 500 acres of wildlife habitat or more. Accordingly, **no impacts to a core wildlife area would occur.**

Indirect Impacts/Edge Effects (Guideline No. 8)

Indirect impacts are all actions that are not direct removal of habitat, but affect the surrounding biological resources either as a secondary effect of the direct impacts or as the cause of degradation of a biological resource over time. Projects can have a wide variety of indirect impacts, depending on the nature of the project. These are called edge effects and can be temporary during construction or part of the operation of the project during the life of the

residential development. Edge effects can result from increased noise, unauthorized trampling of habitat, introduction of pets and pest plants to open space areas, and effects of irrigation and lighting. Project implementation would potentially cause indirect impacts from construction noise, human access, domestic animals, exotic plant species, and lighting.

Increases in human activity in the area could result in degradation of open space habitat and associated indirect impacts on sensitive species through the creation of unauthorized trails and removal of vegetation. In addition, illegal dumping of lawn and garden clippings, trash, and other refuse could occur. Resulting habitat degradation and effects on sensitive species in open space areas could result in a significant impact. Permanent fencing would be installed around biological open space, and signs precluding access would be posted to avoid potentially significant impacts from human access.

The Proposed Project is residential in nature, so domestic predators (e.g., dogs and cats) may be introduced to the surrounding habitat. Although such introductions have potential to harm native wildlife species, the site is adjacent to existing rural residential development and is already subject to some level of disturbance and predation by domestic animals. In addition, the aforementioned permanent fencing that would be installed around the biological open space would preclude access by domestic predators to avoid potentially significant impacts.

Non-native plants could colonize areas disturbed by construction and development and could potentially spread into adjacent native habitats. Many non-native plants are highly invasive and can displace native vegetation (reducing native species diversity), potentially increase flammability and fire frequency, change ground and surface water levels, and potentially adversely affect native wildlife dependent on native plant species. To avoid potentially significant impacts from plants installed as part of the Project, only non-invasive plant species would be included in the landscape plan for the site (species not listed on the California Invasive Plant Inventory prepared by the California Invasive Plant Council [Cal-IPC; 2007]).

Night lighting that extends from a developed area onto adjacent wildlife habitat can discourage nocturnal wildlife in habitat and can provide nocturnal predators with an unnatural advantage over their prey, resulting in a potentially significant impact. All proposed Project-related lighting would be required to adhere to Division 9 of the LPC. Lighting within the proposed Project footprint adjacent to undeveloped habitat would be of the lowest illumination allowed for human safety, selectively placed, shielded and directed away from these areas.

Given the above discussion, **long-term impacts to sensitive species resulting from indirect impacts would be less than significant.** For the discussion on indirect effects associated with construction noise, refer to the “Nesting Success” discussion, below.

Occupied Burrowing Owl Habitat (Guideline No. 9)

Although the Proposed Project site contains suitable burrowing owl habitat (open non-native grassland), no burrowing owls were observed or detected on site during biological surveys. Accordingly, **impacts to burrowing owls would be less than significant.**

Occupied Coastal Cactus Wren Habitat (Guideline No. 10)

The Proposed Project site does not contain suitable habitat for the coastal cactus wren (cactus thickets), and no coastal cactus wrens were observed or detected on site during biological surveys. Accordingly, **no impacts would occur to occupied coastal cactus wren habitat.**

Occupied Hermes Copper Butterfly Habitat (Guideline No. 11)

The Proposed Project site does not contain Hermes copper butterfly habitat (mature redberry bushes), and no Hermes copper butterflies were observed or detected on site during biological surveys. Accordingly, **no impacts would occur to occupied Hermes copper butterfly habitat.**

Nesting Success (Guideline No. 12)

None of the bird species listed above under Guideline No. 12 occurs within the Proposed Project site, with the exception of tree- and ground-nesting raptors. Potential short-term noise impacts would result from construction of the Proposed Project. **Noise effects would be considered significant** if construction noise levels exceed a level of 60 dB L_{EQ} hourly average or ambient (if above 60 dB L_{EQ}) within 300 feet of tree- or ground-nesting raptor nests during the breeding season for raptors (February 1 to July 15). **(Impact BI-2)**

2.4.2.2 Riparian Habitat and Sensitive Natural Communities

Guidelines for the Determination of Significance

A significant impact to riparian habitat or other sensitive natural communities would occur if:

13. Project-related grading, clearing, construction or other activities would temporarily or permanently remove sensitive native or naturalized habitat (as identified in Table 5 in the County Guidelines for Determining Significance – Biological Resources, excluding those without a mitigation ratio) on or off the Project site.
14. Any of the following would occur to or within jurisdictional wetlands and/or riparian habitats as defined by USACE, CDFW, and County: 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.
15. The Project would draw down the groundwater table to the detriment of groundwater-dependent habitat, typically a drop of three feet or more from historical low groundwater levels.

16. 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.
17. The Project does not include a wetland buffer adequate to protect the functions and values of existing wetlands.

Guideline Source

These guidelines are based on the County Guidelines for Determining Significance – Biological Resources (2010a).

Analysis

Vegetation Communities/Habitats (Guideline No. 13)

The Proposed Project would result in direct impacts to 164.9 acres of on-site vegetation communities, which include all areas occurring within Fuel Modification Zones 1 and 2 (Table 2.4-5, *Impacts to Habitat/Vegetation Communities*, and Figures 2.4-5a and 2.4-5b, *Vegetation and Sensitive Resources/Impacts*). Of that total impact, 64.9 acres is comprised of sensitive vegetation communities, including 0.17 acre of southern riparian forest, 0.04 acre of southern willow scrub, 0.01 acre of mule fat scrub, 0.02 acre of herbaceous wetland, 0.08 acre of disturbed wetland, 6.7 acres of coast live oak woodland, 1.0 acre of Diegan coastal sage scrub, 3.1 acres of southern mixed chaparral, and 53.8 acres of non-native grassland. **Impacts to these sensitive vegetation communities would be significant. (Impacts BI-3a through 3i)**

The Proposed Project also would impact non-sensitive vegetation communities on site, including non-native vegetation, orchard, intensive agriculture, extensive agriculture, disturbed habitat and developed land. **Impacts to these habitats would be less than significant.**

In addition, the Proposed Project would affect 1.5 acres off site to install required infrastructure. The off-site impacts are comprised entirely of disturbed and developed lands, including 0.1 acre of disturbed habitat 1.4 acres of developed land (Table 2.4-5 and Figures 2.4-5a and 2.4-5b). Off-site improvements would not impact sensitive vegetation communities. Accordingly, **off site impacts to vegetation communities would be less than significant.**

Jurisdictional Wetlands/Waters (Guideline No. 14)

The Proposed Project would impact 0.21 acre of WUS (wetlands and waters under the jurisdiction of the USACE), comprised of 0.02 acre of herbaceous wetland and 0.19 acre of non-wetland WUS (Table 2.4-6, *Impacts to Jurisdictional Wetlands and Waters*, and Figures 2.4-6a and 2.4-6b, *Waters of the U.S./Impacts*). **Impacts to these jurisdictional features would be significant. (Impact BI-4)**

The Proposed Project also would impact 0.92 acre of CDFW jurisdictional habitat comprised of 0.66 acre of wetland or riparian habitat (0.14 acre of southern riparian forest, 0.39 acre of coast

live oak woodland, 0.02 acre of southern willow scrub, 0.01 acre of mule fat scrub, 0.02 acre of herbaceous wetland, and 0.08 acre of disturbed wetland) and 0.26 acre of streambed (Table 2.4-6 and Figures 2.4-7a and 2.4-7b, *CDFW Jurisdictional Areas/Impacts*). **Impacts to these jurisdictional features would be significant. (Impact BI-5)**

The Proposed Project would impact 0.18 acre of County RPO wetlands comprised of 0.17 acre of southern riparian forest and 0.01 acre of mule fat scrub (Table 2.4-6 and Figures 2.4-8a and 2.4-8b, County of San Diego RPO Wetlands/Impacts). Impacts to these RPO wetlands would be significant. (Impact BI-6)

Proposed impacts to 0.18 acre of RPO wetlands would be consistent with the findings in RPO Section 86.604(a)(5) for the following reasons:

Impacts to 0.01 acre of RPO mule fat scrub adjacent to the northern edge of Mt. Whitney Road are unavoidable because improvements to this existing road are required for Project approval. There is no feasible alternative that avoids the mule fat scrub because of its location directly adjacent to the existing roadway. The road would be widened to County standards and all clearing and grading would be performed outside the avian breeding season. In addition, mitigation would occur at a minimum 3:1 ratio with a minimum 1:1 creation component.

- Impacts to 0.17 acre of RPO southern riparian forest in Neighborhood 3 would result from a necessary road crossing to access the Proposed Project site. This is a primary road access off of Eden Valley Lane that would enter into Neighborhood 3 and cross southern riparian forest to provide necessary ingress/egress for the site. No feasible alternative avoids the wetland due to site grading constraints. Alternate routes are infeasible due to a 50-foot elevation change between the southwestern corner of Neighborhood 3 and the southeastern corner of Neighborhood 2. This single crossing would be the minimum feasible for this area and would be mitigated at a minimum 3:1 ratio with a minimum 1:1 creation component. All clearing and grading would be performed outside the avian breeding season.

Groundwater Table (Guideline No. 15)

No groundwater withdrawals or activities that could result in lowering of the groundwater table are proposed. Groundwater would continue to be used for orchards remaining on site after Project development but would be substantially less than over the last two decades, as the amount of orchard would be reduced by over 60 percent. Furthermore, the Project would use recycled water for landscaping irrigation. Accordingly, **impacts would be less than significant.**

Indirect Impacts (Guideline No. 16)

The Proposed Project would not result in significant indirect impacts from the spread of non-native plant species during construction, as non-native species are already prevalent throughout the Project site, comprising 50 percent of the species observed on site. To avoid further impacts from plants installed as part of the Project, only non-invasive plant species would be included in the landscape plan for the site (species not listed on the California Invasive Plant Inventory

prepared by the Cal-IPC [2007]). Accordingly, **indirect impacts to sensitive vegetation communities would be less than significant.**

Wetland Buffer (Guideline No. 17)

The Proposed Project would provide minimum 50-foot-wide wetland buffers around all preserved wetlands on site. This buffer width is considered appropriate given the small amount of wetlands occurring on site, their scattered distribution, lack of connectivity to large areas of off-site open space, and negative survey findings for listed species. Accordingly, **related impacts would be less than significant.**

2.4.2.3 Federal Wetlands

Guidelines for the Determination of Significance

A significant impact to federal wetlands would occur if the Proposed Project would:

18. 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.

Guideline Source

These guidelines are based on the County Guidelines for Determining Significance – Biological Resources (2010a).

Analysis

As previously stated in Subsection 2.4.2.2, construction of the Proposed Project would result in impacts to 0.02 acre of herbaceous wetland WUS and 0.18 acre of non-wetland WUS (Table 2.4-6 and Figure 2.4-6a and 2.4-6b). **Impacts to these jurisdictional features would be significant. (Impact BI-4)**

2.4.2.4 Wildlife Movement and Nursery Sites

Guidelines for the Determination of Significance

A significant impact to wildlife movement or nursery sites would occur if the Proposed Project would:

19. Impede wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction.
20. Substantially interfere with connectivity between blocks of habitat, or would potentially block or substantially interfere with a local or regional wildlife corridor or linkage.

21. Create artificial wildlife corridors that do not follow natural movement patterns.
22. Increase noise and/or nighttime lighting in a wildlife corridor or linkage to levels proven to affect the behavior of the animals identified in a site-specific analysis of wildlife movement.
23. 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.
24. Not maintain adequate visual continuity (i.e., long lines-of-site) within wildlife corridors or linkages.

Guideline Source

These guidelines are based on the County Guidelines for Determining Significance – Biological Resources (2010a).

Analysis

Wildlife Access (Guideline No. 19)

The Proposed Project would impede wildlife access to on-site areas that may be used for foraging, breeding or obtaining water, however, these areas do not support critical populations of species and the Project would not impede access to areas necessary for such populations' reproduction. Furthermore, the Project site and off-site habitat are not within the future NCMSCP preserve area.

The Proposed Project site is situated at the western edge of existing development with little opportunity for wildlife movement to the east and north. The construction of the Harmony Grove Village development further limits wildlife connectivity to the south of the site. The only open space areas adjacent to the site are two small areas within Harmony Grove Village: (1) a 1.4-acre area of isolated open space along a small portion of the Project site's southern boundary, and (2) a 1.9-acre area of isolated open space south of Mt. Whitney Road and abutting the Project site's southwestern edge. Accordingly, wildlife movement within and adjacent to the Project site is primarily associated with connectivity to off-site habitat along the western site boundary from Mt. Whitney Road north, which abuts existing rural residential development interspersed with chaparral-covered hillsides. Although this off-site habitat is not within a PAMA, it provides habitat for wildlife and connectivity to conserved lands located further to the west, including several canyons that are likely to support areas for wildlife to obtain water, as well as areas suitable for foraging and breeding for deer and other wildlife.

The Proposed Project would preserve a block of approximately 48.6 acres in the northwestern corner of the site as a combination of 12.1 acres within a biological open space easement and 36.5 acres within an agricultural easement, connecting to off-site chaparral along approximately

2,900 linear feet of the western boundary from the site's northwestern corner to the edge of the fuel modification zone in Neighborhood 4 (Figure 2.4-9, *Biological Cumulative Study Area*). Biological open space easements in the other portions of the site would conserve 16.1 acres of habitat, consisting primarily of wetland, riparian, oak woodland and grassland habitats and avoid wetlands and wetland buffers. Preservation of these habitats would continue to provide foraging and breeding habitat for a variety of species on a total of 28.2 acres of biological open space. The Project would not alter existing access from the west of two riparian areas on site: one in preserved lands in the northernmost parcel within southern mixed chaparral and avocado groves, and the other within biological open space in Neighborhood 4.

The 48.6-acre block of land that consists of biological open space easement and an agricultural easement connects to off-site native habitat along approximately 2,900 linear feet of the western site boundary. The riparian area and adjacent preserved lands within Neighborhood 4 provide areas suitable for foraging and breeding, as well as providing a water source for wildlife. Project implementation would impede access to biological open space within Neighborhood 3 to the east of the open space in Neighborhood 4, mainly for mammal species; however, these areas would continue to provide foraging and breeding habitat for avian species and do not provide areas critical for mammal reproduction. Conserved lands associated with Mt. Whitney/Double Peak are located approximately one mile to the west of the Project site and portions of the Escondido Creek Resource Conservation Area are further to the southwest. The viability of these off-site conserved lands as habitat and movement corridors for wildlife would not be affected by the Project as they are part of larger, connected open space areas that do not extend across the Project site. Furthermore, the southernmost entrance road into Neighborhood 5 would include a con-span bridge measuring 20 feet wide by 6 feet high with an earthen bottom. This Project design feature would allow for local movement of aquatic and terrestrial species between the on-site and off-site open space and is of sufficient size for deer to pass through, thereby reducing the potential for road mortality to wildlife. Project implementation would retain adequate access to areas that may be used for foraging, breeding and water sources. Therefore, **impacts to wildlife access would be less than significant.**

Local and Regional Wildlife Corridors and Linkages (Guideline No. 20)

The Proposed Project site does not provide core wildlife habitat or linkage areas. As discussed above, the Project site is situated at the western edge of existing development with limited opportunity for wildlife movement to the east and north of the Project site. The construction of the Harmony Grove Village development further limits wildlife connectivity to the south of the Project site. Thus, the only area of substantial connectivity allowing local wildlife movement to off-site habitat is to the west of the site. The Project would conserve 48.6 acres of land in the northern portion of the site along approximately 2,900 linear feet of the site's western boundary as a combination of biological open space and agricultural easements, thus continuing to allow for wildlife to access the Project site from the west. However, there is no existing regional corridor that continues across the site from the west to off-site preserved habitat because of existing urban and residential development to the north, east and south of the Project site. The site does not provide connectivity between large blocks of habitat or interfere with a regional wildlife corridor or linkage, which is supported by the fact that the site is not identified as potential future PAMA in the draft NCMSCP. Conserved lands associated with

Mt. Whitney/Double Peak are located approximately one mile to the west and portions of the Escondido Creek Resource Conservation Area are further to the southwest. The viability of these off-site conserved lands as habitat and movement corridors for wildlife would not be affected by the Project as they are part of larger, connected open space areas that do not extend across the Project site. The Project site is used by a variety of wildlife species but does not support core or critical populations of any special status species, nor have any listed species or narrow endemic plant or animal species been observed on site. The Project site contains non-continuous riparian areas interspersed primarily with orchard and non-native grassland and does not provide core wildlife habitat or linkage areas. Accordingly, **impacts to core wildlife habitat and linkage areas would be less than significant.**

Artificial Wildlife Corridors (Guideline No. 21)

The Proposed Project would not create artificial wildlife corridors. Riparian habitats, which are often associated with local wildlife movement, would be largely conserved in on-site biological open space easements. However, these areas do not occur as continuous riparian corridors on site, but rather as clusters of riparian habitat interspersed with grassland, orchard, and other upland vegetation communities. Although site development would occur within these connecting upland areas and impede local wildlife movement, no artificial corridors that do not follow natural movement patterns would be created. Accordingly, **no impact would occur.**

Indirect Effects (Guideline No. 22)

As previously discussed, all proposed Project-related lighting would be required to adhere to Division 9 of the LPC. Lighting within the Project site adjacent to undeveloped habitat would be of the lowest illumination allowed for human safety, selectively placed, shielded and directed away from such habitat. In addition, the site is not part of a regional corridor or linkage, and as such, noise impacts resulting from the Project would not impact any regional corridors and linkages. Accordingly, **indirect impacts to wildlife corridors would be less than significant.**

Adequate Width (Guideline No. 23)

The Proposed Project would not reduce the width of an existing wildlife corridor or linkage, or further constrain an already narrow wildlife corridor. The Project site is not part of a local or regional wildlife corridor or linkage. Accordingly, **no impact to the widths of existing wildlife corridors would occur.**

Adequate Visual Continuity (Guideline No. 24)

The Proposed Project would not affect visual continuity within wildlife corridors or linkages, as none exist on or adjacent to the site. Accordingly, **no impact to the visual continuity within wildlife corridors linkages would occur.**

2.4.2.5 Local Policies, Ordinances and Adopted Plans

Guidelines for the Determination of Significance

A significant impact would occur if the Proposed Project would:

25. Impact coastal sage scrub vegetation within lands outside the MSCP in excess of the County's five-percent habitat loss threshold as defined by the Southern California Coastal Sage Scrub NCCP Guidelines.
26. Preclude or prevent the preparation of the subregional NCCP. (If, for example, the Project proposes development within areas that have been identified by the County or resource agencies as critical to future habitat preserves.)
27. Impact any amount of wetlands or sensitive habitat lands as outlined in the RPO.
28. Not minimize and/or mitigate coastal sage scrub habitat loss in accordance with Section 4.3 of the NCCP Guidelines.
29. Not conform to the goals and requirements as outlined in any applicable HCP, Resource Management Plan, Special Area Management Plan, Watershed Plan, or similar regional planning effort.
30. Not minimize impacts to BRCAs within lands in the MSCP, as defined in the Biological Mitigation Ordinance (BMO).
31. Preclude connectivity between areas of high habitat values, as defined by the Southern California Coastal Sage Scrub NCCP Guidelines.
32. Not maintain existing movement corridors and/or habitat linkages, as defined by the BMO.
33. Not avoid impacts to MSCP narrow endemic species and would impact core populations of narrow endemics.
34. Reduce the likelihood of survival and recovery of listed species in the wild.
35. Result in the killing of migratory birds or destruction of active migratory bird nests and/or eggs (MBTA).
36. Result in the take of eagles, eagle eggs or any part of an eagle (Bald and Golden Eagle Protection Act).

Guideline Source

These guidelines are based on the County Guidelines for Determining Significance – Biological Resources (2010a).

Analysis

HLP Ordinance and NCCP Goals and Requirements (Guideline Nos. 25, 26, 28 through 30)

The Proposed Project site falls within the North County Subarea of the MSCP, for which the County is currently processing a Subarea Plan. Since this regional planning document is not yet approved, NCCP compliance would be required for upland impacts. Therefore, pursuant to the 4(d) rule of the federal ESA, impacts to coastal sage scrub are limited to five percent of the total acreage occurring within the County, and require an HLP pursuant to the Habitat Loss Permit Ordinance. The Proposed Project would directly impact 0.9 of 1.8 acre (50 percent) of the Diegan coastal sage scrub on site. The remaining 0.9 acre is not considered biologically viable and would therefore be mitigated as well. The loss of 1.0 acre of sage scrub would not be in excess of the County's 5 percent habitat loss threshold, as defined by the Southern California Coastal Sage Scrub NCCP Guidelines. While the Proposed Project would remove coastal sage scrub habitat, implementation of mitigation for this impact would ensure that the Proposed Project would ultimately comply with the NCCP guidelines.

The Proposed Project would not preclude or prevent the preparation of the subregional NCCP as the Project does not propose development within areas that have been identified by the County or resource agencies as critical to future habitat preserves.

The Proposed Project site is outside of the adopted MSCP but is within the boundary of the Draft North County Subarea Plan. Accordingly, **Project impacts related to the NCCP would be less than significant.**

County Resource Protection Ordinance Wetlands (Guideline No. 27)

The Proposed Project would impact 0.18 acre of County RPO wetlands (refer to Subsection 2.4.2.2); however, no sensitive habitat lands, as defined by the County RPO, occur on site. Impacts to RPO wetlands would occur in two locations: (1) widening of Mt Whitney Road would impact 0.01 acre of mule fat scrub in Neighborhood 1, and (2) construction of a road crossing would impact 0.17 acre of southern riparian forest in Neighborhood 3. **Impacts to RPO wetlands would be significant. (Impact BI-6)**

Proposed impacts to 0.18 acre of RPO wetlands would, however, be consistent with the findings in RPO Section 86.604(a)(5), as discussed in Subsection 2.4.2.2 of this EIR.

Connectivity between Areas of High Habitat Values (Guideline No. 31)

The Proposed Project would not preclude connectivity between areas of high habitat values, as defined by the Southern California Coastal Sage Scrub NCCP Guidelines, as lands on and

adjacent to the Project site are identified as Developed and Agriculture on the County's Habitat Evaluation Map (2002). As such, **impacts would be less than significant.**

Maintenance of Existing Movement Corridors and Habitat Linkages (Guideline No. 32)

As discussed above, the Proposed Project site is not part of a regional wildlife corridor or linkage. The Project site is situated at the western edge of existing development with little opportunity for wildlife movement to the east and north due to urban sprawl within the cities of San Marcos and Escondido, and further impeded by SR-78 and Mission Road. The construction of the Harmony Grove development further limits wildlife connectivity to the south of the Project site. Although the Project site is used by a variety of wildlife species, it is not considered a regional corridor or linkage as connectivity to the north, south and east is limited and the site does not provide connection to open space areas in these areas. Wildlife movement within and onto the site is primarily associated with local populations of species from along the western site boundary from Mt. Whitney Road north, which abuts existing rural residential development interspersed with chaparral-covered hillsides. Chaparral habitat to the west of the Project site provides connectivity to PAMA lands further west (Mt. Whitney/Double Peak area), which is the main wildlife corridor in the Project vicinity. The Project would preserve the majority of riparian resources present on site and would preserve approximately 48.6 acres in the northwestern corner of the site as a combination of 12.1 acres of biological open space and 36.5 acres of agricultural open space, connecting to off-site chaparral along approximately 2,900 linear feet (Figures 2.4-10a and b, *Biological Open Space*). Although Project implementation would hinder large animal movement (e.g., deer) within the developed portions of the site, there is no existing corridor that continues across the site from the west to off-site preserved habitat in any direction. This Project site is not within a future PAMA and therefore, it would not be preserved under MSCP planning. Accordingly, **impacts to movement corridors or habitat linkages would be less than significant.**

Narrow Endemic Species (Guideline No. 33)

The Proposed Project is not located within the adopted MSCP Subarea Plan. Accordingly, **no impacts to MSCP narrow endemic species would occur.**

Survival and Recovery of Listed Species in the Wild (Guideline No. 34)

No listed species would be impacted by construction or operation of the Proposed Project. Accordingly, **no impact associated with the survival or recovery of listed species would occur.**

Migratory Bird Treaty Act (Guideline No. 35)

Construction of the Proposed Project could potentially result in the destruction of active migratory bird nests and/or eggs (per the MBTA). Breeding migratory birds may temporarily or permanently leave their territories to avoid construction and/or extraction operations, which could lead to reduced reproductive success and increased mortality. Accordingly, **a significant impact could occur associated with species covered by the MBTA. (Impact BI-7)**

Bald and Golden Eagle Protection Act (Guideline No. 36)

No eagles were observed during the biological surveys of the Proposed Project site. Accordingly, the Project would not result in the take of eagles, eagle eggs or any part of an eagle (per the Bald and Golden Eagle Protection Act), and the Project would be consistent with the Bald and Golden Eagle Protection Act. Accordingly, **no impact to eagles would result from the Project.**

2.4.3 Cumulative Impact Analysis

Guidelines for the Determination of Significance

A significant cumulative impact would occur if the Proposed Project would:

37. The potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal species.
38. Have impacts that are individually limited, but cumulatively considerable.

Guideline Source

These guidelines are based on the County Guidelines for Determining Significance – Biological Resources (2010a).

Analysis

Impacts that may not be considered significant on a project-specific level can become significant when viewed in the context of other losses in the vicinity of the Project site. When evaluating cumulative impacts, CEQA states that “lead agencies should define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used” (Section 15130[b][3]). The area of consideration for cumulative biological projects impacts was based on an approximately two-mile radius of the Project site (Figure 2.4-9), encompassing the foothills west and southwest of the Project site and extending south to the northern edge of Olivenhain Reservoir. The cumulative study area also extends slightly east of I-15 and north of SR-78. The cumulative study area was chosen because it includes areas with similar biological resources as the Project site, as well as capturing the watershed for the Project site, including urbanized areas draining to Escondido Creek upstream and downstream of the Project site. It also includes the nearest draft NCMSCP PAMA areas and wildlife corridor in the Mt. Whitney/Double Peak area connecting south to Escondido Creek. The area of consideration includes areas within a reasonable distance from the Project site that may have a biologically-based connection to the Project site in terms of habitat, connectivity and development in the watershed.

A total of 20 projects (including the Proposed Project) were reviewed for this cumulative analysis (Table 2.4-7, *Cumulative Impacts to Biological Resources*). Of these 20 cumulative projects, 7 would result in significant or potentially significant cumulative impacts to sensitive biological resources. The remaining 13 projects either would not result in impacts to sensitive biological resources or information on impacts is not available.

Cumulative Impacts to Sensitive Plants

The Proposed Project would not contribute to cumulative impacts to sensitive plant species as no sensitive plant species are present on the Project site.

Cumulative Impacts to Sensitive Wildlife

The cumulative projects with available data (including the Proposed Project) would impact 218.8 acres of raptor foraging habitat, as well as habitat for grasshopper sparrow. Cumulative impacts to raptors and grasshopper sparrow would be significant since the cumulative projects would further reduce the amount of foraging habitat available for these species. (Impact BI-8)

The Proposed Project would result in impacts to raptor foraging habitat and habitat for grasshopper sparrow comprised of 53.8 acres of non-native grassland and 20.5 acres of extensive agriculture (pasture/field). Therefore, the Proposed Project would contribute to significant cumulative impacts to raptors and grasshopper sparrow. However, surpassing the ratio required by County guidelines, the Proposed Project would double the required non-native grassland mitigation for these impacts to 1:1 through the purchase of credits and/or off-site preservation of 53.1 acres of non-native grassland/raptor foraging habitat for impacts to non-native grassland (0.7 acre of the grassland impact is mitigated with oak woodland root zone impacts at a higher ratio). An additional 10.3 acres of off-site preservation and/or purchase of credits would be purchased for impacts to extensive agricultural habitat. Accordingly, the Proposed Project's cumulative impacts to grasshopper sparrow and raptor foraging habitat would be fully mitigated through preservation/acquisition of appropriate habitat off site. Although a significant impact to sensitive wildlife habitat would occur and the Proposed Project would contribute to these significant impacts, such impacts would be mitigated. Accordingly, **the Proposed Project's contribution to cumulative impacts to sensitive wildlife would be mitigated to less than significant.**

Cumulative Impacts to Riparian and Sensitive Habitats

The cumulative projects with available data (including the Proposed Project) would result in impacts to 7.13 acres of wetland/riparian habitats, 13.64 acres of coast live oak woodland, 95.85 acres of coastal sage scrub, 7.17 acres of southern mixed chaparral and 216.5 acres of non-native grassland. Cumulative impacts to sensitive habitats would be significant.

The Proposed Project's impacts to wetland/riparian habitat and sensitive upland communities, while significant, would be mitigable as the Proposed Project would provide mitigation for these impacts in accordance with County and regulatory agency guidelines. Impacts to wetland/riparian habitat and sensitive upland communities would be fully mitigated at

County-approved ratios through off-site preservation and/or purchase of credits as an approved mitigation bank, thus providing long-term conservation value. The County approved mitigation ratios are standardized and not dependent upon the quality of habitat. Rather, the mitigation ratios recognize the regional importance of the habitat, the overall rarity of the habitat, and the number and variety of species it supports. Mitigation for habitat loss is required to compensate for direct impacts as well as cumulative loss of habitat. As the Project would be in conformance with County guidelines and mitigation ratios, **the Proposed Project's contribution to cumulative impacts to sensitive vegetation communities is not considerable.**

Cumulative Impacts to Jurisdictional Areas

The cumulative projects with available data (including the Proposed Project) would result in impacts to 7.13 acres of wetland/riparian habitats, including USACE jurisdictional areas. The Proposed Project's impacts to 0.20 acre of USACE jurisdictional areas comprised of 0.02 acre of herbaceous wetland and 0.18 acre of non-wetland waters, while significant at the project level would be fully mitigated by off-site establishment and rehabilitation of wetlands/WUS. Mitigation would conform to the USACE's no net loss policy; thus, **no cumulative impacts to jurisdictional areas would occur.**

Cumulative Impacts to Wildlife Movement and Nursery Sites

The majority of the projects is located in existing urbanized areas of San Marcos, Escondido, and unincorporated County, or is located on the fringes of urbanization. None of the cumulative projects would impede a wildlife corridor or affect the assembly of preserve areas under the Draft NCMSCP. A few of the cumulative projects to the south and east of the Proposed Project site are located near Escondido Creek, but would not further constrain the creek. **No cumulative impacts would occur** to wildlife movement or nursery sites.

Cumulative Impacts to Local Policies, Ordinances and Adopted Plans

Each of the applicable cumulative projects listed in Table 2.4-7 would be required to conform to County Guidelines, and would provide mitigation, as appropriate, to reduce and/or minimize impacts. The Proposed Project conforms with the RPO, including allowed exceptions for limited impacts. Conformance would be required for the other cumulative projects in order to obtain a recommendation for approval. Accordingly, **no cumulative impacts would occur associated with local policies, ordinances and adopted plans.**

2.4.4 Significance of Impacts Prior to Mitigation

The following significant impacts related to biological resources would occur with Project implementation:

- Impact BI-1a Construction of the Proposed Project would significantly impact 53.8 acres of non-native grassland and 20.5 acres of extensive agriculture (pasture), which comprise habitat for seven County Group 1 animal species observed on site,

- including Cooper's hawk, red-shouldered hawk, northern harrier, white-tailed kite, turkey vulture, prairie falcon, and grasshopper sparrow.
- Impact BI-1b Construction of the Proposed Project would significantly impact raptor foraging habitat comprising 53.8 acres of non-native grassland and 20.5 acres of extensive agriculture (pasture).
- Impact BI-2 Construction-related noise may significantly impact tree- and/or ground-nesting raptors that may be nesting within 300 feet of the construction area if construction noise at the nest exceeds 60 dBA L_{EQ} .
- Impact BI-3a Construction of the Proposed Project would result in significant direct impacts to 0.17 acre of southern riparian forest.
- Impact BI-3b Construction of the Proposed Project would result in significant direct impacts to 0.04 acre of southern willow scrub.
- Impact BI-3c Construction of the Proposed Project would result in significant direct impacts to 0.01 acre of mule fat scrub.
- Impact BI-3d Construction of the Proposed Project would result in significant direct impacts to 0.02 acre of herbaceous wetland.
- Impact BI-3e Construction of the Proposed Project would result in significant direct impacts to 0.08 acre of disturbed wetland.
- Impact BI-3f Construction of the Proposed Project would result in significant direct impacts to 6.7 acres of coast live oak woodland.
- Impact BI-3g Construction of the Proposed Project would result in significant direct impacts to 1.0 acre of isolated Diegan coastal sage scrub and significant indirect impacts to 0.8 acre of Diegan coastal sage scrub.
- Impact BI-3h Construction of the Proposed Project would result in significant direct impacts to 3.1 acres of granitic southern mixed chaparral.
- Impact BI-3i Construction of the Proposed Project would result in significant direct impacts to 53.8 acres of non-native grassland.
- Impact BI-4 Implementation of the Proposed Project would impact 0.02 acre of herbaceous wetland WUS and 0.19 acre of non-wetland WUS regulated by the USACE.
- Impact BI-5 Implementation of the Proposed Project would impact a total of 0.92 acre of CDFW jurisdiction, comprised of 0.66 acre of vegetated habitat (0.14 acre of southern riparian forest, 0.39 acre of coast live oak woodland, 0.02 acre of southern willow scrub, 0.01 acre of mule fat scrub, 0.02 acre of herbaceous wetland, and 0.08 acre of disturbed wetland) and 0.26 acre of streambed.

- Impact BI-6 Implementation of the Proposed Project would impact 0.18 acre of County RPO wetlands comprised of 0.17 acre of southern riparian forest and 0.01 acre of mule fat scrub.
- Impact BI-7 Breeding migratory birds may temporarily or permanently leave their territories to avoid construction and/or extraction operations, which could lead to reduced reproductive success and increased mortality.
- Impact BI-8 The Proposed Project would contribute to cumulative impacts to sensitive wildlife that use the grassland and pasture, including grasshopper sparrows and raptors.

2.4.5 Mitigation

Mitigation is identified for each of the significant impacts identified above. Table 2.4-8, *Mitigation for Impacts to Habitat/Vegetation Communities*, summarizes the amount of habitat impacted on and off the Proposed Project site, as well as the amount of required mitigation. Figure 2.4-10 shows the proposed open space easement areas for the Project site. Open space easements are protected by limited building zone (LBZ) easements to avoid potential fuel management impacts in the open space areas. The mitigation measures listed below would reduce Project impacts to biological resources to less than significant.

M-BI-1a and b

Mitigation for impacts to non-native grassland habitat (typically a 0.5:1 ratio) must include direct and cumulative impacts to sensitive species (grasshopper sparrow and raptors) which increases the mitigation ratio to 1:1, for a mitigation requirement of 53.1 acres.¹ Mitigation for impacts to extensive agriculture, which provides more limited habitat value to species, will occur at the base ratio of 0.5:1, for a mitigation requirement of 10.3 acres. Mitigation for impacts to raptor foraging habitat and grasshopper sparrow habitat would occur through one or a combination of the following: off-site preservation of grassland habitat and/or other like-functioning habitat within the NCMSCP PAMA boundaries, or purchase of grassland credits or like-functioning habitat at an approved mitigation bank such as the future Brook Forest Conservation Bank or other location deemed acceptable by the County and Wildlife Agencies. The 0.6 acre of mitigation for non-native grassland and 10.3 acres of mitigation for extensive agriculture within the Elfin Forest Harmony Grove Community Plan (EFHGCP) shall demonstrate conformance with the EFHGCP to the satisfaction of the Director of PDS.

- M-BI-2 No grubbing, clearing or grading within 300 feet of an active raptor nest during the raptor breeding season (February 1 through July 15) will occur. All grading permits, improvement plans and the final map will include such statement. If grubbing, clearing or grading is proposed during the raptor breeding season, a pre-grading

¹ 53.1 acres of grassland mitigation would be provided for impacts to 53.8 acres of non-native grassland. The remaining 0.7 acre would be mitigated through oak woodland mitigation, as impacts to 0.7 acre of non-native grassland occur within the oak root zone as defined by the County and are considered impacts to oak woodland.

- survey will be conducted within three days prior to clearing to determine if raptors occur within the areas directly impacted by grading or indirectly impacted by noise. If there are no raptors nesting (includes nest building or other breeding/nesting behavior) within this area, development will be allowed to proceed upon approval of the Director of PDS with concurrence from USFWS and CDFW. However, if raptors are observed nesting or displaying breeding/nesting behavior within the area, construction will be postponed until (1) all nesting (or breeding/nesting behavior) has ceased or until after July 15; or (2) a temporary noise barrier or berm is constructed at the edge of the development footprint to reduce noise levels below 60 dB L_{EQ} or ambient (if ambient is greater than 60 dB L_{EQ}), to the satisfaction of the Director of PDS with concurrence from USFWS and CDFW. Alternatively, if approved by the Director of PDS with concurrence from USFWS and CDFW, the duration of construction equipment operation could be controlled to keep noise levels below 60 dB L_{EQ} or ambient (if ambient is greater than 60 dB L_{EQ}) in lieu of or in concert with a wall or other sound attenuation barrier.
- M-BI-3a Impacts to 0.17 acre of southern riparian forest will be mitigated at a 3:1 ratio through the purchase of 0.51 acre of wetland credits at the San Luis Rey Mitigation Bank, or other location deemed acceptable by the County and Regulatory Agencies.
- M-BI-3b Impacts to 0.04 acre of southern willow scrub will be mitigated at a 3:1 ratio through the purchase of 0.12 acre of wetland credits at the San Luis Rey Mitigation Bank, or other location deemed acceptable by the County and Regulatory Agencies.
- M-BI-3c Impacts to 0.01 acre of mule fat scrub will be mitigated at a 3:1 ratio through the purchase of 0.03 acre of wetland credits at the San Luis Rey Mitigation Bank, or other location deemed acceptable by the County and Regulatory Agencies.
- M-BI-3d Impacts to 0.02 acre of herbaceous wetland will be mitigated at a 3:1 ratio through the purchase of 0.06 acre of wetland credits at the San Luis Rey Mitigation Bank, or other location deemed acceptable by the County and Regulatory Agencies.
- M-BI-3e Impacts to 0.08 acre of disturbed wetland will be mitigated at a 3:1 ratio through the purchase of 0.24 acre of wetland credits at the San Luis Rey Mitigation Bank, or other location deemed acceptable by the County and Regulatory Agencies.
- M-BI-3f Impacts to 6.7 acres of coast live oak woodland and 0.9 acre of oak woodland buffer (consisting of 0.7 acre non-native grassland and 0.2 acre of eucalyptus woodland) will be mitigated at a 2:1 ratio for the 2.4 acres occurring within the LBZ around biological open space, and at a 3:1 ratio for the remaining 4.3 acres of impact and 0.9 acre of buffer impact. A 2.4-acre Oak Tree Protection Easement would be recorded over the 2.4 acres of coast live oak woodland remaining within the LBZ, which would limit fuel modification to clearing of the understory and prohibit the removal of mature oak trees. Mitigation would be accomplished through the purchase of 20.4 acres of oak woodland, oak riparian woodland, or oak riparian forest credits at an approved mitigation bank such as the future Brook Forest Conservation

- Bank or other location deemed acceptable by the County and Wildlife Agencies. The 9.8 acres of mitigation for oak woodland within the EFHGCP shall demonstrate conformance with the EFHGCP to the satisfaction of the Director of PDS.
- M-BI-3g Direct impacts to 1.0 acre of Diegan coastal sage scrub and indirect impacts to 0.8 acre of Diegan coastal sage scrub will be mitigated at a 2:1 ratio through the purchase of 3.6 acres of coastal sage scrub credits at an approved mitigation bank such as the future Brook Forest Conservation Bank or other location deemed acceptable by the County and Wildlife Agencies; and/or off-site acquisition and preservation of land within the NCMSCP PAMA boundaries containing Diegan coastal sage scrub. The 0.2 acre of mitigation for coastal sage scrub within the EFHGCP shall demonstrate conformance with the EFHGCP to the satisfaction of the Director of PDS.
- M-BI-3h Impacts to 3.1 acres of granitic southern mixed chaparral will be mitigated at a 0.5:1 ratio through one or a combination of the following: the purchase of 1.6 acres of chaparral credits at an approved mitigation bank such as the future Brook Forest Conservation Bank or other location deemed acceptable by the County and Wildlife Agencies; or off-site acquisition and preservation of land within the NCMSCP PAMA boundaries containing southern mixed chaparral.
- M-BI-3i Impacts to 53.8 acres of non-native grassland will be mitigated at a 1:1 ratio through one or a combination of the following: off-site preservation of 53.1 acres² of grassland habitat and/or other like-functioning habitat within the NCMSCP PAMA boundaries, or purchase of 53.1 acres of grassland credits at an approved mitigation bank such as the future Brook Forest Conservation Bank or other location deemed acceptable by the County and Wildlife Agencies. Impacts to 20.5 acres of extensive agriculture will be mitigated at the base ratio of 0.5:1, for a mitigation requirement of 10.3 acres through one or a combination of the following: off-site preservation of 10.3 acres of pasture or grassland habitat and/or other like-functioning habitat within the NCMSCP PAMA boundaries, or purchase of 10.3 acres of grassland credits at an approved mitigation bank such as the future Brook Forest Conservation Bank or other location deemed acceptable by the County and Wildlife Agencies. The 0.6 acre of mitigation for non-native grassland and 10.3 acres of mitigation for extensive agriculture within the EFHGCP shall demonstrate conformance with the EFHGCP to the satisfaction of the Director of PDS.
- M-BI-4 Impacts to 0.02 acre of USACE herbaceous wetland will be mitigated at a 3:1 ratio as described in Mitigation Measure M-BI-3d, above. Impacts to 0.19 acre of non-wetland WUS will be mitigated by purchase of 0.19 credits at the San Luis Rey Mitigation Bank, or other location deemed acceptable by the County and Regulatory Agencies. All mitigation for WUS will occur in consultation with the USACE.

² 53.1 acres of grassland mitigation would be provided for impacts to 53.8 acres of non-native grassland. The remaining 0.7 acre would be mitigated through oak woodland mitigation, as impacts to 0.7 acre of non-native grassland occur within the oak root zone as defined by the County and are considered impacts to oak woodland.

M-BI-5 Impacts to 0.66 acre of vegetated CDFW jurisdictional habitat would be mitigated by the implementation of the above Mitigation Measures M-BI-3a (southern riparian forest), M-BI-3b (southern willow scrub), M-BI-3c (mule fat scrub), M-BI-3d (herbaceous wetland), M-BI-3e (disturbed wetland) and M-BI-3f (coast live oak woodland).

Impacts to 0.26 acre of CDFW streambed would be mitigated by the implementation of Mitigation Measure M-BI-4, above, plus purchase of an additional 0.07-acre credit at the San Luis Rey Mitigation Bank, or other location deemed acceptable by the County and Regulatory Agencies.

M-BI-6 Impacts to 0.18 acre of County RPO wetlands would be mitigated by the implementation of Mitigation Measures M-BI-3a and M-BI-3c, above.

M-BI-7 In order to ensure compliance with the MBTA, grading and clearing of vegetation will occur outside of the breeding season of most avian species (February 1 through September 1). Grading or clearing during the breeding season of MBTA-covered species could occur with PDS approval and wildlife agency concurrence if it is determined that no nesting birds (or birds displaying breeding or nesting behavior) are present immediately prior to clearing and grading. A pre-construction survey will be conducted within seven days prior to clearing and grading activities to determine if breeding or nesting avian species occur within impact areas.

M-BI-8 Impacts would be mitigated with M-BI-3i and M-BI-1a and b. Mitigation for impacts will provide a higher mitigation ratio and better habitat value to species.

2.4.6 Conclusion

The implementation of the mitigation measures listed above would reduce all impacts to biological resources to less than significant levels. Construction of the Proposed Project would directly and cumulatively impact habitat for seven County Group 1 animal species (Impact BI-1a), which also results in significant impacts to foraging habitat for raptors (Impact BI-1b). These impacts would be mitigated to less than significant by off-site preservation of (1) non-native grassland habitat and/or other like-functioning habitat, and (2) grassland, extensive agricultural lands and/or other like-functioning habitat lands approved by the County (M-BI-1a and 1b, M-BI-8). The specified habitat mitigation ratios take into consideration the importance of preserving areas necessary to ensure the continued survival of the more sensitive raptors and the grasshopper sparrow. The habitat preservation ratio is effective because through retention of sustainable habitat, sensitive species can continue to thrive. The mitigation would preserve species habitat and foraging grounds, and thus, help ensure survival of these species within the Project site (open space) and within the County. The mitigation ratios utilized for impacts to these species' habitats were developed based upon NCCP Guidelines (CDFW and California Resources Agency 1997) intended to accomplish preservation of sensitive species, and the wildlife agencies have reviewed and approved these mitigation ratios.

The Proposed Project could result in construction-related noise that may significantly impact nesting raptors that may be nesting within 300 feet of the construction area if construction noise at the nest exceeds 60 dB L_{EQ} (Impact BI-2). This impact would be mitigated to less than significant by not allowing grubbing, clearing or grading within 300 feet of an active raptor nest during the raptor breeding season (February 1 through July 15), unless approved by the Director of PDS with concurrence from USFWS and CDFW (M-BI-2). Nesting raptors would be protected from disturbance associated with movement and noise from construction activities during the breeding season due to the required 300-foot distance between construction activities and active nests, a distance determined by the wildlife agencies to adequately attenuate the disturbance. Because the daily activities of this species would not be disrupted, breeding and nesting activities would continue within proposed on-site open space, thus helping to ensure the survival of this species.

Construction of the Proposed Project would result in significant direct impacts to southern riparian forest, southern willow scrub, mule fat scrub, herbaceous wetland, disturbed wetland, coast live oak woodland, Diegan coastal sage scrub, granitic southern mixed chaparral and non-native grassland (Impacts BI-3a through BI-3i). Impacts would be mitigated to less than significant through (1) off-site establishment, rehabilitation and/or preservation or (2) purchase of credits at an approved mitigation bank (M-BI-3a through M-BI-3i). Implementation of these mitigation measures would avoid or substantially reduce the significant effects because the mitigation ratios for impacts to these habitats were developed based on NCCP Guidelines (CDFW and California Resources Agency 1997), and the wildlife agencies have reviewed and approved these mitigation ratios. Additionally, these standard ratios have been applied to projects within the County since DPS developed its first Biological Report Guidelines in the mid-1990s (adopted by the Board of Supervisors). The ratio is identified as effective because these reviewing agencies have reached consensus that retention at these ratios will result in sustainable levels of these habitats.

The Proposed Project would result in impacts to USACE, CDFW and County RPO wetlands/waters (Impacts BI-4 through BI-6). Impacts would be mitigated to less than significant through (1) off-site establishment, rehabilitation and preservation (M-BI-4 through M-BI-6). Implementation of these mitigation measures would fully mitigate impacts to these jurisdictional areas, because the typical mitigation ratio for impacts to wetlands is 3:1 (with a minimum 1:1 creation ratio thereby replacing the values of the impacted wetland) and the mitigation ratio for Waters of the U.S./streambed is 1:1, which is a ratio the resource agencies reviewed and approved. Federal, State, and County policies require that projects have a no net loss of wetlands. Because the Proposed Project would mitigate its impacts to wetlands at a 3:1 ratio, including a minimum 1:1 creation ratio and 2:1 rehabilitation/preservation ratio, no net loss of wetland habitat would occur. Rehabilitation of wetland habitat would fully mitigate impacts to Waters of the U.S./streambed because it would benefit both native plant species and animal species that utilize the drainage, and would not alter of the function of the wetlands.

Grading and clearing of vegetation associated with construction of the Proposed Project could cause breeding migratory birds to temporarily or permanently leave their territories, which could lead to reduced reproductive success and increased mortality (Impact BI-7). Impacts would be mitigated to less than significant by not allowing grading or clearing of vegetation during the

breeding season of most avian species (February 1 through September 1) without PDS approval and wildlife agency concurrence. Nesting migratory bird species would be protected from disturbance associated with movement and noise from construction activities during the breeding season due to cessation of grading or construction activities. Because the daily activities of these species would not be disrupted, breeding and nesting activities would continue within proposed on-site open space, thus helping to ensure the survival of these species.

Vegetation Community¹	Acreage²
Southern riparian forest (61300)	2.50
Southern riparian woodland – including disturbed (62000)	0.29
Southern willow scrub (63320)	0.15
Mule fat scrub (63310)	0.02
Freshwater marsh (52400)	0.12
Herbaceous wetland (52510)	0.35
Disturbed wetland (11200)	0.13
Open water/pond (64140)	0.51
Tamarisk scrub (63810)	0.04
Coast live oak woodland – including disturbed (71160)	11.7
Diegan coastal sage scrub – including disturbed (32500)	1.8
Southern mixed chaparral – including disturbed (37121)	8.0
Eucalyptus forest (79100)	7.2
Eucalyptus woodland (79100)	3.5
Non-native grassland (42200)	63.9
Non-native vegetation (11000)	1.5
Orchard (18100)	100.2
Intensive agriculture (18200)	8.8
Extensive agriculture (18300)	21.3
Disturbed habitat (11300)	2.4
Developed land (12000)	4.1
TOTAL	238.8

Source: HELIX 2015d

¹ Vegetation categories and numerical codes are from Holland (1986) and Oberbauer (2008).

² Upland habitats are rounded to the nearest 0.1 acre, while wetland habitats are rounded to the nearest 0.01 acre; thus, the total reflects rounding.

Habitat	Acreage¹
Wetlands	
Freshwater marsh	0.12
Herbaceous wetland	0.33
Subtotal	0.45
Non-wetland WUS	
Open water/pond	0.51
Non-wetland WUS/streambed	0.68
Subtotal	1.18
TOTAL	1.64

Source: HELIX 2015d

¹ Rounded to nearest 0.01 acre.

Table 2.4-3 EXISTING ON-SITE CDFW JURISDICTIONAL AREAS	
Habitat	Acreage¹
Coast live oak woodland	2.05
Disturbed wetland	0.13
Freshwater marsh	0.12
Herbaceous wetland	0.41
Mule fat scrub	0.02
Open water/pond	0.51
Southern riparian forest	2.50
Southern riparian woodland	0.29
Southern willow scrub	0.13
Streambed	0.89
TOTAL	7.05

Source: HELIX 2015d

¹ Rounded to nearest 0.01 acre.

Table 2.4-4 EXISTING ON-SITE RPO WETLANDS	
Habitat	Acreage¹
Freshwater marsh	0.12
Herbaceous wetland	0.39
Mule fat scrub	0.02
Open water/pond	0.51
Southern riparian forest	2.50
Southern riparian woodland	0.29
Southern willow scrub	0.11
Disturbed wetland	0.05
TOTAL	3.99

Source: HELIX 2015d

¹ Rounded to nearest 0.01 acre.

Vegetation Community ¹	Impacts (acres) ²		
	On Site	Off Site	Total
Southern riparian forest (61300)	0.17	--	0.17
Southern riparian woodland – including disturbed (62000)	0.00	--	0.00
Southern willow scrub (63320)	0.04	--	0.04
Mule fat scrub (63310)	0.00	--	0.00
Freshwater marsh (63310)	0.00	--	0.00
Herbaceous wetland (52510)	0.02	--	0.02
Disturbed wetland (11200)	0.08	--	0.08
Tamarisk scrub (63810)	0.04	--	0.04
Coast live oak woodland – including disturbed (71160)	6.7 ³	--	6.7
Diegan coastal sage scrub – including disturbed (32500)	1.0	--	1.0
Southern mixed chaparral – including disturbed (37121)	3.1	--	3.1
Eucalyptus forest (79100)	4.6	--	4.6
Eucalyptus woodland (79100)	1.4	--	1.4
Non-native grassland (42200)	53.8	--	53.8
Non-native vegetation (11000)	1.0	--	1.0
Orchard (18100)	60.6	--	60.6
Intensive agriculture (18200)	6.9	--	6.9
Extensive agriculture (18300)	20.5	--	20.5
Disturbed habitat (11300)	2.1	--	2.1
Developed land (12000)	2.9	1.4	4.3
TOTAL	164.9	1.5	166.4

Source: HELIX 2015d

¹ Vegetation categories and numerical codes are from Holland (1986) and Oberbauer (2008).

² All areas within Fuel Modification Zones 1 and 2 are included as impacts. Upland habitats are rounded to the nearest 0.1 acre and wetland habitats to the nearest 0.01 acre; thus, totals reflect rounding.

³ Direct development impacts to coast live oak woodland comprise 2.4 acres; the remaining 4.3 acres of impact are within FMZs. Of the 4.3 acres within the FMZs, 2.4 acres of coast live oak woodland are within the LBZ around the Biological Open Space and would be placed within an Oak Tree Protection Easement that limits fire clearing to the understory and prohibits removal of mature oak trees.

Table 2.4-6 IMPACTS TO JURISDICTIONAL WETLANDS AND WATERS			
Habitat	Impacts (acres)¹		
	Waters of the U.S. (USACE)	CDFW	County RPO Wetlands
Wetlands/Riparian			
Southern riparian forest	--	0.14	0.17
Southern riparian woodland	--	--	--
Coast live oak woodland	--	0.39	--
Southern willow scrub	--	0.02	--
Mule fat scrub	--	0.01	0.01
Freshwater marsh	--	--	--
Herbaceous wetland	0.02	0.02	--
Disturbed wetland	--	0.08	--
Subtotal	0.02	0.66	0.17
Non-wetland Waters			
Non-wetland WUS/streambed	0.19	0.26	--
Open water/pond	--	--	--
Subtotal	0.19	0.26	--
TOTAL	0.21	0.92	0.18

Source: HELIX 2015d

¹ Habitat impacts are rounded to the nearest 0.01 acre.

Table 2.4-7 CUMULATIVE IMPACTS TO BIOLOGICAL RESOURCES												
Map Key No. ¹	Project Numbers Issued by Agency	Project Name	Biological Resources									
			Riparian/Wetland		Coast Live Oak Woodland		Coastal Sage Scrub		Southern Mixed Chaparral		Non-native Grassland	
			Impacts	Mitigation	Impacts	Mitigation	Impacts	Mitigation	Impacts	Mitigation	Impacts	Mitigation
COUNTY OF SAN DIEGO												
13	GPA 04-007 REZ 04-014 TM 5382	Montiel Heights/ Montiel Road Townhomes	0	0	0	0	0	0	0	0	0	0
15	SP 04-003 GPA 04-004 REZ 04-010 VTM 5365 MUP 04-012 MUP 04-013 MUP 04-014	Harmony Grove Village	3.96	6.80	5.8	17.4	37.6	68.6	3.7	1.9	37.7	18.9
CITY OF SAN MARCOS												
42	--	Marketplace @ Twin Oaks	--	--	--	--	--	--	--	--	--	--
43	ND 12-822	Citywide Channel Maintenance Programmatic Permit	0.71	1.28	0	0	0	0	0	0	0	0
44	MF 1785 TSM 479 MFSCDP 10-51 R 10-146 GV 10-85 CUP 10-835 ND 10-806	Candera	--	--	--	--	--	--	--	--	--	--
45	MF 1392 EIR 03-39	University District Specific Plan	--	--	--	--	--	--	--	--	--	--

**Table 2.4-7 (cont.)
CUMULATIVE IMPACTS TO BIOLOGICAL RESOURCES**

Map Key No. ¹	Project Numbers Issued by Agency	Project Name	Biological Resources									
			Riparian/Wetland		Coast Live Oak Woodland		Coastal Sage Scrub		Southern Mixed Chaparral		Non-native Grassland	
			Impacts	Mitigation	Impacts	Mitigation	Impacts	Mitigation	Impacts	Mitigation	Impacts	Mitigation
CITY OF SAN MARCOS (cont.)												
48	SCH 92011057	Kaiser Medical Office Building	--	--	--	--	--	--	--	--	--	--
49	--	Leigh Hanson Site	--	--	--	--	--	--	--	--	--	--
50	--	Campus Pointe II	--	--	--	--	--	--	--	--	--	--
51	MND 12-820 CUP 12-894	Rancho Coronado Phase I School Site	0.35	0.70	0	0	0.25	--	0.47	--	0	0
CITY OF ESCONDIDO												
54	SUB 09-0002	Kenny Ray Harmony Grove	--	--	--	--	--	--	--	--	--	--
55	ER 2000-34	Harmony Grove Industrial Park	--	--	--	--	--	--	--	--	--	--
56	PHG 11-0038	Hale Avenue Resource Recovery Facility (HARRF) Administration Building	0	0	0	0	0	0	0	0	0	0
57	ER-2006-10	Citracado Parkway Extension	0.71	2.13	0.94	1.7	0.6	0.6	0	0	6.4	4.2
58	File No. 0800-40 PHG 10-0014	Escondido Asphalt Plant Expansion	0	0	0	0	0	0	0	0	0	0
60	2007-25-PD 2005-20-PD	The Point	0	0	0	0	0	0	0	0	0	0
61	2007-18-PD ER 86-43	Springhill Suites by Marriott	0	0	0	0	0	0	0	0	0	0

**Table 2.4-7 (cont.)
CUMULATIVE IMPACTS TO BIOLOGICAL RESOURCES**

Map Key No. ¹	Project Numbers Issued by Agency	Project Name	Biological Resources									
			Riparian/Wetland		Coast Live Oak Woodland		Coastal Sage Scrub		Southern Mixed Chaparral		Non-native Grassland	
			Impacts	Mitigation	Impacts	Mitigation	Impacts	Mitigation	Impacts	Mitigation	Impacts	Mitigation
ESCONDIDO UNION HIGH SCHOOL DISTRICT												
63	ADM 10-0001 SCH No. 2009081074	Citracado High School/Del Lago Academy	0	0	0	0	8.1	8.1	0	0	18.1	--
PALOMAR POMERADO HEALTHCARE DISTRICT												
64	2001-01-SPA 2005-81-SPA/DA PHG 11-0034 SCH No. 200112106	Escondido Research & Technology Center (ERTC)	1.02	3.06	1.2	3.6	48.4	96.8	0	0	102.8	62.4
RINCON DEL DIABLO MUNICIPAL WATER DISTRICT												
66	NA	Water Master Plan Update – 2014 Capital Improvement Program	--	--	--	--	--	--	--	--	--	--
Subtotal			6.75	13.97	7.94	22.7	94.95	174.1	4.17	1.9	165.0	85.5
-	SP-13-001 GPA 13-001 STP 13-003 TM 5575 REZ 13-001	Valiano (Proposed Project)	0.32	0.96	6.7	20.4	1.0	3.6	3.1	1.6	53.8	53.1
TOTAL			7.07	14.93	14.6	43.1	96.0	177.7	7.3	3.5	218.8	138.6

Source: HELIX 2015d

¹ Refer to Figure 1-34 of this EIR.

-- = information not available

**Table 2.4-8
MITIGATION FOR IMPACTS TO HABITAT/VEGETATION COMMUNITIES**

Vegetation Community/Habitat ¹	Tier	Existing Acreage ²	Impacts (acres) ²		Mitigation Ratio	Mitigation (acres) ²			
			On Site	Off Site		Required	Preserved On Site ³	Impact Neutral ⁴	Off-site Mitigation
Southern riparian forest (61300)	I	2.50	0.17	--	3:1	0.51	2.33	2.33	0.51
Southern riparian woodland – including disturbed (62000)	I	0.29	0.00	--	--	--	0.27	0.29	--
Southern willow scrub (63320)	I	0.15	0.04	--	3:1	0.12	0.11	0.11	0.12
Mule fat scrub (63310)	I	0.02	0.01	--	3:1	0.03	0.01	0.01	0.03
Freshwater marsh (52400)	I	0.12	0.00	--	3:1	--	0.12	0.12	--
Herbaceous wetland (52510)	I	0.35	0.02	--	3:1	0.06	0.33	0.33	0.06
Disturbed wetland (11200)	I	0.13	0.08	--	3:1	0.24	0.05	0.05	0.24
Open water/pond (64140)	--	0.51	0.00	--	--	--	0.17	0.51	--
Tamarisk scrub (63810)	--	0.04	0.04	--	--	--	--	--	--
Coast live oak woodland – including disturbed (71160)	I	11.7	6.7	--	2:1 to 3:1 ⁵	20.4 ⁶	4.2	3.3	20.4
Diegan coastal sage scrub – including disturbed (32500)	II	1.8	1.0	--	2:1	3.6 ⁷	0.7	0.6	3.6
Southern mixed chaparral – including disturbed (37121)	III	3.8	3.1	--	0.5:1	1.6	0.6	0.6	1.6
Eucalyptus forest (79100)	--	7.2	4.6	--	--	--	2.1	--	--
Eucalyptus woodland (79100)	IV	3.5	1.4	--	--	--	2.1	--	--
Non-native grassland (42200)	III	63.9	53.8	--	1:1 ⁸	53.1 ⁸	6.5	3.4	53.1
Non-native vegetation (11000)	--	1.5	1.0	--	--	--	0.3	--	--
Orchard (18100)	IV	100.2	60.6	--	--	--	3.9 ⁹	--	--
Intensive agriculture (18200)	IV	8.8	6.9	--	--	--	0.1	--	--

**Table 2.4-8 (cont.)
MITIGATION FOR IMPACTS TO HABITAT/VEGETATION COMMUNITIES**

Vegetation Community/Habitat ¹	Tier	Existing Acreage ²	Impacts (acres) ²		Mitigation Ratio	Mitigation (acres) ²			
			On Site	Off Site		Required	Preserved On Site ³	Impact Neutral ⁴	Off-site Mitigation
Extensive agriculture (18300)	IV	21.3	20.5	--	0.5:1 ¹⁰	10.3	0.3	--	10.3
Disturbed habitat (11300)	IV	2.4	2.1	0.1	--	--	0.2	--	--
Developed land (12000)	IV	4.1	2.9	1.4	--	--	--	--	--
TOTAL		238.8	164.9	1.5	--	90.0	28.2	11.7	90.0

Source: HELIX 2015d

¹ Vegetation categories and numerical codes are from Holland (1986) and Oberbauer (2008).

² Upland habitats are rounded to the nearest 0.1 acre and wetland habitats are rounded to the nearest 0.01, thus totals reflect rounding.

³ Within the on-site biological open space.

⁴ Includes all preserved RPO wetlands and their buffers, as well as RPO wetlands occurring within the SDG&E easement (which are not impacted by the Project but cannot be placed into an open space easement).

⁵ Mitigation provided at a 2:1 ratio for 2.4 acres of woodland to be placed within the Oak Tree Protection Easement in the LBZ, and at 3:1 ratio for 4.3 acres of direct development and fuel modification impacts.

⁶ Includes 2.7 acres of mitigation for impacts to 0.9 acre of oak woodland buffer, per County requirements (comprised of 0.7 acre of non-native grassland and 0.2 acre of eucalyptus woodland).

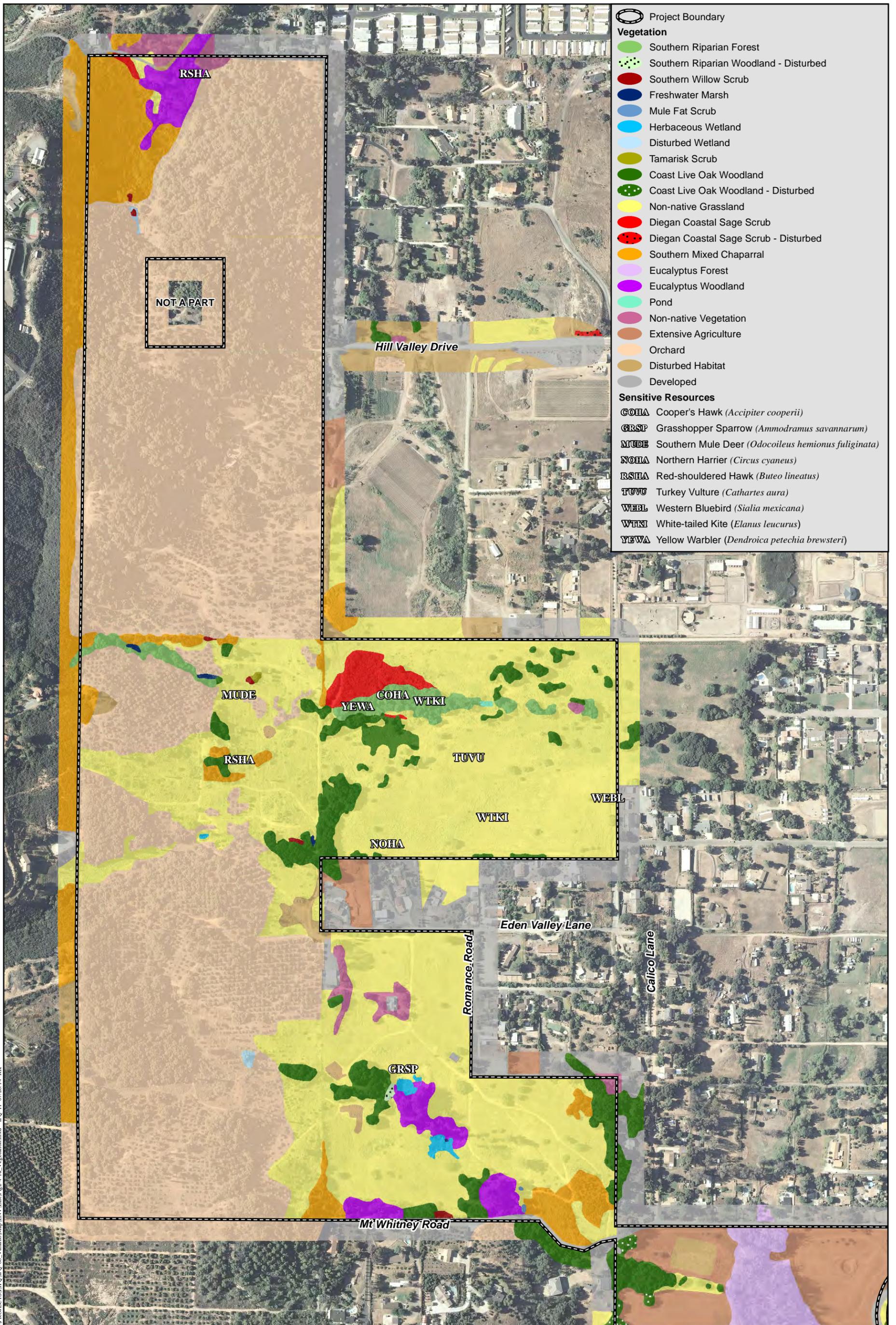
⁷ Per direction from USFWS, all coastal sage scrub occurring on site is considered impacted and mitigation is required at 2:1.

⁸ A total of 0.7 acre of grassland impacts occur within the oak woodland buffer zone and would be mitigated at 3:1 for impacts to oak woodland; thus the 53.1 acres of grassland mitigation instead of 53.8 acres. See footnote 6, above.

⁹ An additional 36.5 acres of orchard adjacent to biological open space will be preserved in the northwestern corner under an agricultural easement.

¹⁰ County guidelines require mitigation at 0.5:1 for impacts to extensive agriculture consisting of field/pasture lands.

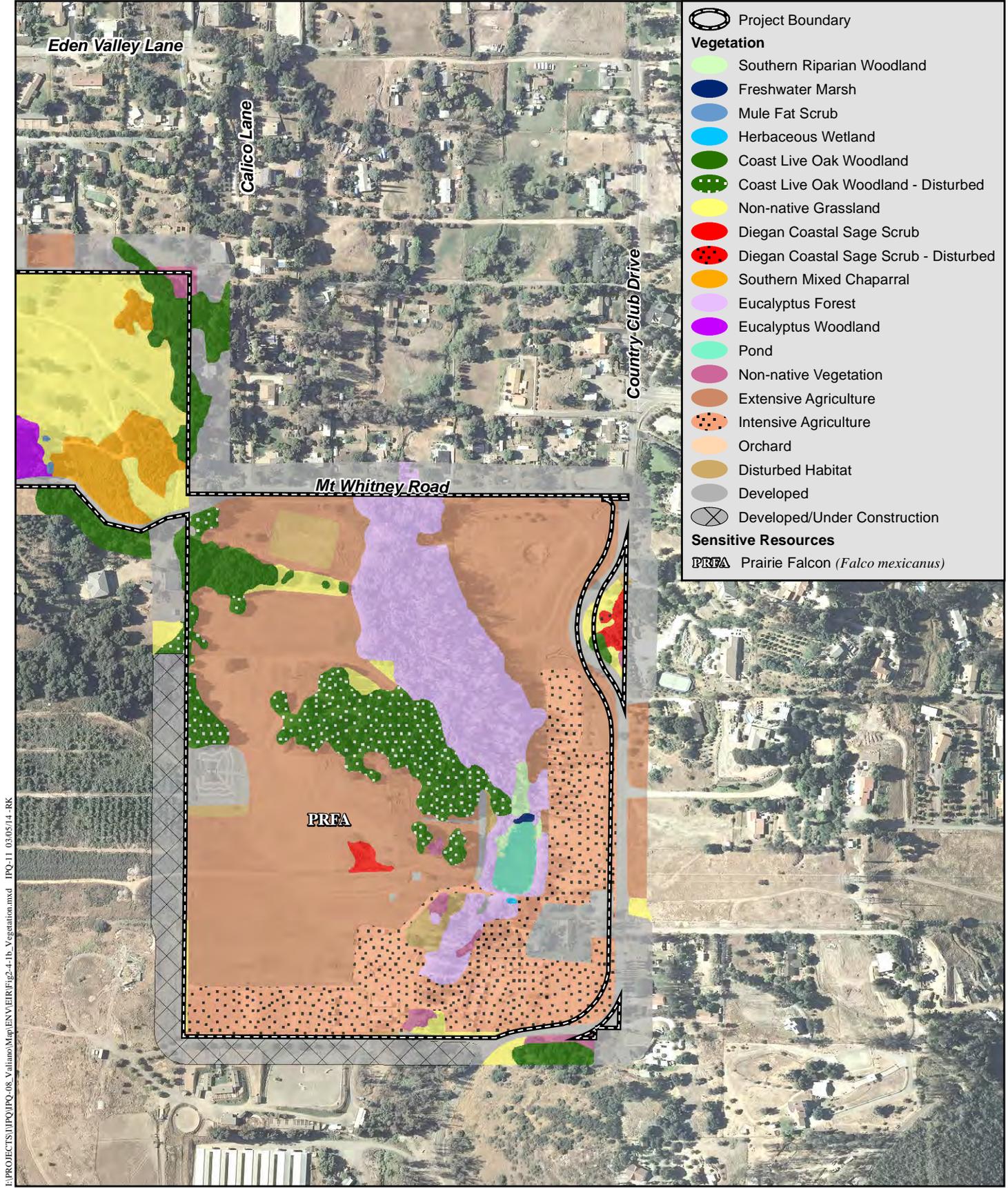
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Vegetation and Sensitive Resources Map

VALIANO

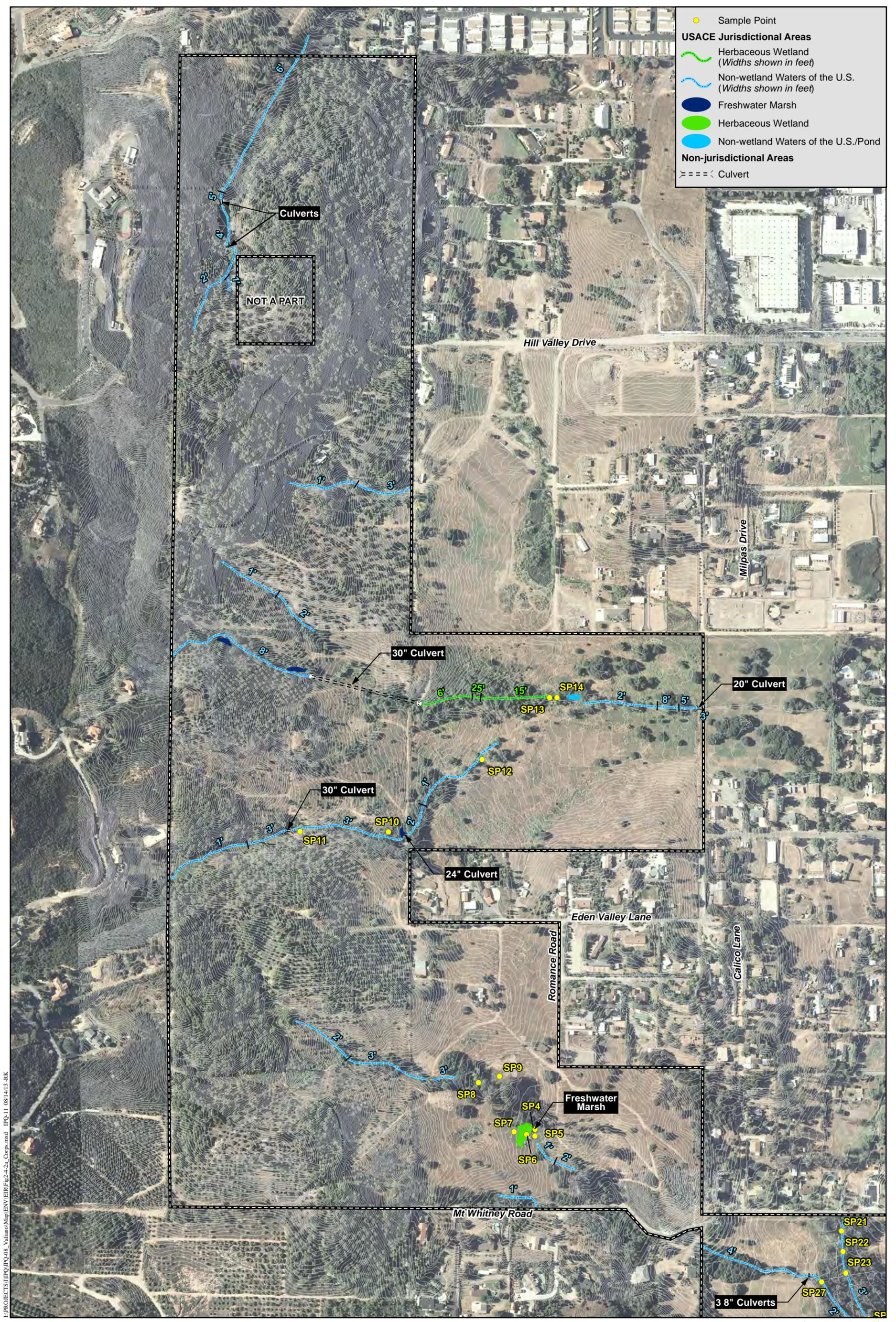
Figure 2.4-1a



Vegetation and Sensitive Resources Map

VALIANO

Figure 2.4-1b

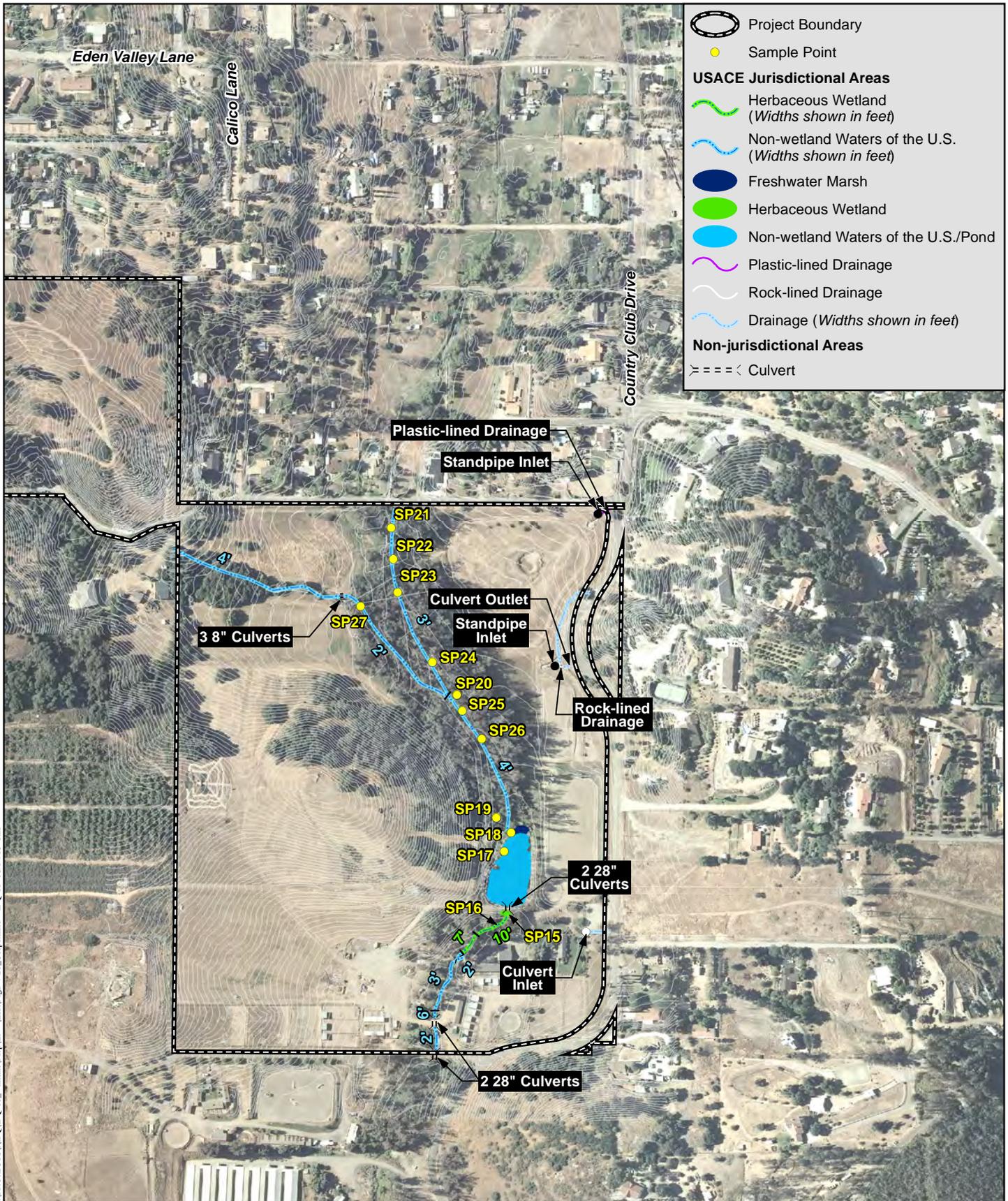


Waters of the U.S.

VALIANO

Figure 2.4-2a

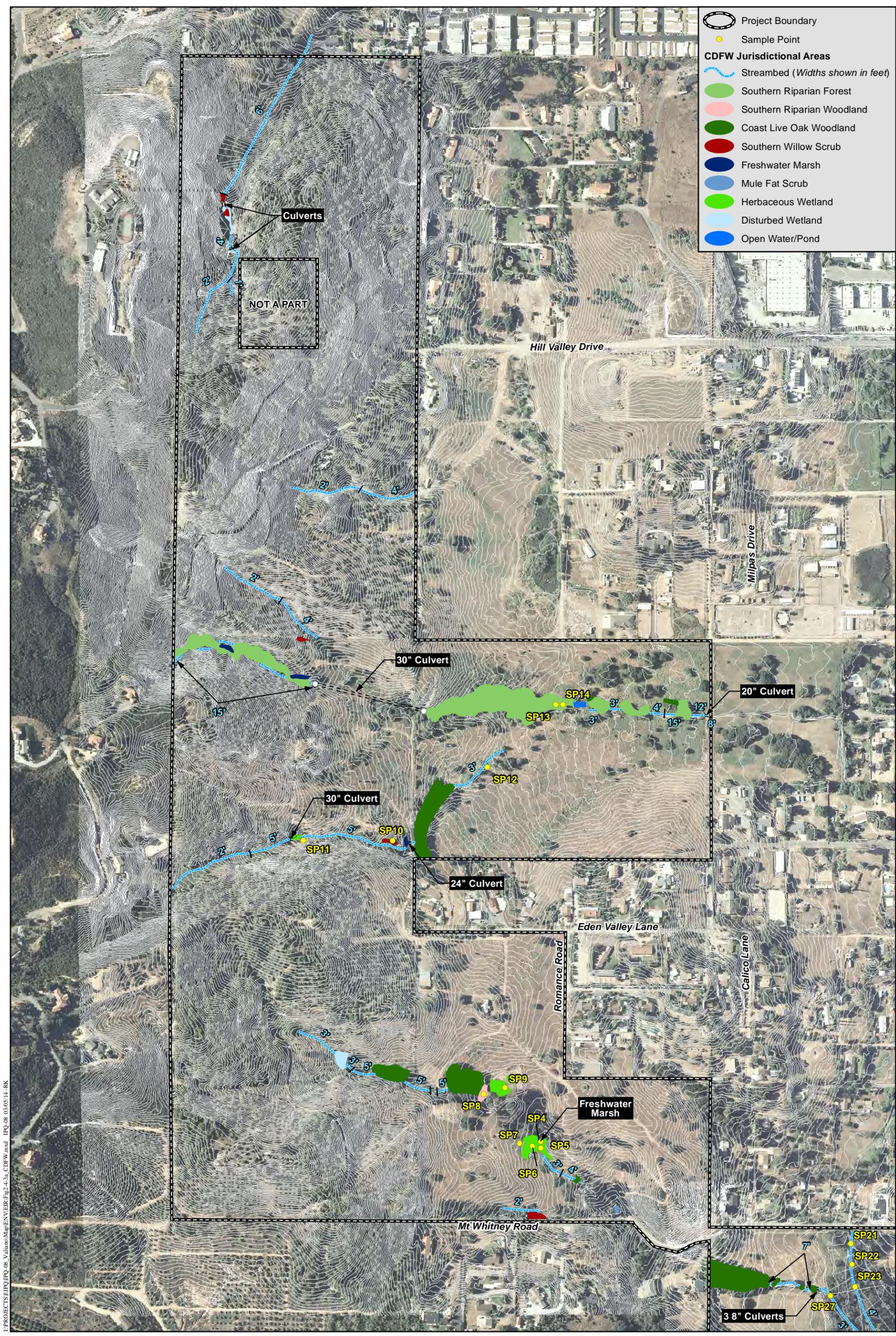
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Waters of the U.S.

VALIANO

Figure 2.4-2b



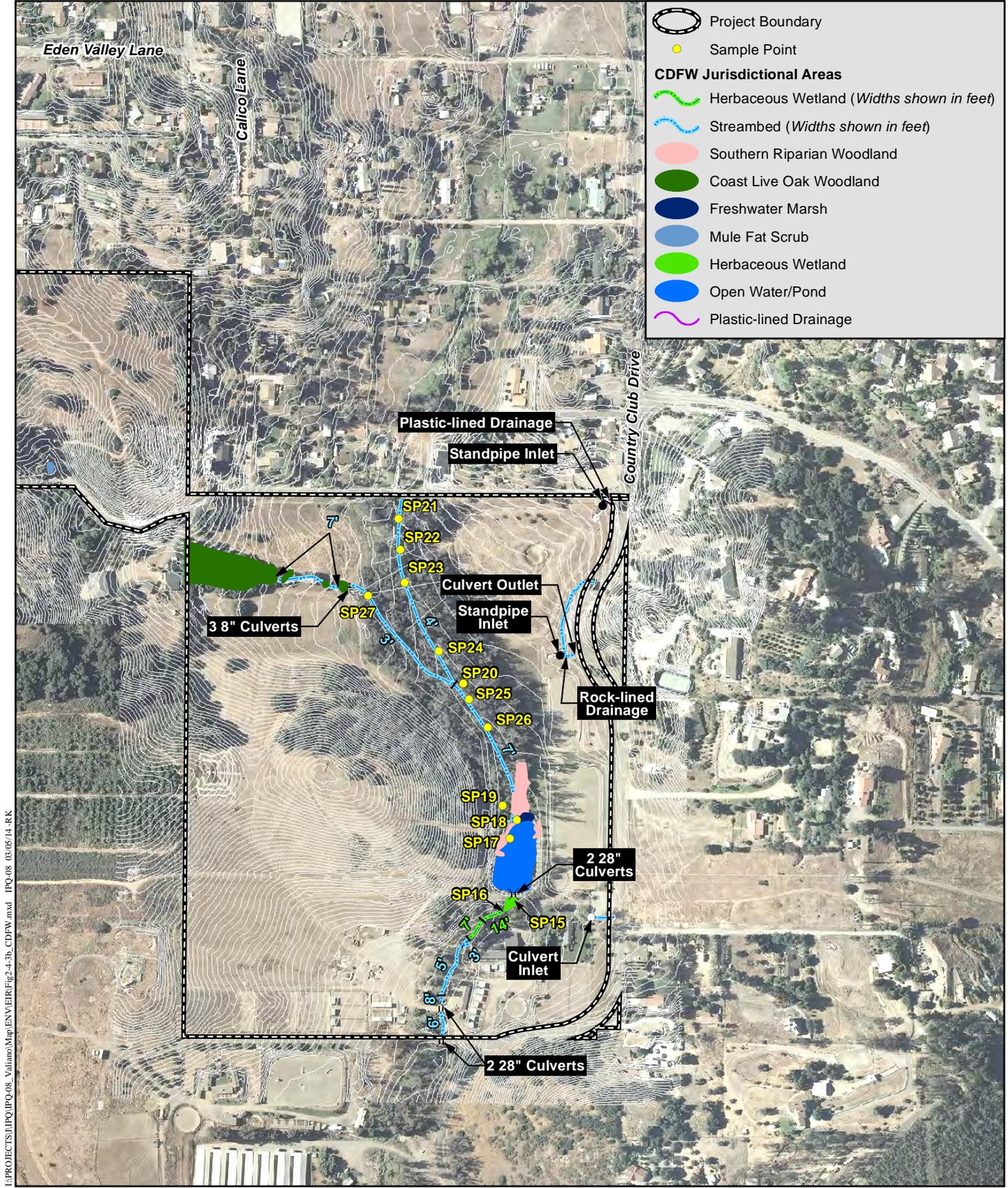
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CDFW Jurisdictional Areas

VALIANO

Figure 2.4-3a





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CDFW Jurisdictional Areas

VALIANO