SUBCHAPTER 3.3

BIOLOGICAL RESOURCES

3.3 Biological Resources

The 1980 and 1983 EIRs identified biological resources impacts as significant but mitigable, as does the current Project. Findings in the 1980 EIR were based on the 1979 Biological Survey for the Sycamore Springs Specific Plan. The report discussed the presence of riparian woodland, aquatic areas and associated upland disturbed grassland habitat. No sensitive plant or animal species were noted on site.

Findings in the 1983 EIR were based on the 1980 Technical Report completed for the Sycamore Springs Project, as discussed above. Mitigation was specified for wetlands habitat—both in terms of preservation and creation of acreage lost at a greater than 1:1 ratio. The small amount of sage scrub (off the current Campus Park Project site) was in a portion of both prior projects to be retained in open space.

Currently, on-site habitat has changed in type and extent. The riparian woodland (southern riparian forest) has expanded substantially in extent—perhaps as a result of lack of farming activities on site. An additional portion of human-disturbed agriculture area is now considered non-native grassland. A large portion of the earlier project containing biological resources has been severed from the Project (and now constitutes the Palomar College and Campus Park West projects). The approximately 175-acre parcel appended to the Specific Plan in the northern portion of the Proposed Project consists largely of Diegan coastal sage scrub, coast live oak woodland, and non-native grassland. Coastal California gnatcatcher, as well as two sensitive plants have been noted in the northern portion of the site, and least Bell's vireo have been detected in the southern portion of the site. In addition to changes to on-site physical conditions since the early 1980s, a number of changes have occurred in terms of review requirements. The County MSCP was implemented in 1997, and the County RPO was enacted in 1991. The coastal California gnatcatcher has been federally listed as threatened (March 30, 1993) and as a California Species of Special Concern and the least Bell's vireo has been listed at both the state (October 2, 1980) and federal (May 2, 1986) levels as endangered.

Based on the substantial changes in extent and type of on-site habitats, as well as the presence of sensitive plant and animal species not previously observed and subject to review and regulation, a subsequent analysis is required. These substantial changes in circumstances, as well as new information of substantial importance, would result in significant effects not previously discussed.

This section describes existing biological conditions within the 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 REC Consultants, Inc. (REC; 2009a, as amended) and is summarized below; the complete report is included as Appendix G of this EIR. Refer to text below for new and/or revised evaluation of all issues related to biology for the Project.

3.3.1 Existing Conditions

Existing Setting

Land Uses

The majority of the Project site is currently used for non-commercial grazing by cattle. Historically, the site has been used for farming, for which containment and drainage channels were constructed to allow for irrigation and cultivation of crops. Drainage from the property into the San Luis Rey River has been restricted, following construction of I-15 and SR 76. Development of projects to the north of the Project site has resulted in increased dry-season flows in the drainage due to landscape irrigation. In addition, alteration of Horse Ranch Creek during construction of Old Highway 395 and SR 76 has further altered

the original on-site ecology. More recently, Caltrans realigned the creek to construct I-15, and a previous property owner channelized the on-site creek to create additional land for farming purposes. Upstream irrigation has resulted in year-round creek flow.

Biological Surveys

Within the Project site, general biological surveys (for plants and animals) were conducted by REC in the winter of 1999, summer of 2003, and fall of 2003 (preceding the October 2007 fire). Species were identified directly by sight with the aid of binoculars or by vocalizations; and indirectly by scat, tracks, or burrows. The existing habitat and site conditions were assessed to determine whether or not any sensitive species had the potential to occur on site. Focused surveys were performed on site in 1999 and 2004 for the federally threatened coastal California gnatcatcher (*Polioptila californica californica*), federally endangered Quino checkerspot butterfly (*Euphydryas editha quino*), federally and state endangered least Bell's vireo (*Vireo bellii pusillus*), and federally endangered arroyo toad (*Bufo microscaphus californicus*), as well as sensitive plants. Jurisdictional wetland delineations were performed on site by REC in December 2002, January and September 2003, and August 2004. Biological resource surveys also were conducted by REC in May and June 2008 at off-site intersections proposed to be improved as part of the Proposed Project and traffic mitigation. The current alignment of Pankey Road was surveyed in 2005.

On-site Habitats

Eleven vegetation communities occur on the Project site. A brief description of each in relation to the Proposed Project is provided below. Vegetation communities on site are illustrated on Figure 3.3-1, On-site Biological Resources, and summarized on Table 3.3-1, Vegetation Communities/Habitats and Proposed Impacts.

It should be noted that the majority of the Project site burned in October 2007. While much of the riparian area still remains, the northern area of the site was completely burned. The following information is based on site surveys conducted prior to the fire and includes the condition of the site at that time. Left to regenerate naturally, habitats are expected to grow back in the same location they occupied prior to the fire; therefore, the Project site would not need to be resurveyed.

Southern Riparian Forest (County Habitat Code 61300)

Southern riparian forest is a riparian habitat type that occurs along the banks of rivers, streams, and/or lakes and is characterized by a dense thicket of willow trees (*Salix* spp.) with scattered cottonwoods (*Populus fremontii*) and/or western sycamores (*Platanus racemosa)*. On the Project site, this habitat is dominated by black and arroyo willows (*Salix gooddingii* and *Salix lasiolepis*, respectively) with western sycamores. Approximately 85.6 acres in the southwestern portion of the site are occupied by southern riparian forest.

Southern Willow Scrub (County Habitat Code 63320)

Southern willow scrub is characterized by dense, broadleaf, winter-deciduous riparian thickets dominated by several willow species. Most stands are too dense to allow much understory development. On the Project site, this habitat type is dominated by arroyo and black willows, with mule fat (*Baccharis salicifolia*) and coyote bush (*Baccharis pilularis*). Southern willow scrub occupies 1.6 acres of the site along the centrally located drainage adjacent to the area mapped as pasture.

Freshwater Marsh (County Habitat Code 52410)

Freshwater marsh features a community of plants living in fresh water found along the shores of ponds, lakes, streams and some rivers. Livestock grazing has resulted in substantial disturbance to this habitat, with usually taller species having been grazed to the ground. The disturbed wetland contains species such as cattail (*Typha sp*.), mulefat, giant reed (*Arundo donax*), oats (*Avena* sp.), saltgrass (*Distichlis spicata*), fennel (*Foeniculum vulgare*), tree tobacco (*Nicotiana glauca*), bristly ox-tongue (*Picris echioides*), and tamarisk (*Tamarix* sp.). Freshwater marsh occupies 10.3 acres along the eastern edges of southern riparian forest in the southern portion of the Project site.

Coast Live Oak Woodland (County Habitat Code 71160)

Within southern California, coast live oak (*Quercus agrifolia*) is the dominant species in this woodland habitat. The shrub layer typically is poorly developed, but may include toyon (*Heteromeles arbutifolia*), currant (*Ribes* sp.), laurel sumac (*Malosma laurina*), and blue elderberry (*Sambucus mexicana*). The herb component is continuous within this habitat and dominated by ripgut grass (*Bromus diandrus*) and several other introduced taxa. The coast live oak woodland on site is interspersed with ornamental plantings, such as California fan palm (*Washingtonia filifera*), eucalyptus (*Eucalyptus* sp.), olive (*Olea europaea*), and pine (*Pinus* sp.). In addition to coast live oak, this habitat is dominated by scrub oak (*Quercus berberidifolia*), with mission manzanita (*Xylococcus bicolor*). This vegetation community occupies approximately 2.8 acres in the northern portion of the Project site.

Diegan Coastal Sage Scrub (County Habitat Code 32510)

Diegan coastal sage scrub is characterized by low-density, drought-deciduous, flexible shrubs, such as California sagebrush *(Artemisia californica*) and true sages (*Salvia* sp.), on low-moisture sites (Schoenherr 1992). Many rock outcrops (approximately 1.5 acres) are located within the on-site Diegan coastal sage scrub. Approximately 129.6 acres of Diegan coastal sage scrub (including rock outcrops) occur within the northern portion of the Project site. On-site coastal sage scrub habitat occurs in three distinct subphases: higher quality coastal sage scrub, coyote bush scrub, and disturbed coastal sage scrub.

Higher quality coastal sage scrub (89.8 acres) occurs primarily on the hillsides in the northern portion of the Project site, north of Pala Mesa Heights Drive. The coastal sage scrub habitat in this area is not uniform. California sagebrush dominates the base and lower portions of the hillsides; as the hillsides increase in elevation, black sage (*Salvia mellifera*) becomes the dominant species, and laurel sumac is interspersed evenly throughout this area. Evidence of a previous fire (prior to the 2007 fire) exists within the northwestern corner of the property, where California sagebrush and black sage are co-dominant. There is approximately 30 percent shrub cover within this area, consisting primarily of laurel sumac stump sprouts approximately three feet in height. At the base of the southwest-facing hills, shrubbier species, including laurel sumac, sugar bush (*Rhus ovata*), and ceanothus (*Ceanothus* spp.), have established, although not to the degree that this should be classified as chaparral. The Diegan coastal sage scrub at the top of these hills in the northeastern corner of the property contains a large, though not dominant, chamise (*Adenostoma fasciculatum*) element.

Coyote bush scrub, a form of coastal sage scrub composed predominantly of coyote bush, also occurs on site. This area has been heavily impacted by grazing and consists of scattered, mature coyote bush. On-site coyote bush scrub occupies approximately 0.7 acre. This subhabitat type is distinguished on site since it occurs in a separate location from the more typical coastal sage scrub and is of a different vegetative structure.

Disturbed Diegan coastal sage scrub on the Project site is dominated by California sagebrush; however, shrub cover represents approximately 30 to 40 percent of this habitat on site, consisting primarily of laurel sumac and California sagebrush. Species indicative of disturbance include California pepper (*Schinus molle*), star thistle (*Centaurea* sp.), mustard (*Brassica nigra*), and oats. Many patches of coast prickly pear (*Opuntia littoralis*) also were found within this habitat. Approximately 37.6 acres of disturbed Diegan coastal sage scrub occur on site.

Non-native Grassland (County Habitat Code 42200)

Non-native grasses and weeds can become the dominant vegetation type in an area when grazing, agriculture, or other disturbances have degraded native vegetation. There are approximately 44.1 acres of non-native grassland on site, including the area north of Pala Mesa Heights Drive, as well as a portion north of SR 76. The non-native grassland on site includes species such as wild oats, century plant (*Agave americana*), brome grasses (*Bromus* sp.), California pepper, fennel, coyote brush, and star thistle.

Non-native Vegetation (County Habitat Code 11000)

Stands of California pepper trees are scattered throughout the site. These stands do not comprise a habitat type, nor do they demonstrate function as a naturalized habitat for native wildlife species. There is approximately 0.1 acre of non-native vegetation on the Project site.

Pasture (County Habitat Code 18310)

The portion of the Project site south of Pala Mesa Heights Drive has been and currently is being grazed, primarily by cattle, and is fenced. This area has been used as pasture land since the 1950s. Bare ground and non-native vegetation, such as tree tobacco and fennel, dominant this habitat. On-site pasture habitat occurs on approximately 135.4 acres.

Eucalyptus Woodland (County Habitat Code 11100)

The eucalyptus woodland on site is mostly comprised of eucalyptus stands. This habitat is typically created (planted) during urban expansion, as it is used for shade, wind barriers, privacy "walls," or "fence" lines. Eucalyptus trees often are used for raptor nesting sites. Approximately 0.1 acre of eucalyptus woodland is located near the southeastern boundary of the Project site.

Disturbed (County Habitat Code 11300)

The disturbed land on site includes habitats that have been altered to such an extent that native vegetation no longer persists, nor would it be expected to regenerate to native habitat. Vegetation that thrives within this habitat often consists of weedy, non-native species that have adapted to rapidly colonize exposed substrates. Approximately 4.4 acres of the Project site contains disturbed habitat, represented predominantly by bare dirt (i.e., dirt roads) with sporadic non-native species such as oats, tocalote (*Centaurea melitensis*), black mustard (*Brassica nigra*), and foxtail chess (*Bromus madritensis*).

Developed (County Habitat Code 12000)

Developed areas on the Project site, totaling 2.1 acres, consist of paved roads, an existing trailer and associated facilities, abandoned house pads, and an agriculture staging area.

Off-site Habitats

Twelve vegetation communities occur within off-site areas proposed for Project improvements or direct traffic-required mitigation locations. These vegetation communities are listed on Table 3.3-1 and Figures 3.3-2a, Off-site Biological Resources and Project Impacts, and b through ~~e~~d, Off-site Intersection Resources and Impacts. Each of the habitats is similar in composition to those described above for the on-site conditions, with the exception of orchards, of which none is present on the Project site. A brief description of each habitat type in relation to the Proposed Project is provided below.

Southern Riparian Forest

Southern riparian forest occurs along the proposed Pankey Road/Pala Mesa Drive extension through the Campus Park West property to the west of the Project site. Approximately ~~1.00~~0.7 acre of southern riparian forest occurs within off-site improvement areas.

Southern Willow Scrub

Approximately ~~0.06~~0.8 acre of southern willow scrub habitat would be impacted by off-site improvements. This area is located on slope modifications associated with construction of Horse Ranch Creek Road across from PA MF-1~~2~~ and along off-site Pankey Road.

Freshwater Marsh

Approximately 0.1 acre of freshwater marsh occurs within the proposed off-site improvement areas. This habitat is located on slope modifications associated with construction of Horse Ranch Creek Road across from PA MF-2.

Diegan Coastal Sage Scrub

The off-site Diegan coastal sage scrub areas occur along the eastern boundary of the site where off-site grading is proposed. In addition, this habitat (including disturbed) occurs at the intersections of ~~SR 76/Old Highway 395,~~ Old Highway 395/Pala Mesa Drive, and Old Highway 395/Stewart Canyon Road, and the I-15 ramps from SR 76. Diegan coastal sage scrub occupies a total of ~~3.95~~3.77 acres within off-site improvement areas.

Non-native Grassland

Non-native grassland occurs off site within the area proposed for the alignment of Pankey Road and Pala Mesa Drive, potential improvements to SR 76 on either side of existing Pankey Road, at the intersection of Old Highway 395/Pala Mesa Drive, and at the I-15 ramps from SR 76. Approximately ~~6.37~~6.27 acres of non-native grassland occur in the off-site improvement areas.

Non-native Vegetation

Non-native vegetation (ornamental) occurs within the area proposed for off-site improvement areas associated with the construction of Horse Ranch Creek Road ~~north of the proposed PA MF-1~~, as well as at the I-15 loop ramps from SR 76 and the intersections of Old Highway 395/Pala Mesa Drive and Old Highway 395/Stewart Canyon Road. Approximately ~~0.37~~0.39 acre of non-native vegetation occurs within these off-site improvement areas.

Pasture

Off-site pasture occurs to the east of existing Pala Mesa Heights Drive and near the proposed off-site extension of Horse Ranch Creek Road. Approximately ~~7.76~~9.06 acres of this habitat occurs within these off-site improvement areas.

Orchard (County Habitat Code 18100)

Orchards that are part of the Pankey Ranch land to the east of the Project site would be impacted due to proposed fuel modification. Impacts to this habitat also would include those associated with the construction of the southern end of Horse Ranch Creek Road. These orchards include citrus and avocado trees and associated dirt roads. In addition, orchards occur at Old Highway 395/Stewart Canyon Road. Approximately 11.4~~91~~ acres of orchard occur within the limits of the proposed off-site improvements. These off-site areas provide little to no biological value since they are regularly maintained as part of the existing agricultural operations.

Eucalyptus Woodland

Eucalyptus woodland occurs primarily off site near the southeastern Project site boundary and SR 76. Approximately ~~1.7~~0.3 acre~~s~~ of this habitat occurs within the off-site improvements area where fuel modification is proposed, as well as the location of proposed Pankey Place.

Disturbed

Disturbed habitat would be impacted due to the construction of Horse Ranch Creek Road, as well as the I-15 ramps from SR 76 and the intersection~~s~~ of ~~SR 76/Old Highway 395 and~~ Old Highway 395/Pala Mesa Drive. Disturbed habitat totals approximately ~~14.21~~13.71 acres within all off-site improvement areas.

Developed

Developed land occurs at the I-15 ramps from SR 76 and the intersection of Old Highway 395/Pala Mesa Drive. Developed land totals approximately ~~1.56~~1.75 acres within all off-site improvement areas.

Jurisdictional Delineation

State and federal regulatory requirements pertain to jurisdiction over wetlands and other sensitive habitats, as well as listed species. The Project site contains potential jurisdictional drainages, which, as possible wetlands or waters, are subject to regulation by the Corps, CDFG, and County. The Corps regulates wetlands and Waters of the U.S. protected under Section 404 of the Clean Water Act; the CDFG 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, and a report summarizing the findings of that evaluation is attached in Appendix G (Attachment 5 of that report). Jurisdictional delineation data for proposed off-site improvements also are included for the Campus Park West property, but not for any of the other off-site improvement areas; therefore, acreages for off-site impacts are based on riparian habitat only.

Impacts to wetlands would require consultation and approvals from federal and state agencies, including a Section 404 Permit from the Corps, 401 Certification from the RWQCB, and a 1602 Streambed Alteration Agreement from the CDFG.

Corps Jurisdiction

Through implementation of the Clean Water Act, Corps 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 wetland waters is the upper limit of the wetland. Delineations of wetland limits were conducted for the Project according to the procedures found in the Wetlands Delineation Manual (Corps 1987).

The Corps wetland delineation procedure requires that a site must have wetland indicators within three parameters: vegetation, soils, and hydrology. If any one parameter does not contain a positive wetland indicator, the site is not a Corps 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 Corps 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 (Corps) 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 Waters of the U.S.

As shown on Figure 3.3-3, Jurisdictional Wetlands and Waters, and listed on Table 3.3-3, Existing and Impacted On- and Off-site Jurisdictional Areas, Corps wetlands on site encompass 94.1 acres and off site are expected to include approximately ~~1.16~~0.8 acre~~s~~. (Wetland delineations have not been conducted at the off-site intersection improvement areas; therefore, off-site acreages are based on riparian habitat only.) Also included under Corps jurisdiction are drainages in upland habitat comprising 3.6 acres of on-site non-wetland Waters of the U.S., which includes a drainage near the center of the Project site that drains the irrigation water off the adjacent groves in the Meadowood property, and 0.8 acre of off-site non-wetland Waters of the U.S. ~~No non-wetland Waters of the U.S. occur within the off-site improvement areas.~~

CDFG Jurisdiction

According to Section 1600 of the California Fish and Game Code, an entity 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 CDFG receives written notification regarding the activity. After said notification is complete, the CDFG 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, CDFG must provide a draft agreement (Streambed Alteration Agreement) to an entity, describing the fish and wildlife resources that CDFG has determined the activity may substantially adversely affect and including measures to protect those resources. The Project Applicant would be required to apply for and receive approval of that Streambed Alteration Agreement from CDFG.

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

CDFG jurisdictional boundaries were determined based on the presence of any one of three wetland criteria (hydrology, soils, or vegetation) being present. CDFG jurisdictional wetlands on the Project site encompass 85.4 acres on site and ~~1.84~~1.6 acres off site. As stated above, wetland delineations have not been conducted at the off-site intersection improvement areas; therefore, off-site acreages are based on riparian habitat only. Also included under CDFG jurisdiction are 1.4 acres of on-site non-wetland Waters.

County Jurisdiction

The County's RPO is more restrictive than the Corps' 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 the substratum of which is predominantly non-soil and such lands contribute substantially to the biological functions or values of wetlands in the drainage system.

On July 23, 2004, the San Diego County Planning Commission granted an exemption to RPO (PC7-23\RPO-Exemption) requirements to Campus Park and Campus Park West because a Tentative Map for these parcels was recorded prior to 1988. (Parcels for which TMs were recorded prior to 1988 are expressly exempted from the RPO) The exemption findings are listed in Section 4.0 of the Biological Technical Report (REC 2008a).

Therefore, the Proposed Project is in conformance with the Planning Commission's exemption and no further RPO analysis or mitigation is required. Nonetheless, it should be noted that mitigation of sensitive resources is proposed in accordance with the RPO.

Plant Species

Two hundred fifty-four (254) plant species were observed on site during biological surveys. A complete list of plant species observed, with common and scientific names, is provided in Appendix G (Appendix A of that report).

Wildlife Species

Wildlife on the Project site is concentrated primarily within the coastal sage scrub habitat in the northern portion of the site and the riparian habitat in the southern portion of the site. Observations included 33 insect, 70 bird, 11 reptile, 4 amphibian, and 16 mammal species. A complete list of animal species observed, with common and scientific names, is included in Appendix G (Appendix B of that report).

Invertebrates

The most common of the 33 insect species observed on site were Sara orangetip (*Anthocharis sara*) and southern blue (*Glaucopsyche lygdamus australis*) butterflies, ladybug (Family *Coccinellidae*), and honeybee (*Apis mellifera*).

Amphibians

During the on-site surveys, four amphibian species were observed, including bullfrog (*Rana catesbeiana*) and California treefrog (*Hyla cadaverina*). Tree frogs were prevalent within the riparian habitats on site.

Reptiles

A total of 11 reptile species were observed during site surveys, including western fence lizard (*Sceloporus occidentalis*), common kingsnake (*Lampropeltis getulus*), and western rattlesnake (*Crotalus virdis*). Two sensitive species observed on site were orange-throated whiptails (*Cnemidophorus hyperythrus beldingi*) and northern red-diamond rattlesnake (*Crotalus ruber ruber*).

Birds

During the field surveys, 70 bird species were observed on site. Some of the more abundant species included American goldfinch (*Carduelis tristis*), yellow-rumped warbler (*Dendroica coronata*), bushtit (*Psaltiparus minimus*), California towhee (*Piplio crissalis*), house finch (*Carpodacus mexicanus*), lesser goldfinch (*Carduelis psaltria*), spotted towhee (*Piplio erythrophthalmus*), and wrentit (*Chamaea fasciata*). Species found in the riparian area included black phoebe (*Sayornis nigricans*), common yellowthroat (*Geothlypis trachas*), and song sparrow (*Melispiza moldia*). Upland species included Bewick's wren (*Thryomanes bewickii*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), and western meadowlark (*Sturnella neglecta*).

Mammals

There was evidence of 16 mammal species within on-site southern riparian forest, Diegan coastal sage scrub, non-native grassland, and pasture. Species observed/detected included: raccoon (*Procyon lotor*), ground squirrel (*Spermophilus beecheyi*), gopher (*Thomomys bottae*), coyote (*Canis latrans*), and cottontail rabbit (*Sylvilagus auduboni*). Domestic species also were found on site within southern riparian forest, Diegan coastal sage scrub, and pasture and included: cow (*Bos taurus*), donkey (*Equus asinus asinus*), goat (*Capra capra*), and horse (*Equus cabbalus*).

Sensitive Resources

Sensitive or special interest species are those considered rare, threatened, or endangered within the state or region by local, state, and/or federal resource conservation agencies. Sensitive habitats, as identified by these agencies, are those that generally support the above-noted sensitive plant or wildlife species. Sensitive species and habitats are so called because of their limited distribution, restricted habitat requirements, particular susceptibility to human disturbance, and degradation due to development or invasion by non-native species, or a combination of these factors. Sources used for the determination of sensitive biological resources include the County RPO (2007) and Guidelines for Determining Significance and Report Format and Content Requirements – Biological Resources (March 2007), USFWS Threatened and Endangered Species System Listings by State and Territory (2006), CDFG State and Federally Listed Endangered and Threatened Animals of California (2009), and the California Native Plant Society Inventory of Rare and Endangered Plants of California (2006).

Sensitive Habitats

Sensitive habitats on site include southern riparian forest, southern willow scrub, freshwater marsh, coast live oak woodland, Diegan coastal sage scrub, non-native grassland, and pasture. A brief description of

each habitat type is provided below, and the location of each sensitive habitat on the Project site is shown on Figure 3.3-1.

Southern Riparian Forest, Southern Willow Scrub, and Freshwater Marsh. The County considers wetland habitats to be sensitive because of their limited distribution, high wildlife diversity, and valuable water source in the arid climate of southern California. Other agencies that consider wetland habitats sensitive include the Corps, USFWS, CDFG, and USEPA. The County RPO specifically addresses wetland habitat protection, as do CDFG Code Sections 1600-1606 (Streambed Alteration Agreement) and the Corps Clean Water Act Section 404 permit process.

Coast Live Oak Woodland. Coast live oak woodland is considered sensitive throughout the County. This habitat is very limited in its distribution. Valued for high ecological function and aesthetic value, oak woodlands acreage has declined dramatically throughout the region. Although no wildlife was observed within the on-site coast live oak woodland, this vegetation community typically supports a large number of wildlife species, particularly avian species, due to the nesting, foraging, and sheltering opportunities.

Diegan Coastal Sage Scrub. The USFWS, CDFG, and County consider Diegan coastal sage scrub habitats as sensitive. Regionally, this habitat supports a disproportionately large number of listed plant and animal species. Animal species include the coastal California gnatcatcher, coastal cactus wren (*Campylorynchus brunneicapillus*), orange-throated whiptail, and coast horned lizard (*Phrynosoma coronatum*). It is estimated that 70 to 90 percent of this habitat in the state has been lost as a result of urban expansion in coastal areas (Atwood 1998). Even in a disturbed condition, coastal sage scrub habitat may be considered sensitive by the resource agencies because it may still serve as habitat for wildlife and may be regenerating to higher quality coastal sage scrub.

Non-native Grassland and Pasture. Non-native grasslands and pastures, while common throughout the County, are afforded some level of protection because this habitat provides a critical foraging area for resident and migratory raptors.

Sensitive Plants

Two sensitive plant species were detected on the Project site. No sensitive plants were located in the Proposed Project off-site improvement areas. Both species noted are discussed briefly below, and the location of each is shown in Figure 3.3-1.

Parry's Tetracoccus (*Tetracoccus dioicus*). Parry's tetracoccus, a deciduous shrub, is included on List 1B of the CNPS Inventory. List 1B plants are rare, threatened, or endangered in California and elsewhere. The County identifies this plant as a Group A species, which corresponds generally to CNPS List 1B. This shrub, which is in decline due to loss of habitat, typically is found in low-growing chamise chaparral or coastal sage scrub with a moderate dense canopy cover on Las Posas soils. Approximately 1,688 individuals of this species were observed in coastal sage scrub in the northern area.

Palmer's Grappling-hook (*Harpagonella palmeri*). Palmer's grappling-hook, an annual plant, is found on List 4 of the CNPS Inventory. List 4 plants are those of limited distribution, not rare, but uncommon enough that their status should be monitored regularly. The County identifies this plant as a Group D species, which corresponds generally to CNPS List 4. This sensitive species, which is associated with clay soils, is decreasing in numbers throughout southern California. Urban development and agricultural disking have destroyed much of the habitat for this species. One individual Palmer's grappling-hook was observed on a dirt trail in the northern portion of the Project site in 2004. It is likely that more would have been observed under less dry conditions.

Sensitive Wildlife

Eight sensitive animal species were observed on the Project site. One additional species of special County interest, the turkey vulture (*Cathartes aura*), also was observed on site. All of these observed animal species are briefly discussed below, and the location of each observed sensitive species is shown in Figure 3.3-1.

Orange-throated Whiptail (*Cnemidophorus hyperythrus*). The orange-throated whiptail, a California Species of Special Concern and County Group 2 species, is a slender, quick lizard that eats insects and spiders and lives in coastal sage scrub, chaparral, grasslands and riparian areas. Five orange-throated whiptails were observed on site along a dirt trail adjacent to Diegan coastal sage scrub.

Northern Red-diamond Rattlesnake *(Crotalus ruber rubber)*. The northern red-diamond rattlesnake is a California Species of Special Concern and County Group 2 species. This reddish to pinkish-tan rattlesnake occupies coastal sage scrub, chaparral, and woodlands, as well as desert scrub, pinon-juniper woodlands, and fields. It is a secretive species that is relatively docile (compared to the southern Pacific rattlesnake [*Crotalus viridis*]). It eats ground squirrels, lizards, rabbits, and carrion. One northern red-diamond rattlesnake was observed in the Diegan coastal sage scrub habitat in the northern area.

Least Bell's Vireo (*Vireo bellii pusillus*). This bird is federally and state endangered and a County Group 1 species. The least Bell's vireo is a small gray bird that inhabits cottonwood-willow forest, oak woodland, shrubby thickets, and dry washes with thickets at the edges. Nine least Bell's vireos, including two pairs and a juvenile, were observed on site within southern riparian forest.

Coastal California Gnatcatcher (*Polioptila californica californica*). The coastal California gnatcatcher, a federally threatened species, California Species of Special Concern, and County Group 1 species, is a small gray songbird resident of scrub-dominated communities from the Los Angeles Basin through Baja California, Mexico. Coastal California gnatcatcher populations have declined due to extensive loss of Diegan coastal sage scrub habitat to urban and agricultural uses. Five pairs of gnatcatchers were documented on site in the Diegan coastal sage scrub during protocol surveys conducted in 1999. In addition, the coastal California gnatcatcher was observed off site along the northwestern property line. Two additional gnatcatcher locations were noted in the field from faint, distant calls at the eastern edge of the northern area, but were never confirmed or visually identified. For the purposes of this analysis, only those pairs confirmed in the field are analyzed.

Southern California Rufous-crowned Sparrow (*Aimophila ruficeps canescens*). The southern California rufous-crowned sparrow is a California Species of Special Concern and County Group 1 Species. This sparrow is usually found in coastal sage scrub, grassland, and open pine-oak woodlands, where it nests on the ground. Two southern California rufous-crowned sparrows were observed within Diegan coastal sage scrub in the northern area.

Yellow Warbler (*Dendroica petechia*). The yellow warbler, a California Species of Special Concern and County Group 2 species, is a small yellow songbird that inhabits bushes, swamp edges, streams, and gardens. One yellow warbler was observed in the southern riparian forest on the Project site.

Yellow-breasted Chat (*Icteria virens*). The yellow-breasted chat, a California Species of Special Concern and County Group 1 species, is a large warbler with a bright yellow throat and breast, and a distinctive call. This species inhabits brushy tangles, briars, and stream thickets. Four individuals were observed in southern riparian forest on site.

Cooper's Hawk (*Accipiter cooperii*). The Cooper's hawk, a California Species of Special Concern and County Group 1 species, occupies riparian and oak woodlands, eucalyptus groves, and other wooded habitats. This bird was once a common nester in the County, but numbers of breeding pairs have declined over the last several decades, most likely due to the loss of riparian habitat and human disturbance. Two Cooper's hawks were observed in or over on-site Diegan coastal sage scrub and southern riparian forest.

Turkey Vulture (*Cathartes aura*). The turkey vulture is a large scavenger that is usually seen soaring in the sky, perched on dead trees, posts, and carrion, and on the ground. Although this species is not state or federally listed, it is of special interest to the County (a County Group 1 species). Turkey vultures were observed flying over the Project site.

Raptors. Raptors are large predatory or scavenger birds that typically require tall trees for perching and nesting, with adjacent open grasslands necessary for foraging. These species are protected, especially during their critical nesting and wintering stages. Due to declining habitat and associated declining numbers, raptors as a group are protected under CDFG Code Section 3500. Non-listed raptors observed on or over the site included four American kestrels (*Falco sparverius*), several white-tailed kites (*Elanus leucurus*), one red-shouldered hawk (*Buteo lineatus*), and several red-tailed hawks (*Buteo jamaicensis*).

Other Sensitive Species Known from the Area

In addition to those sensitive animal species observed on the Project site, three federally identified endangered wildlife species are known to occur in the Project vicinity: the southwestern willow flycatcher (*Empidonax traillii extimus*), arroyo toad (*Bufo californicus*), and Stephens' kangaroo rat (*Bipodomys stephensi*). These three species are discussed below.

Southwestern Willow Flycatcher. The southwestern willow flycatcher is a federally listed endangered bird that breeds only in dense riparian vegetation near surface water or saturated soil. This species is threatened by loss of habitat and nest parasitism. Southwestern willow flycatchers are documented to occur in the San Luis Rey River in the vicinity of the Project site. Although no focused surveys for this species were conducted, the survey protocol for least Bell's vireo requires that willow flycatchers also be documented and reported. No willow flycatchers were detected during the vireo surveys. The nearest documented location of the southwestern willow flycatcher is approximately 1.3 miles to the east of the Project site.

Arroyo Toad. A federally listed endangered species threatened by loss of habitat, the arroyo toad breeds in slow-moving streams with sandy substrates. The nearest documented location of this sensitive species is approximately 0.5 mile southeast of the Project site in the San Luis Rey River. Protocol surveys for this species were conducted on site in 1999 and 2004; no arroyo toads were detected. In addition, pit traps were placed on the Meadowood property to the east of the Project site to determine if aestivation (summer dormancy) of this species occurs in upland habitats. No arroyo toads were detected during this survey.

Stephens' Kangaroo Rat *(Dipodomys stephensi).* The Stephens' kangaroo rat is a federally listed endangered species known to occur in the Fallbrook area (but more prevalent in Riverside County). The documented occurrence of this species nearest to the Project site is at the Fallbrook Weapons Station, west of I-15 approximately 5.6 miles to the southwest of the Project site. An on-site habitat assessment for this species was conducted with negative results. It was determined that the on-site substrate and habitat are not suitable for this species.

Wildlife Corridors/Linkages

Wildlife corridors and linkages are critical to the regional conservation of sensitive species as they allow populations to access appropriate habitat and to expand. As defined in the County's Guidelines for Determining Significance – Biological Resources (March 2007), a wildlife linkage is an area of land that supports or contributes to the long-term movement of wildlife and genetic exchanges by providing live-in habitat that connects to other habitats, and a wildlife corridor is a specific route that is used for movement and migration of species. A corridor may represent a smaller or narrower avenue for movement, generally consisting of local pathways connecting short distances usually covering one or two main types of vegetation communities. Wildlife linkages are landscape-level connections between very large core areas. They generally span several thousand feet and cover multiple habitat types.

Regional Corridors/Linkages

The Project site is immediately surrounded by development (across I-15) and a future college site to the west, the San Luis Rey River and agricultural groves to the south, agricultural groves and future development (Meadowood) to the southeast, future development (Campus Park West) to the southwest, and undeveloped land (Monserate Mountain Preserve) to the northeast and north. Currently there is little or no direct habitat connection between the San Luis Rey River to the south of the Project site and the coastal sage scrub to the north of the site (Figure 3.3-4, Wildlife Corridors). Even though the pasture area currently provides an undeveloped area between the San Luis Rey River to the south and coastal sage scrub habitat to the north, it does not provide topographic protection (i.e., drainages) or vegetation cover or perches for many wildlife species looking for protection from predators. In addition, the pasture area between the Monserate Mountain Preserve to the north and the San Luis Rey River to the south historically and currently does not support regional wildlife movement because the existing/baseline condition for this area supports few resources due to cattle grazing since the 1950s. The majority of wildlife species observed/detected on site were within the areas intended for open space, as these areas are higher in quality, function, and value.

Significant stands of coastal sage scrub occur northeast of the Project site near Rice Canyon. Rice Canyon is less than one mile east of the Project site and currently is comprised of sparse rural development. This area would provide vegetation cover ideal for movement of wildlife species to hide from predators during north-south movement, as well as forage for food, breed, and raise young. In addition, the area along I-15 west of the Project site is comprised of small- to medium-sized patches of coastal sage scrub that form a series of habitat "stepping stones" ideal for foraging birds. Coastal California gnatcatchers are known to occur within these patches of coastal sage scrub habitat. Both of these alternative routes or linkages are higher in habitat quality than the Project property. They comprise feasible wildlife corridors unobstructed from development, with good foraging capabilities and suitable vegetation coverage ideal for protection from predators.

Local Corridors

Local corridors represent wildlife movement patterns in a localized area that is large enough to provide adequate foraging and breeding acreage. Two local corridors exist on site. One is comprised of the southern riparian forest habitat and the other is comprised of the slopes and ridgeline of the Monserate Mountain Preserve. Although not directly connected to the San Luis Rey River to the south, the on-site southern riparian forest is a large stand of diverse vegetation that provides substantial cover and foraging opportunities for riparian wildlife species, as well as cover and a water source for upland wildlife species. The coastal sage scrub and non-native grassland within the northern portion of the site connects to the Monserate Mountain Preserve to the north. This local corridor allows for localized movement of upland

wildlife species from the on-site habitat to the Monserate Mountain Preserve, as well as to the larger regional corridor, identified above, in Rice Canyon.

Regulatory Framework

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) 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.

Sections 4(d) and 7 of the federal ESA regulate actions that could jeopardize endangered or threatened species. A special rule under Section 4(d) of the ESA authorizes take of certain protected species under approved state NCCP programs, which are administered by the states. The County of San Diego participates in a 4(d) program relative to Diegan coastal sage scrub. Section 7 describes a process of federal interagency consultation for use when federal actions may adversely affect listed species. A Section 7 consultation (formal or informal) is required when there is a nexus between listed species' use of the site and Corps jurisdictional areas such as those that occur on the Project site. A biological assessment is required for any major construction activity if it may affect listed species. In such a case, take can be authorized via a letter of biological opinion, issued by the USFWS for non-marine related listed species issues.

Migratory Bird Treaty Act. The Migratory Bird Treaty Act (MBTA) is a federal statute that prohibits the ability to "pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention… for the protection of migratory birds… or any part, nest, or egg of any such bird." This statute allows the USFWS to enforce the prohibition of direct "taking" of active nests. Implementation of this law typically includes restrictions on development activities when sensitive nesting birds, including raptors, are present.

State

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. Section 2081 of the California ESA authorizes CDFG to enter into a memorandum of agreement for 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 plants that are listed. The California ESA followed NPPA and covers both plants and animals that are determined to be endangered or threatened with extinction. Plants listed as rare under NPPA were designated as threatened under the California ESA.

Natural Community Conservation Planning Program. The objective of the NCCP Act, passed by the state of California in 1991, is to conserve natural communities and accommodate compatible land uses. The

NCCP is broader in its orientation and objectives than the California and federal ESAs. These laws are designed to identify and protect individual species that have already declined significantly in number. The objective of the NCCP is to conserve natural communities (thereby also preserving the species that live in them) and accommodate compatible land uses. This pilot program is a cooperative effort between the state and federal governments and numerous private partners. The focus of the California pilot program is the Diegan coastal sage scrub community of southern California. Diegan coastal sage scrub supports the federally listed threatened coastal California gnatcatcher and approximately 100 other potentially threatened or endangered species. The habitat is fragmented and distributed over more than 6,000 square miles, encompassing portions of San Diego, Orange, Riverside, Los Angeles, and San Bernardino counties.

For planning purposes, some these regions are organized into "subareas" that correspond to geographic boundaries of participating jurisdictions and/or landowners. In each subregion and subarea, a local lead agency coordinated the collaborative planning process. Working with landowners, environmental organizations, and other interested parties, the local agency oversees the numerous activities that compose the development of a conservation plan. The CDFG and USFWS provide the necessary support, direction, and guidance to NCCP participants in these functions. The County is participating in the NCCP and has an MSCP in place for southern and western portions of the County (County 1997).

RWQCB Certification. If an entity proposes to conduct any activity including, but not limited to, the construction or operation of facilities that may result in any discharge to Waters of the U.S., a 401 Certification must be obtained. The Project applicant would be required to apply for and receive approval of a 401 Certification from the RWQCB.

County

North County MSCP Subarea Plan. The MSCP is a comprehensive, long-term habitat conservation plan that addresses the needs of multiple species by identifying key areas for preservation as open space in order to link core biological areas into a regional wildlife preserve. The total MSCP study area encompasses 582,243 acres, of which 43 percent (252,132 acres) is in the unincorporated areas of San Diego County. The County adopted an MSCP Subarea Plan on October 22, 1997 for the southwestern portion of the County, to meet the requirements of the NCCP Act of 1991 and the federal and state Endangered Species Acts (County 1997). This Subarea Plan became effective March 17, 1998 with issuance of the Take Permit by the USFWS. The County currently is in the process of finaling the North County MSCP Subarea Plan. A preliminary draft of the North County Plan was released for public review on February 19, 2009. Based on comments received, a revised Plan, as well as a draft EIR/Environmental Impact Statement (EIS) is planned to be released for public review ~~before~~ in late 2010 or early 2011.

The Campus Park Project site, while in an unincorporated area of the County, does not fall within the limits of the adopted MSCP Subarea Plan. It is, however, within the planning area of the proposed North County Segment of the MSCP, and the Project site has negotiated a hardline preserve and take authorization. Since it is likely that the North County Subarea Plan will be approved prior to construction of the Project, a hardline approval has been agreed upon by the Project Applicant, who has had discussions with the County, as well as with the USFWS and CDFG. The current Project design incorporates the agreed-upon hardline open space. Such designation would allow for take authorization within the Project's impacted areas with no further approvals necessary from the resource agencies as they relate to the NCCP process. The hardline open space proposed for the Project includes all areas outside the proposed grading and fuel management zone limits. The hardline agreement between the applicant, County, and resource agencies would incorporate the mitigation and protection measures for impacted biological resources. In addition to the mitigation measures listed in Section 3.3.6 of this

subchapter, the Project also would include an RMP outlining the management tasks to be conducted to preserve the proposed open space in perpetuity. These include maintenance, management, sensitive species surveys, and funding.

Because the North County Segment of the MSCP does not apply due to its current status, conformance with the MSCP and associated Biological Mitigation Ordinance (BMO) are not required for the Proposed Project. Instead, the Project would be subject to the requirements of the NCCP and Section 4(d) of the federal ESA for impacts to Diegan coastal sage scrub. Pursuant to Section 4(d) of the federal ESA, impacts to Diegan coastal sage scrub are limited to five percent of the total acreage occurring within the County as of 1994, and require a Habitat Loss Permit (HLP) pursuant to Habitat Loss Ordinance 8365.

Resource Protection Ordinance. The RPO, effective October 10, 1991, as amended March 21, 2007, provides development controls for unique topography, ecosystems, and natural characteristics within the County deemed to be fragile, irreplaceable, and vital to the general welfare of the County's residents. The resources protected by the County under the RPO include wetlands and wetland buffers (addressed above under jurisdictional waters), steep slopes, sensitive habitat lands, floodways, floodplain fringe, and significant prehistoric and historic sites. The RPO requires that, prior to approval of tentative maps or major use permits, a Resource Protection Study must be completed and findings made relative to compliance with the provisions of the RPO. As noted above, on July 23, 2004, the San Diego County Planning Commission determined that the Campus Park site (and adjacent Pappas property) was exempt from the RPO requirements (PC7-23/RPO-Exemption) because a Tentative Map for the site was recorded prior to August 10, 1988, pursuant to Section 86.605(b).

3.3.2 Guidelines for the Determination of Significance

3.3.2.1 Guidelines of Significance

A significant impact to biological resources would occur if the Proposed Project would:

Regional Habitat

1. Eliminate or substantially degrade a block of habitat considered essential to the local or regional biological environment such that it no longer provides the same or similar function or value.

2. Fail to preserve the natural biological diversity and habitat associations in a contiguous, functional block, thereby compromising the health and viability of the ecosystem.

Wildlife Corridors

3. Result in Project-related improvements or activities within or adjacent to local corridors, regional linkages, or other areas utilized for wildlife movement that would:

    a. Prevent wildlife from accessing areas considered necessary to the species or population persistence in the area (i.e., foraging resources, breeding areas, etc.);

    b. Restrict wildlife from utilizing their natural movement paths (i.e., those paths used when given the choice absent human interference);

    c. Further constrain a narrow corridor by reducing width, removing available vegetative cover, creating edge effects, or placing barriers in the movement path; or

    d. Create artificial corridors that do not follow natural movement patterns.

Edge Effects

4. Subject on- or off-site habitat to substantial edge effects, including:

    a. An increase in noise to a level above ambient conditions, proven to adversely affect sensitive species.

    b. An increase in nighttime light levels above ambient conditions proven to adversely affect sensitive species.

    c. Encroachment of any kind, including but not limited to unauthorized clearing within preserved areas, trash dumping, or off-road vehicle traffic.

    d. Predation of native species such that unrestrained domestic pets would deplete the native population.

    e. Water runoff or underground seepage causing a change in natural moisture levels and/or increasing the spread of pollution and pesticides.

    f. A change in vegetation caused by invasive plants from adjacent ornamental landscaping that would result in a decrease in function and value of the native habitat for native wildlife species.

Sensitive Habitat Wetlands

5. Result in any of the following to or within wetlands: removal of associated vegetation; grading; obstruction or diversion of water flow; change in velocity or siltation 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 a change in species composition, diversity, and abundance.

6. Not include a wetland buffer adequate to protect the functions and values of existing wetlands.

Sensitive Species

7. Result in grading, clearing, construction or other activities (except for passive recreation) within one kilometer (3,280 feet) of occupied breeding or non-breeding suitable upland/wetland habitat for the arroyo southwestern toad.

Sensitive Habitat

8. Remove any significant component of native or naturalized habitat through grading, clearing, and/or other construction activities.

9. Degrade the value of habitat “moderately to significantly” either immediately or in the long-term as indicated by one of the following:

    a. A change in species composition or diversity; or

    b. A decline in the value or function of the habitat.

10. Remove substantial (sufficient to reduce the population of the raptors in the region) raptor foraging habitat.

Applicable Plans, Policies, and Ordinances

11. Fail to conform to the goals and requirements of the HLP Ordinance or NCCP.

12. Fail to conform to the goals and requirements of applicable federal or state regulations, including but not limited to the federal ESA, MBTA, Bald Eagle Protection Act, Clean Water Act, Porter-Cologne Water Quality Act, and California Fish and Game Code.

Special Status Species

13. Result in direct, indirect, and/or cumulative impacts that would be detrimental to the regional long-term survival of a County sensitive species (those recognized as being depleted, potentially depleted, declining, rare, locally endemic, endangered, or threatened), or any species nominated for or on a state or federal rare, endangered or threatened species list (within the San Diego subregion), or a state or County-defined sensitive habitat, including:

    a. Any impact to a plant or animal species listed as federally or state endangered, threatened, or a Species of Special Concern, a County Group A or B plant species, or a County Group 1 animal species;

    b. Impacts that would reduce the local population of a plant species listed as a County Group C or D by 20 percent or more;

    c. Impacts that would reduce the estimated local population of a County Group 2 sensitive animal species by 20 percent or more, or cause impacts that may be considered detrimental to the regional long-term survival of that species;

    d. Grading, clearing, construction, or other construction-related activities would occur within 4,000 feet of an active golden eagle (*Aquila chrysaetos*) nest during the breeding season (January 1 to July 31), such that it would be likely to interfere with normal nesting activities of the eagle in accordance with County Guidelines for Determining Significance – Biological Resources (March 2007; however, this does not supersede implementation agreements with the wildlife agencies);

    e. Passive recreation would occur within 4,000 feet of an active golden eagle nest during the breeding season (January 1 to July 31).

    f. Long-term or permanent development or active recreational uses that would occur within 4,000 feet of an active golden eagle nest such that it would be likely to interfere with normal nesting, resting, or foraging activities of the eagle. (Development and uses closer than 4,000 feet that would not be in the line-of-sight and would not increase indirect impacts may provide analysis to justify a less-than-significant impact level);

    g. Grading, clearing, and/or construction that would occur within the following distances and within the following time periods for one or more of these species:

Species	Distance	Breeding Season
Coastal cactus wren	300 feet from occupied habitat	February 15 to August 15
Coastal California gnatcatcher	300 feet from occupied habitat	February 15 to August 31
Least Bell's vireo	300 feet from occupied habitat	March 15 to September 15
Southwestern willow flycatcher	300 feet from occupied habitat	May 1 to September 1
Tree-nesting raptors	500 feet from occupied habitat	January 15 to July 15
Ground-nesting raptors	800 feet from occupied habitat	February 1 to July 15
Southern California rufous crowned sparrow	300 feet from occupied habitat	February 15 to August 31
Yellow warbler	300 feet from occupied habitat	March 15 to September 15
Yellow-breasted chat	300 feet from occupied habitat	March 15 to September 15

3.3.2.2 Guideline Sources

The identified guidelines are based on Appendix G of the CEQA Guidelines, state and federal laws and regulations and SANDAG's Regional Comprehensive Plan (RCP). These guidelines precede and are consistent with current County guidelines as stated in the Guidelines for Determining Significance – Biological Resources (March 2007).

Guideline Nos. 1 and 2 are associated with the identification of local or regionally important habitat blocks in sources such as the NCCP and MSCP (e.g., Core Areas) and the Fallbrook Community Plan (e.g., Resource Conservation Areas [RCAs]). The guidelines are intended to protect both the function and value of such individual habitat areas from Project-related development and to maintain the contribution of such areas to the regional biological environment.

Criteria related to wildlife movement corridors identified in Guideline No. 3 are intended to protect such areas due to their critical role in species survival. Appendix G of the CEQA Guidelines indicates that a project could have a significant impact if it would "interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors." Wildlife movement corridors and linkages accommodate a number of essential activities for species viability, including foraging, juvenile dispersal, genetic flow, migration, and colonization. Without adequate movement areas to provide for these ecological needs, other efforts to protect wildlife are undermined, and the probability of species extirpation from a specific locale and eventual extinction may be substantially increased. Because of the importance of adequate wildlife movement corridors and linkages, they have been subject to substantial analysis in conservation biology literature. Despite this intensive study, however, universally accepted standards for maintaining corridors have not been generated due to the inherent variability in regional and local biological conditions and requirements. Optimal criteria for individual wildlife movement areas are instead based on site-specific factors, such as function (e.g., to accommodate regional linkage or local movement), individual species needs, and the type and quality of habitats present. The criteria identified in Guideline No. 3 incorporate the use of site-specific factors, pursuant to principles established by the conservation biology community.

Criteria identified in Guideline No. 4 are intended to protect open space from edge effects related to development, with such effects potentially extending several hundred feet into open space preserves. Such effects are addressed through the NCCP and can result in significant direct changes to species composition, diversity, and abundance, as well as indirect effects that can vary widely depending on the nature of development and adjacent resources. Noise and artificial lighting, for example, can affect foraging and breeding habits of all types of species, including moths (an important prey source for bats), nesting birds, and nocturnal mammals. Edge affects also can adversely impact the availability of

resources such as water or prey species, and can change habitat suitability by altering (for example) moisture or vegetation conditions. Due to their potential to affect large areas of preserved open space, edge effects have been subject to substantial analysis in multiple species recovery plans, reports, technical journals, and scientific conferences. Universally accepted standards for addressing edge effects have not been generated due to the variability in site-specific conditions. The criteria identified for potential project-related edge effects in Guideline No. 4 were therefore generated on the basis of both local conditions and commonly accepted practices in the biological community.

Impacts to wetlands and wetland buffers, as discussed in Guideline Nos. 5 and 6, can have widespread ramifications beyond the immediate loss of sensitive habitat. The loss of wetlands, for example, can affect the riparian species located within them, as well as upland species, which use wetlands as a source of water and as access corridors. Additionally, even minor impacts to wetlands potentially can result in substantial changes in downstream hydrology and/or water quality, with indirect effects therefore not necessarily confined to the area of project-related activities. The CDFG and the Corps regulate impacts to wetlands.

Guideline No. 7 is associated with the identification of important breeding and aestivation areas within one kilometer of occupied arroyo southwestern toad habitat. The guideline is intended to not only protect the breeding habitat of this species but the summer aestivation and movement areas as well.

The removal of native or naturalized habitat through project-related activities, as identified in Guideline Nos. 8 and 9, would directly affect habitat acreage and associated plant/animal species, and would affect potential associated resources/uses such as species diversity, foraging, breeding, and access. Such habitats impacts are addressed in Appendix G of the CEQA Guidelines.

Guideline No. 10 is intended to address raptor species' regular use of both native and non-native grassland habitats for foraging. These species are protected under the MBTA as well as the California Fish and Game Code.

Guideline No. 11 is intended to address applicable goals and requirements under the County HLP Ordinance 8365 and related NCCP. The Southern California Coastal Sage Scrub NCCP was the first effort of this statewide program (with related guidelines adopted in 1993), and authorized a total interim Diegan coastal sage scrub habitat loss of five percent (based on calculations of then-existing habitat acreage by an established Scientific Review Panel). As a participant in the NCCP program, the County is the local jurisdiction in the Project area with authority to issue an HLP and correspondingly allow "take" of the federally listed threatened coastal California gnatcatcher, pursuant to Section 4(d) of the federal ESA. An HLP is required for parcels located outside of the MSCP and must be issued prior to issuance of a Brushing and Clearing Permit, Grading Permits, or Improvement Permits in lieu of Grading Permits. There is an MSCP Plan in place for portions of the County, although the Project site is not within the limits of this plan. While a "North County Subregional Plan" is currently being drafted for areas in northern San Diego County that include the Project site, it has not yet been approved, and the Proposed Project must therefore conform to the NCCP and HLP Ordinance guidelines.

All of the federal and state requirements identified in Guideline No. 12 include goals and objectives intended to protect (among other issues) sensitive species, habitats, and related resource values such as water quality. Compliance with the referenced laws and regulations is required and is related to biological resources. The agencies responsible for enforcing these laws and regulations are responsible agencies with respect to this EIR, including the USFWS, CDFG, RWQCB and Corps. These agencies and/or the laws and regulations they enforce are specifically referenced in Appendix G of the CEQA Guidelines, which indicates that impacts to the biological resources protected by these agencies may constitute a significant environmental impact.

Analyses of potential impacts to applicable plant and animal species conducted during creation of the MSCP concluded that individual populations of most MSCP species could remain viable if no more than 20 percent was removed. Accordingly, Guideline Nos. 13a and 13c identify this criterion for applicable species including: (1) species listed as County Group A or B (plant) or County Group 1 or 2 (animal); and (2) plant or animal species listed as federally or state endangered, threatened, or Species of Special Concern. Impacts to less than 20 percent of individual plant and animal populations, however, also potentially can be detrimental to regional long-term species survival. It should be noted that determining accurate estimates of given animal populations may be more difficult than generating similar estimates for plant populations. Accordingly, the "detrimental to regional long-term survival" criterion should be used (rather than the "20 percent criterion") in cases where the estimate of an animal population is questionable.

The County Group C and D plant species identified in Guideline No. 13b are thought to be in decline, although not to the extent that extirpation or extinction is imminent. Because these species are often prolific within suitable habitat, standards based on protection of such habitats are generally adequate to protect Group C and D species. Due to the generally declining nature of these species (and associated habitats), however, some instances may occur where Project-related impacts may be detrimental to their regional long-term survival. As noted above, determining accurate estimates of given animal populations may be more difficult than generating similar estimates for plant populations.

The criteria identified in Guideline Nos. 13d, 13e, 13f, and 13g are intended to address the potential loss of offspring for the noted particularly sensitive avian species. Any direct or indirect impacts that might affect the nesting success of these species would be considered significant, with the described buffer distances and breeding season dates derived from various studies completed for birds in San Diego County (and generally accepted by the scientific community). Furthermore, nesting raptors and coastal California gnatcatchers are protected by the USFWS through the MBTA and the federal ESA, respectively. Appendix G of the CEQA Guidelines indicates a potential significant impact if a project would "impede the use of native wildlife nursery sites."

3.3.3 Analysis of Project Effects and Determination as to Significance

Direct project-related impacts are immediate impacts resulting from the permanent removal of habitat due to project development. Direct impacts from the Proposed Project are shown on Figure 3.3-5, On-site and Off-site Biological Resources/Impacts, for impacts in the immediate vicinity of the Project and occurring as part of Project design. Off-site impacts associated with potential traffic mitigation are shown on Figures 3.3-2a through e. For purposes of this assessment, all biological resources within the limits of grading for development, trails (including the 10 feet on either side for fuel modification), off-site improvements, or within the fuel management zones were considered 100 percent impacted. A total of ~~243.7~~226.7 acres would be directly impacted on the Campus Park Project site. Up to an additional ~~52.17~~49.1 acres of habitat would be impacted as a result of off-site Project-proposed improvements.

~~One of the Project mitigation measures is the proposed revegetation of a manufactured slope to serve as a revegetated wetland buffer between proposed development (PA MF-1) and the adjacent southern riparian forest (OS-2). The slopes created between the MF-1 and OS-2 are designed to function as the fuel modification zone and limited building zone, as well as a revegetated wetland buffer for riparian wildlife. This revegetated wetland buffer area would be planted with native low fuel plants, including hydrophytic plants (i.e., plants that grow partly or wholly in water) such as mulefat, coyote brush, and sandbar willow (*Salix interior*) near the bottom of the slope, and coast live oaks and associated understory on the ascending slope. Per CEQA Guidelines Section 15126.4, the effect of the mitigation measure was factored into Project analysis. This proposed revegetated buffer was analyzed as a direct Project impact.~~

A primary focus of Project design was avoidance of the maximum amount of both wetlands and the highest quality coastal sage scrub that is adjacent to off-site open space to the north (Heights of Pala Mesa). Proposed development was sited primarily within existing pastureland, disturbed and developed area, and disturbed coastal sage scrub~~, and the fringe of the wetland habitat~~. The Project design avoids the largest contiguous block of wetland habitat supporting the federally and state listed endangered least Bell's vireo. In addition, the highest quality on-site coastal sage scrub, which is adjacent to off-site open space, would be preserved.

Direct Impacts to On-site Habitats (Guideline Nos. 1, 2, and 8)

Direct impacts from the Proposed Project to vegetation communities on site are shown in Table 3.3-1. ~~Under Wastewater Management Option 1, t~~The Proposed Project would result in impacts to approximately ~~241.1~~226.7 acres within the Project site, including ~~8.2~~1.4 acres of southern riparian forest, 1.6 acres of southern willow scrub, ~~6.5~~0.01 acre~~s~~ of freshwater marsh, 1.3 acres of oak woodland, 42.3 acres of Diegan coastal sage scrub, ~~41.2~~38.5 acres of non-native grassland, 0.1 acre of non-native vegetation, ~~133.8~~135.4 acres of pasture, 0.1 acre of eucalyptus woodland, 3.9 acres of disturbed habitat, and 2.1 acres of developed land. ~~Under Wastewater Management Option 2, the Proposed Project would impact an additional 2.6 acres of habitat (for a total of 243.7 acres), including 1.3 acres each of southern riparian forest freshwater marsh.~~ Impacts to southern riparian forest, southern willow scrub, ~~freshwater marsh,~~ coast live oak woodland, Diegan coastal sage scrub, non-native grassland, and pasture would be **significant**. (**Impacts BI-1a through BI-1g, respectively**)

Impacts to non-native vegetation, eucalyptus woodland, disturbed habitat, and developed land would be **less than significant**.

Direct Impacts to Off-site Habitats (Guideline Nos. 1, 2, and 8)

Off-site Impacts Associated with Project Design Features and Direct Traffic Mitigation

Potential project-related off-site impacts relate both to required project elements, as well as potential disturbance at the one direct traffic mitigation locale (depicted on Figure 3.3-2c). The following discussion addresses off-site Project-design elements.

Proposed off-site road improvements (including those for direct traffic mitigation), sewer line construction, and grading would impact approximately ~~47.91~~48.25 acres of off-site habitats, including ~~1.0~~0.7 acre of southern riparian forest, ~~0.06~~0.8 acre of southern willow scrub, 0.1 acre of freshwater marsh, ~~3.95~~3.77 acres of Diegan coastal sage scrub, ~~6.37~~6.27 acres of non-native grassland, ~~0.37~~0.39 acre of non-native vegetation, ~~7.76~~9.06 acres of pasture, ~~11.91~~11.4 acres of orchard, ~~1.7~~0.3 acre~~s~~ of eucalyptus woodland, ~~14.21~~13.71 acres of disturbed habitat, and ~~1.56~~1.75 acres of developed land (Table 3.3-1). Impacts to off-site southern riparian forest, southern willow scrub, freshwater marsh, Diegan coastal sage scrub, non-native grassland, and pasture would be **significant**. (**Impacts BI-1a, b, c, e, f, and g, respectively**)

Impacts to non-native vegetation, orchards, eucalyptus woodlands, disturbed habitat, and developed land would be **less than significant**.

Off-site Impacts Associated with Cumulative Traffic Mitigation

The Proposed Project may include the improvements of some additional off-site intersections as part of cumulative traffic mitigation in conjunction with payment of TIF. These intersections are demarcated with a 3 on Figure 1-35 of this EIR and include Old Highway 395/Stewart Canyon Road/Canonita Drive,

and Old Highway 395/Pala Mesa Drive~~, and SR 76/Old Highway 395~~ (Figures 3.3-2c~~b,~~ and 3.3-2d~~, and 3.3-2e~~). Should the Project implement these intersection improvements, additional impacts to off-site habitats would include 0.01 acre of coast live oak woodland, 0.~~45~~ 23 acre of Diegan coastal sage scrub, 0.03 acre of non-native grassland, 0.31 acre of non-native vegetation, 0.14 acre of pasture, 0.09 acre of disturbed habitat, and 0.~~54~~ 05 acre of developed land, for a total of ~~1.57~~0.86 acre~~s~~ (Table 3.3-2). Impacts to off-site coast live oak woodland, Diegan coastal sage scrub, non-native grassland, and pasture would be **significant**. (**Impacts BI-1d(1), e(1), f(1), and g(1), respectively**)

Impacts to non-native vegetation, disturbed habitat, and developed land would be **less than significant**.

Direct Impacts to Wetlands (Guideline No. 5)

The Proposed Project would impact wetlands and waters as shown on Figure 3.3-6, Impacts to Jurisdictional Wetlands and Waters, and summarized in Table 3.3-2. ~~Under Wastewater Management Option 1, t~~The Proposed Project would directly impact ~~13.9~~1.41 acres of wetlands, as well as 1.6 acres of non-wetland Waters of the U.S., under Corps jurisdiction on site; impacts to CDFG jurisdictional areas on site would include ~~7.5~~1.41 acres of wetlands and 1.~~4~~6 acres of non-wetland Waters of U.S. ~~Under Wastewater Management Option 2, the Proposed Project would directly impact 16.5 acres of wetlands, as well as 1.6 acres of non-wetland Waters of the U.S., under Corps jurisdiction on site; impacts to CDFG jurisdictional areas on site would include 8.8 acres of wetlands and 1.4 acres of non-wetland Waters of U.S.~~ Off-site Project improvements would impact ~~1.16~~0.8 acre~~s~~ of Corps wetlands and 0.8 acre of Corps non-wetland Waters of the U.S., as well as ~~1.16~~1.6 acres of CDFG wetlands. Impacts to jurisdictional areas would be **significant**. (**Impact BI-2**)

Impacts to Sensitive Species (Guideline Nos. 7, 10, 12, and 13a through f)

Parry's Tetracoccus

The Proposed Project would impact the smaller remnant population on site of approximately 248 individuals of Parry's tetracoccus. The larger population of approximately 1,440 plants would not be impacted. Therefore, approximately 15 percent of the total plants on site would be impacted. Impacts to Parry's tetracoccus would be **significant** in accordance with Guideline 13a. (**Impact BI-3**)

This impact is not expected to significantly impact the survival of this species in the wild as the majority of the population would be protected and would ensure the viability of this population.

Palmer's Grappling-hook

One individual of Palmer's grappling-hook was located on site in the northern area, but would not be impacted by the Proposed Project.

Orange-throated Whiptail

One orange-throated whiptail was observed on an existing dirt road on site. This individual potentially could be impacted by the Project due to trail construction and use. Four additional orange-throated whiptails were observed in on-site Diegan coastal sage scrub habitat that would be preserved. Impacts to this species would be **less than significant** since the majority of observations were within an area of habitat proposed for preservation.

Northern Red-diamond Rattlesnake

The Project would not impact the observed location of the northern red-diamond rattlesnake; therefore, impacts to this species would be **less than significant**.

Least Bell's Vireo

~~The location of one least Bell's vireo observed on site would be impacted by implementation of the Proposed Project.~~ The Project would not directly impact any locations where least Bell's vireos were observed; therefore, **no direct impact** to this species would occur. ~~This impact would be **significant**. (**Impact BI-4**)~~

Coastal California Gnatcatcher

Implementation of the Proposed Project would impact one observed location of one pair of gnatcatchers on site, as well as habitat for the gnatcatcher (~~46.25~~46.07 acres on and off site). Habitat on site for this species would be reduced by ~~32~~ 33 percent. Impacts to this species would be **significant**. (**Impact BI-~~5~~4**)

Southern California Rufous-crowned Sparrow

Implementation of the Project would not result in direct impacts to the locations of the two southern California rufous-crowned sparrows observed on site. Impact to this species would be **less than significant**.

Yellow Warbler

The Proposed Project would directly impact the location of the yellow warbler observed on site. This impact would be **significant**. (**Impact BI-~~6~~5**)

Yellow-breasted Chat

The Proposed Project would directly impact two of the four locations of the yellow-breasted chats observed on site. This loss would be **significant**. (**Impact BI-~~7~~6**)

Raptors

The site contains foraging habitat for a variety of raptor species, including the observed Cooper's hawk and turkey vulture. Although raptors are opportunistic in their foraging strategies and will use almost any open habitat where rodents, birds, and reptiles are present, they typically prefer open shrub-lands, grassland, and pastureland because prey is more conspicuous and accessible in these habitats. The loss of ~~47.57~~44.77 acres of non-native grassland (including ~~6.37~~6.27 acres off site) and ~~141.56~~144.46 acres of pasture (including ~~7.76~~9.06 acres off site) would result in diminished carrying capacity for raptors on site and in the immediate Project vicinity. The loss of these habitats would constitute a **significant impact**. (**Impact BI-~~8~~7**)

Other Sensitive Species Known from the Area

Southwestern Willow Flycatcher

Although critical habitat for the southwestern willow flycatcher is located along the nearby San Luis Rey River, the willow riparian habitat on site is not suitable to support this species. **No impact** to this species is expected to occur**.**

Arroyo Toad

Although no arroyo toads were observed on site during protocol surveys, suitable habitat does occur on site and critical habitat has been designated for this species along the San Luis Rey River just south of the Project site. Even so, it is not anticipated that indirect impacts to this species would occur from the Proposed Project because there is neither suitable breeding habitat (slow-moving streams with soil substrates) on site nor is it considered an area of toad seasonal movement. The closest documented location of this species is 0.5 mile southeast of the Project site (Cadre Environmental 2005). Arroyo toads were not observed near the Project site. No suitable breeding habitat occurs on site as substantiated by the surveys, nor is the Project site suitable for movement due to the widening of SR 76, compaction of on-site soils, and results of a pitfall trapping study conducted for adjacent Meadowood project (Cadre Environmental 2005). Therefore, **no impact** to arroyo toads would occur.

Stephens' Kangaroo Rat

No Stephens' kangaroo rats were observed on site during protocol surveys. As stated above, a habitat assessment for this species was conducted on site with negative results. It was determined that the substrate and habitat are not suitable for this species on site. **No impact** to Stephens' kangaroo rats would occur.

Golden Eagle

No known active golden eagle nests occur within 4,000 feet of the Project site; therefore, **no impact** to golden eagles would occur.

Direct Impacts to Wildlife Corridors (Guideline No. 3)

The Project site is located adjacent to and east of I-15. Planned Campus Park West and existing groves are located to the south. Existing groves and planned Meadowood are located to the east and southeast. The Monserate Mountain Preserve (Heights of Pala Mesa) is located to the north and northeast. Design of an adequate wildlife corridor is based on the quality of habitat, connectivity of the habitat, cover by native plants, and edge effects from adjacent land uses. The Project site, while supporting a high-quality riparian woodland in the southern area and Diegan coastal sage scrub in the northern area, is not expected to provide an adequate regional wildlife corridor for bird and mammal species. This is due to the pasture between the southern riparian forest to the south and Diegan coastal sage scrub to the north. Though undeveloped, the pasture between the northern Monserate Mountain Preserve and the southern San Luis Rey River has been fenced and grazed since the 1950s and is therefore not used as a regional corridor. This pasture has been and currently is being used for livestock grazing and thus is largely barren or sparsely vegetated with non-native forbs. The Project site does not have well-protected habitat cover for upland bird species and/or mammals to traverse the Project site between the southern riparian forest and Diegan coastal sage scrub. No current on-site regional wildlife corridor exists. The proposed development footprint would not change this existing baseline condition.

Related to this topic, higher quality cover and habitat linkages are provided east of the Project site that could be utilized for regional dispersal of wildlife (Figure 3.3-4). Rice Canyon is a relatively undeveloped area east of the Project site that connects habitat from the south to the Monserate Mountain Preserve to the north; it is considered a regional north-south wildlife corridor. Adequate cover and linkage also exists west of I-15 via patches of coastal sage scrub habitat that create a series of sequential habitat "stepping stones" that can be used by upland species, including foraging birds. (Coastal California gnatcatchers are known to occur within these patches of sage scrub.) There is little vegetation for the gnatcatcher to use between the on-site Diegan coastal sage scrub and habitat to the south. When viewed regionally, the most viable connection for gnatcatchers is either from coastal sage scrub south of the San Luis Rey River through habitat in Rice Canyon to the east or through the series of coastal sage scrub habitat "stepping stones" located west of I-15. Both the Rice Canyon corridor and the "stepping stones" to the west provide a more suitable regional corridor than on-site resources. In conclusion, direct impacts to wildlife corridors are expected to be **less than significant** as a result of Project implementation.

As for localized corridors, wildlife would be expected to use the large southern riparian forest habitat on site, as well as on-site Diegan coastal sage scrub in the northern portion of the site. In addition, various upland drainages occur within the Diegan coastal sage scrub habitat that could be utilized by small wildlife movement as localized corridors. The Proposed Project has been designed to provide large blocks of habitats continuing to connect to off-site open space. The Diegan coastal sage scrub habitat in the northern area abuts the Monserate Mountain Preserve, while the southern riparian forest provides habitat within Horse Ranch Creek between I-15 and SR 76, which would remain in open space. Proposed Pankey Place would not act as a barrier to wildlife movement along Horse Ranch Creek as the road would not bisect the creek. An existing bridge is located on Pankey Road that crosses Horse Ranch Creek. That facility would be relocated approximately 100 feet southwest of its existing location and would be approximately the same width as the existing structure. It would also be approximately five feet higher than the existing structure, allowing for a larger passage. The Proposed Project would not interfere with these local wildlife use areas; therefore, impacts to local wildlife corridors would be **less than significant**.

Indirect Impacts (Guideline Nos. 4, 6, 9, and 13g)

Indirect impacts associated with adverse "edge effects" can result from changes in land use adjacent to natural habitat. These indirect effects can be either short-term impacts (e.g., related to the construction period) or long-term (e.g., ongoing effects associated with development). Potential indirect/edge effect impacts from the Proposed Project may include: excess noise levels; excess night-time artificial light; unauthorized encroachment; predation of native wildlife by domestic pets; contaminated water runoff; encroachment of invasive non-native plants; wetland buffer impacts; habitat isolation; and road kill. Each of there issues is addressed below.

Noise

Guideline No. 4a states that substantial edge effects may occur if the Project creates noise greater than ambient levels (and at levels proven to adversely affect sensitive species). Currently, portions of the site are severely affected by ambient noise from I-15 to the west. Ambient noise levels in OS-2 and OS-3 range from 55 to 70 dBA. Noise levels are not expected to increase from proposed residential activities because the Project would include ~~community theme~~open view sound walls as part of Project design between some proposed development and open space (refer to Figure 1-28) and the only "developed" Project uses proposed near OS-2 would be a pump station and trail staging area. The pump station is proposed to be located a minimum of 100 feet from the edge of biological open space. Utilizing a drop-off rate of 6 dBA per doubling of distance, noise generated by the pump station would fall within acceptable limits at abutting biological open space lots (60 dBA $L_{eq;}$ Appendix E). Given that the ambient

noise levels already are elevated due to I-15, and that the Proposed Project is not expected to create significant noise impacts beyond the ambient noise levels; impacts would be **less than significant**.

Grading, clearing, or construction activities within 300 feet of an active coastal California gnatcatcher, southern California rufous crowned sparrow, least Bell's vireo, yellow warbler, or yellow-breasted chat nest during these species' breeding seasons would have the potential to disrupt nesting behavior. The breeding seasons have been identified as February 15 through August 31 for coastal California gnatcatcher and southern California rufous crowned sparrow, and March 15 to September 15 for least Bell's vireo, yellow warbler, and yellow-breasted chat. Similarly, any grading, clearing, or construction within 500 feet of an active tree-nesting raptor nest or 800 feet of an active ground-nesting raptor between the raptor breeding season (January 15 to July 15 for tree-nesting raptors and February 1 to July 15 for ground-nesting raptors) could disrupt nesting. This potential adverse effect would comprise a **significant impact**. (**Impact BI-~~9~~8**)

Night-time Artificial Lighting

Night-time lighting on native habitats can provide nocturnal predators with an unnatural advantage over their prey. When this occurs, it could cause an increased loss of native wildlife, which would be potentially significant for listed species such as the coastal California gnatcatcher and least Bell's vireo. For the Proposed Project, however, the Project would conform with the County Light Pollution Code, provide shielding, and direct street lights away from natural open space. Therefore, impacts associated with night-time lighting would be **less than significant**.

Human Encroachment

Increases in human activity in the area could result in degradation of sensitive vegetation by fragmenting habitat and forming additional edges through the creation of unauthorized roads or trails and by removing existing vegetation. In addition, illegal dumping of lawn and garden clippings, trash, or other refuse could occur. Should they occur, such impacts would be considered significant as Guideline No. 4c may be exceeded. The open space would be fenced with a five- to six-foot high open-view fence, however, and posted with permanent "no trespassing" signs. This would protect the area from encroachment. A fencing plan is included as part of the Project (Figure 1-28). The implementation of the fencing plan would avoid any potential significant impact associated with human encroachment; impacts would be **less than significant**.

Domestic Pets and Nuisance Species

The Project has the potential for domesticated animals and nuisance species to impact native wildlife. Cats are known to prey on wildlife adjacent to residential development, especially birds and lizards. Dogs also may prey on wildlife. Accordingly, domestic animals could significantly impact native wildlife in the immediate area. In addition, residential uses often support the introduction of Argentine ants to local habitats. This could have significant consequences on native ant species and animals that feed on them by the Argentine ants outcompeting native ant species and replacing them in native habitats. Nuisance or domesticated animals species within open space would be potentially **significant**. (**Impact BI-~~10~~9**)

Increased or Contaminated Water Runoff

Water quality in riparian areas can be adversely affected by potential surface runoff from residential development, including increases in urban contaminants such as fertilizers, pesticides, and car petroleum products. Decreased water quality may adversely affect vegetation, aquatic animals, and terrestrial wildlife that depend upon these resources. Compliance with County requirements and implementation of

Project design measures (refer to Table 1-13), however, would reduce any potential water quality effect associated with runoff. The Proposed Project would have an approved Storm Water Management Plan (SWMP) that would incorporate bioswales and implement BMPs to protect the adjacent wetlands from impacts associated with storm water runoff. Accordingly, impacts would be **less than significant**.

Increased water flow often creates erosion and/or siltation issues for downstream wetland resources. The Project design includes a number of measures to reduce the peak runoff volume and velocity of on-site flows, and to control post-development runoff from the Project site during design storm events. With the inclusion of these proposed design measures (refer to Table 1-13 for the complete list of design measures), post-development runoff volumes leaving the Project site boundary would be less than or equal to the pre-development volumes. Accordingly, impacts associated with water flow would be **less than significant**.

Invasion of Open Space by Invasive Non-native Plant Species

Non-native plants could colonize sites disturbed by construction and could spread into adjacent native habitats, especially following a disturbance, such as fire. Many ~~of~~ non-native plants are highly invasive and can displace native vegetation, reducing native species diversity, potentially increasing flammability and fire frequency, changing ground and surface water levels, and potentially adversely affecting native wildlife that is dependent on the native plant species, as a few examples. Review of the landscape plans indicates that no species identified as invasive are proposed as part of the landscape plans. However, colonization of non-native plant species in non-impact areas could occur if Project residents plant invasive plant species in their yards. Colonization, if it were to occur, would result in degradation of native habitat. This would constitute a **significant impact**. (**Impact BI-~~11~~10**)

Impacts to Buffers

Wetland buffers are an integral part of a preserve system to reduce issues addressed above, such as invasive plants, noise, water quality, and lighting and also serve as a means to reduce edge effects. The Proposed Project would impact the wetland buffer adjacent to Horse Ranch Creek and side tributaries at ~~three locations: PA MF-1,~~ Pankey Place, ~~and the off-site extension of Pala Mesa Drive~~Pankey Road, the detention basin, trail staging area, and sewer pump station. Typical wetland buffers vary in width from 50 to 200 feet depending on the resources within and surrounding the wetland. Guideline No. 6 states that significant impacts would occur if the Project does not include a wetland buffer adequate to protect the functions and values of existing wetlands. Due to the constraints posed by the road alignments and intersections, construction would directly impact wetlands and wetland buffers, thereby not buffering the riparian habitat that would remain on site. Project grading and ultimate build-out without an adequate buffer may result in degradation of the adjacent habitat and wildlife within the wetland. Once Project construction is complete, a manufactured buffer between the proposed buildings and the adjacent habitat would be installed/created, and the Project proposes to revegetate these areas with native species, thereby reducing this impact. Manufactured buffers would be part of the landscape plan and are discussed in the On-site Wetland Enhancement Plan. A manufactured buffer would not be used as mitigation or enhancement credit because it would be within the fuel modification zone, with a plant palette in accordance with fire clearing requirements. These wetland buffers effects would be **significant impacts**. (**Impact BI-~~12~~11**)

Impacts to Off-site Habitat due to Isolation

Guideline 3a states that significant biological impacts would occur if the Proposed Project would prevent wildlife from accessing areas considered necessary to the species for population persistence in the area (i.e., foraging resources, breeding areas, etc). The pasture area between the Monserate Mountain Preserve

to the north and the San Luis Rey River to the south has been used for cattle grazing since the 1950s, providing a degraded existing condition. The Project, however, was designed to provide (1) a continuous block of habitat connecting to Monserate Mountain Preserve to the north and (2) a significant block of the riparian habitat of Horse Ranch Creek. Pankey Place was moved further south to reduce fragmentation of riparian habitat. Off-site segments of Pankey Road, Pala Mesa Drive, and Horse Ranch Creek Road have the potential to fragment habitats both on the Campus Park West property and the Meadowood property. Currently, the locations, while not separated by development, are separated by the grazed pasture land, citrus groves, SR 76, and I-15. Therefore, impacts are expected to be **less than significant** as a result of implementation of the Proposed Project.

Road Kill

Road kill could occur as vehicles travel on the roads associated with the Project. Increases in road kill also could occur as traffic is added to roads that lead to the Project site. The proposed open space would be separated from the roads in the northern and central sections by development (e.g., houses, commercial uses, etc.) therefore the likelihood of significant road kill would be low. Mortality would be more likely to occur along Pankey Place, which would traverse the riparian habitat that supports several sensitive species. Impacts associated with road kill along Pankey Place would be potentially **significant**. (**Impact BI-~~13~~12**)

Conformance with the Goals and Requirements of the Habitat Loss Permit Ordinance or Natural Community Conservation Plan (Guideline No. 11)

The Project would be subject to the requirements of the NCCP and Section 4(d) of the federal ESA for impacts to Diegan coastal sage scrub. Pursuant to Section 4(d) of the federal ESA, approvable impacts to Diegan coastal sage scrub are limited to five percent of the total acreage occurring within the County as of 1994, and require an HLP pursuant to Habitat Loss Ordinance 8365. The Project Applicant would be required to obtain an HLP or a Section 10 permit from USFWS for take of coastal California gnatcatcher habitat. The Proposed Project would conform to the goals and requirements of the HLP Ordinance as a matter of law. Impacts are assessed as **less than significant**.

3.3.4 Cumulative Impact Analysis

Cumulative impacts refer to incremental, individual, environmental effects of two or more projects when considered together. These impacts may be minor when addressed individually, but still be collectively significant as they occur over a period of time. When assessing cumulative impacts to biological resources, the geographic area included in the cumulative analysis should reflect: (1) biological parameters similar to those occurring on the Project site or within the same watershed area; (2) distribution of sensitive species populations and home ranges similar to those occurring the Project site; and (3) habitat use patterns of common wildlife species similar to those occurring the Project site. Based on these criteria, cumulative assessment areas were determined for the various biological resources on site (REC 2008a; Figure 3.3-7, Cumulative Projects for Biological Resources). Of the cumulative projects listed in Tables 1-14 and 1-15, 87 are known to support biological resources similar to those found on the Project site. Refer to Appendix H of EIR Appendix G for a breakdown of the habitats contained within each of the projects shown on Figure 3.3-7. Figure 3.3-7 shows the cumulative projects that were evaluated.

Regional Ecosystems

The Proposed Project is partially located in an eastern portion of the Northern Valley Humid Temperate Ecological Region and partially in the Northern Foothills Humid Temperate Ecological Region, as

mapped by the County. The Project site sits east of I-15 in the Pala Mesa Valley and watershed of the San Luis Rey River. The area is developed; consisting primarily of rural residential, active groves, and riparian habitats along the floodplain of the San Luis Rey River and its tributaries. Natural habitats of the region consist of sage scrubs, chaparrals, riparian and oak woodlands and sandy washes.

Areas that are important to the wildlife of the region include the San Luis Rey River corridor, large tracts of undeveloped coastal sage scrub to the east (Rice Canyon), and the coastal sage scrub/chaparral "stepping stone" areas west of I-15.

Cumulative Impact Area for Wetlands, Southern Riparian Forests and Riparian Scrubs, Oak Woodlands, and Wetland Sensitive Species

When analyzing cumulative impacts to wetlands, waters, and aquatic species, it is important to consider impacts within the watershed in which the project is located. The area analyzed for potential cumulative impacts includes the San Luis Rey River watershed within the ecoregion from approximately the communities of Bonsall to Pala. Oak woodlands also are included within this cumulative impact assessment because the oak woodlands in the region are generally associated with minor tributaries to this river.

The least Bell's vireo is known to occur throughout the San Luis Rey River, Santa Margarita River, San Diego River, Sweetwater River and these river's tributaries. For this assessment, least Bell's vireo impacts are assessed utilizing the San Luis Rey River corridor and its tributaries. This same study area is used for analysis of impacts to the yellow warbler and yellow-breasted chat.

Cumulative Impact Area for Diegan Coastal Sage Scrub, Non-native Grassland, Coastal California Gnatcatcher, Raptors, and Parry's Tetracoccus

Many species associated with upland habitats are locally migratory and do not tend to traverse many miles. Therefore, the cumulative area addressed in this analysis is the upland habitat of Diegan coastal sage scrub and non-native grassland comprised of the area within the Northern Foothills and Northern Valley Humid Temperate ecological regions, which are quite large. To provide an adequate cumulative assessment, the cumulative impact area includes those habitats within these regions from Fallbrook to Bonsall to Lilac to Pala (an approximately five-mile radius around the Project site). This provides sufficient range for resident species while encompassing enough lands to provide an adequate assessment.

The coastal California gnatcatcher and raptors are analyzed within the ecoregions described above. Parry's tetracoccus is known to occur primarily in the inland North County, but has been observed as far south as Dehesa and McGinty Mountain near Jamul. For this analysis, the assessment of cumulative impacts to Parry's tetracoccus incorporates the two ecoregions defined above.

Cumulative Impacts to Sensitive Habitats

Permanent impacts to sensitive habitats associated with the Project include impacts to riparian forest/scrub, coast live oak woodland, Diegan coastal sage scrub, non-native grassland, and pasture. A total of 87 of the cumulative projects in the vicinity are known to support one or more of these habitat types. These projects, while adding to the cumulative loss of these habitats, also are required to set aside open space to protect these habitats. In the case of wetland habitats, mitigation is required at a minimum ratio of 1:1 creation and 2:1 restoration/enhancement; therefore, no net loss of these habitat types would occur. Accordingly, cumulative impacts to wetland habitats would be **less than significant** due to the no net loss policy of the federal, state, and County regulations.

The Fallbrook and Pala Mesa areas are rural in nature, and include the Fallbrook Conservancy Preserve area. Most land in this region is large-lot residential or undeveloped land that will be required to comply with the NCCP guidelines and eventually the North County MSCP, thereby reducing or hindering the cumulative loss of sensitive upland habitats. Accordingly, incremental loss of upland habitats, including Diegan coastal sage scrub, coast live oak woodland, non-native grassland, and pasture are expected to be **less than significant**.

Cumulative Impacts for Sensitive Plant Species

Parry's tetracoccus are relatively abundant both on and off site. This species is prevalent in the Monserate Mountain Preserve to the north of Campus Park and within the chaparral habitats of the region. This species often occurs on steep slopes that preclude development impacts, thereby protecting this species from cumulative losses. The biological goals of the Draft North County MSCP Subarea Plan is to "develop a preserve system that will preserve ecosystem functions and values, maintain the range of natural biological communities and native species within the Plan area and contribute to the recovery of endangered, threatened, and sensitive species and their habitats." This Subarea Plan discusses regional conservation goals of Parry's tetracoccus to be 80 percent within known locations and 73 percent for all habitats predicted to be conserved as part of that plan. Therefore, it is implied that the preservation of 80 percent of this species would provide adequate cumulative protection of this species. Accordingly, cumulative impacts to Parry's tetracoccus would be **less than significant**.

Cumulative Impacts for Sensitive Wildlife

The analysis of cumulative impacts on sensitive species should take into account the distribution of these species, the home range of the species, and the distribution of the reproducing population. The species analyzed for potential cumulative impacts were the coastal California gnatcatcher (analyzed within the ecoregion); least Bell's vireo, yellow warbler, and yellow-breasted chat (San Luis Rey River and its tributaries); and raptors (ecoregion).

Significant impacts to least Bell's vireo, California gnatcatcher, yellow warbler, yellow-breasted chat, and raptor species are expected to occur on site. Least Bell's vireos occur in the major river systems of San Diego County and (closer to the Project site) within the San Luis Rey River as far east as Pala and as far west as Oceanside. The population of least Bell's vireo in the riparian systems of these rivers accounted for 74 percent of the total population in the County in 1996, with the remainder occurring in Sweetwater, San Diego, and Tijuana rivers and their tributaries (Unitt 2004). Least Bell's vireos also are known to recolonize within restored southern riparian forest habitat. The Project proposes to mitigate for impacts to southern riparian forest by creating high quality habitat suitable for least Bell's vireo off site and restoring some of the habitat that occurs on site. Based on this information, cumulative loss of habitat for the least Bell's vireo due to Project implementation would be **less than significant**.

Coastal California gnatcatchers occur within coastal sage scrub habitats from the foothills to the coast of San Diego County. The loss of ~~46.25~~46.07 acres (both on and off site) of predominantly disturbed non-occupied habitat would not add to the cumulative loss of the coastal California gnatcatcher regionally. The majority of the high quality habitat and the observed locations of this species on site would be preserved. In addition, preserved open space would connect to off-site open space, allowing for local distribution of this species. Cumulative impacts would be **less than significant**.

Sufficient open land, including agricultural lands, non-native grasslands, and open coastal sage scrub, occur throughout the region to support raptor species. In addition, appropriate raptor foraging land is required as off-site mitigation for direct impacts under the Proposed Project. This land would be set aside in perpetuity, and would have the same or better functionality than on-site land. The loss of non-native

grassland and pasture, while significant on a Project-direct basis, would not be considered cumulatively significant with regard to raptor foraging. Accordingly, cumulative impacts to raptors would be **less than significant**.

3.3.5 Significance Prior to Mitigation

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

Impact BI-1a ~~Wastewater Management Option 1:~~ The Project would result in significant impacts to ~~9.2~~2.1 acres of southern riparian forest (including ~~8.2~~1.4 acres on site and ~~1.0~~0.7 acre off site).

~~Wastewater Management Option 2: The Project would result in significant impacts to 10.5 acres of southern riparian forest (including 9.5 acres on site and 1.0 acre off site).~~

Impact BI-1b The Project would result in significant impacts to ~~1.66~~2.4 acres of southern willow scrub (including 1.6 acres on site and ~~0.06~~0.8 acre off site).

Impact BI-1c ~~Wastewater Management Option 1:~~ The Project would result in significant impacts to ~~6.6~~0.11 acre~~s~~ of freshwater marsh (including ~~6.5~~0.01 acre~~s~~ on site and 0.1 acre off site).

~~Wastewater Management Option 2: The Project would result in significant impacts to 7.9 acres of freshwater marsh (including 7.8 acres on site and 0.1 acre off site).~~

Impact BI-1d The Project would result in significant impacts to 1.3 acres of coast live oak woodland (all on site).

Impact BI-1e The Project would result in significant impacts to ~~46.25~~46.07 acres of Diegan coastal sage scrub (including 42.3 acres on site and ~~3.95~~3.77 acres off site).

Impact BI-1f The Project would result in significant impacts to ~~47.57~~44.77 acres of non-native grassland (including ~~41.2~~38.5 acres on site and ~~6.37~~6.27 acres off site).

Impact BI-1g The Project would result in significant impacts to ~~141.56~~144.46 acres of pasture (including ~~133.8~~135.4 acres on site and ~~7.76~~9.06 acres off site).

Impact BI-2 ~~Wastewater Management Option 1:~~ The Project would significantly impact ~~13.9~~1.41 acres of wetlands, as well as 1.6 acres of non-wetland Waters of the U.S., under Corps jurisdiction on site. Impacts to CDFG jurisdictional areas on site would include ~~7.5~~1.41 acres of wetlands and ~~1.4~~1.6 acres of non-wetland Waters of U.S. Off-site Project improvements would impact ~~1.16~~0.8 acre~~s~~ of Corps wetlands and 0.8 acre of Corps non-wetland Waters of the U.S., as well as ~~1.16~~1.6 acres of CDFG wetlands.

~~Wastewater Management Option 2: The Project would significantly impact 16.5 acres of wetlands, as well as 1.6 acres of non-wetlands Waters of the U.S., under Corps jurisdiction on site. Off-site Project improvements would impact 1.16 acres of Corps wetlands. Impacts to CDFG jurisdictional areas on site would include 8.8 acres of wetlands and 1.4 acres of non-wetland Waters of U.S. Off-site Project elements would impact 1.16 acres of CDFG wetlands.~~

Impact BI-3 The Proposed Project would significantly impact the smaller remnant population on site of approximately 248 individuals of Parry's tetracoccus (15 percent of individuals on site).

~~Impact BI-4 The location of one least Bell's vireo observed on site would be directly impacted by implementation of the Proposed Project. This would result in a significant impact.~~

Impact BI-~~5~~4 Implementation of the Proposed Project would directly impact one observed location of one pair of gnatcatchers on site, as well as habitat for the gnatcatcher (~~46.25~~46.07 acres on and off site). This would result in a significant impact.

Impact BI-~~6~~5 The Proposed Project would directly impact the location of the yellow warbler observed on site. This would result in a significant impact.

Impact BI-~~7~~6 The Proposed Project would directly impact two of the four locations of the yellow-breasted chats observed on site. This would result in a significant impact.

Impact BI-~~8~~7 The loss of ~~47.57~~44.77 acres of non-native grassland (including ~~6.37~~6.27 acres off site) and ~~141.56~~144.46 acres of pasture on site (including ~~7.76~~9.06 acres off site) would result in diminished carrying capacity for raptors on site and in the immediate Project vicinity. This would result in a significant impact.

Impact BI-~~9~~8 Grading, clearing, or construction activities within 300 feet of an active coastal California gnatcatcher, southern California rufous crowned sparrow, least Bell's vireo, yellow warbler, or yellow-breasted chat nest during these species' breeding seasons would have the potential to disrupt nesting behavior. Similarly, any grading, clearing, or construction within 500 feet of an active tree-nesting raptor nest or 800 feet of an active ground-nesting raptor between the raptor breeding season would have the potential to disrupt raptor nesting behavior. The breeding seasons have been identified as February 15 through August 31 for coastal California gnatcatcher and southern California rufous crowned sparrow; March 15 to September 15 for least Bell's vireo, yellow warbler, and yellow-breasted chat; January 15 through July 15 for tree-nesting raptors; and February 1 through July 15 for ground-nesting raptors. Impacts to these bird species would be significant.

Impact BI-~~10~~9 The introduction of nuisance or domesticated animal species into open space would be potentially significant.

Impact BI-~~11~~10 Colonization of non-native plant species in non-impact areas due to potential use of non-native plant species by residents in their yards and the resulting degradation of native habitat would be significant should it occur.

Impact BI-~~12~~11 Impacts to wetland buffers would be significant.

Impact BI-~~13~~12 Impacts associated with road kill along Pankey Place have the potential to be significant.

Potential Off-site Impacts Associated with Cumulative Alternative Traffic Mitigation[1]

If ~~improvements~~ off-site intersection improvements detailed in Section 2.2.6, M-TR-~~4a~~ 6 ~~through~~ and 7~~a~~, of this EIR are implemented rather than TIF payment as part of cumulative traffic mitigation, the following biological resource impacts would occur:

Impact BI-1d(1) The Project would result in significant impacts to 0.01 acre of coast live oak woodland (at Old Highway 395/Stewart Canyon Road/Canonita Drive).

Impact BI-1e(1) The Project would result in significant impacts to 0.~~45~~ 23 acre of Diegan coastal sage scrub (at Old Highway 395/Stewart Canyon Road/Canonita Drive, and Old Highway 395/Pala Mesa Drive~~, and/or SR-76/Old Highway 395~~).

Impact BI-1f(1) The Project would result in significant impacts to 0.03 acre of non-native grassland (at Old Highway 395/Pala Mesa Drive).

Impact BI-1g(1) The Project would result in significant impacts to 0.14 acre of pasture (at Old Highway 395/Stewart Canyon Road/Canonita Drive).

3.3.6 Mitigation

Mitigation is identified for each of the significant impacts identified above. Table 3.3-3, Summary of Required Mitigation for Impacts Associated with the Proposed Project, summarizes the amount of habitat impacted on and off the Project site, as well as the amount of required mitigation. The mitigation measures listed below would reduce Project impacts to biological resources to below a level of significance.

The mitigation outlined below for direct impacts to on- and off-site habitats includes preservation both on and off site, ~~off~~on-site creation of habitat, and on-site enhancement of habitat. Appendix I of the Biological Technical Report (EIR Appendix G) contains the conceptual mitigation plans for the Project, including ~~the Off-site~~ on-site ~~W~~wetland mitigation ~~Plan~~ (REC ~~2009b~~2010~~) and the On-site Wetland Enhancement Plan (REC 2009c)~~. A conceptual RMP (REC 2009; Appendix G of EIR Appendix G) also was prepared for the Proposed Project, and discusses short- and long-term management of the habitat to be preserved on site.

Wetland habitats, including southern riparian forest, southern willow scrub, and freshwater marsh are proposed to be mitigated through ~~off-site creation of wetland habitat and~~ on-site enhancement of existing wetland habitat. The ~~Off-site~~ Wetland Revegetation Plan ~~and the On-site Wetland Enhancement Plan~~ details the feasibility, site selection criteria, and success criteria to achieve mitigation. ~~The site selected for off-site creation must, at a minimum~~

- ~~Be within a mitigation bank or be any other land deemed acceptable to the Director of DPLU;~~
- ~~Be approved by the appropriate state and federal resource agencies as part of the wetland permitting process under separate permit authority;~~
- ~~Have the ability to create at least 10.7 acres of southern riparian forest, 1.66 acres of southern willow scrub, and 7.9 acres of freshwater marsh at the completion of all impacts (acreages may be implemented in increments based on mitigation phasing);~~
- ~~Mitigate for other habitat considered important regionally. If such habitat is removed, the Applicant must provide mitigation for such impacts;~~

[1] Mitigation for cumulative traffic effects may be mitigation either through payment into the TIF or through specified improvements at particular off-site locations (see Section 2.2.6 of this EIR).

~~Be selected based on (1) its hydrological regime, (2) its ability to be protected from future impacts, and (3) existing habitat on site, as well as adjacent habitat;~~
~~Provide for adequate hydrology to support hydrophytic plant species, either through surface water and/or groundwater;~~
~~Not be prone to scour or sedimentation;~~
~~Provide soils that enhance the establishment of wetland habitat; and~~
~~Be located within the same watershed as the San Luis Rey River to the greatest extent practicable.~~

~~Once the off-site creation area is selected it must be described in detail in a Final Revegetation Plan.~~

Upland habitats that would be impacted by the Project, including coast live oak woodland, Diegan coastal sage scrub, non-native grassland, and pasture, are proposed to be mitigated through on- and off-site preservation. The off-site preservation location(s) preferably would occur within the watershed of the San Luis Rey River. Site(s) shall be approved by the Director of DPLU. On-site preservation management is addressed within the Project RMP. Off-site preservation management will be addressed once a site is selected. A separate RMP will be required for off-site mitigation.

Mitigation (i.e., preservation of open space) would occur upon issuance of the grading permit for each particular area on site. Mitigation will be implemented as impacts occur; therefore, mitigation has been divided into phases. Specific product phasing may increase or decrease based on economic factors. Mitigation has been divided into three major phases:

- **Phase 1**: Impacts/mitigation south of proposed Baltimore Oriole Road, including the off-site extension of Horse Ranch Creek Road, Pankey Place, Pankey Road, and Pala Mesa Drive.
- **Phase 2**: Impacts/mitigation north of proposed Baltimore Oriole Road.
- **Phase 3**: Impacts/mitigation for off-site intersection improvements as each intersection is improved.

Because mitigation will be phased, an impact and mitigation tracking system will be utilized. The Project Applicant or monitoring biologist will tally impacts as they occur and ensure that the appropriate mitigation (preservation, creation, and/or enhancement) occur concurrently. The Applicant, County, or monitoring biologist will ensure that adequate and appropriate mitigation is provided for the total impact to each habitat.

Habitats

M-BI-1a ~~Wastewater Management Option 1:~~ Significant direct impacts to ~~9.2~~2.1 acres of southern riparian forest (including ~~8.2~~1.4 acres on site and ~~1.0~~0.7 acre off site) shall be mitigated at a 3:1 ratio, including 1:1 creation and 2:1 enhancement. A total of ~~9.2~~2.1 acres of riparian forest shall be created ~~off-~~on site and ~~. Off-site mitigation for this habitat type must~~ be of sufficient quality to support least Bell's vireo, yellow warbler, and yellow-breasted chat. ~~Mitigation shall either occur at an approved mitigation bank, or any other land determined acceptable by the Director of DPLU.~~ A conceptual mitigation plan for wetland creation and enhancement is included as Appendix I of EIR Appendix G. In addition, ~~18.4~~4.2 acres of the on-site southern riparian forest shall be enhanced. On-site enhancement shall include cowbird trapping~~,~~ and removal of exotics~~, and potential removal of existing berms~~.

~~Wastewater Management Option 2: Significant direct impacts to 10.5 acres of southern riparian forest (including 9.5 acres on site and 1.0 acre off site) shall be mitigated at a 3:1 ratio, including 1:1 creation and 2:1 enhancement. A total of 10.5 acres of riparian forest~~

~~shall be created off site. Off-site mitigation for this habitat type must be of sufficient quality to support least Bell's vireo, yellow warbler, and yellow-breasted chat. Mitigation shall either occur at an approved mitigation bank, or any other land determined acceptable by the Director of DPLU. A conceptual mitigation plan for wetland creation and enhancement is included as Appendix I of EIR Appendix G. In addition, 21.0 acres of the on-site southern riparian forest shall be enhanced. On-site enhancement shall include cowbird trapping, removal of exotics, and potential removal of existing berms.~~

M-BI-1b Significant direct impacts to ~~1.66~~2.4 acres of southern willow scrub (including 1.6 acres on site and 0.8~~06~~ acre off site) shall be mitigated at a 3:1 ratio, including 1:1 creation and 2:1 enhancement. This mitigation requires creation of ~~shall consist of creating 1.66~~2.4 acres of southern willow scrub habitat ~~off~~ on site. ~~Mitigation shall either occur at an approved mitigation bank, or any other land determined acceptable by the Director of DPLU.~~[2] A conceptual mitigation plan for wetland creation and enhancement is included as Appendix I of EIR Appendix G. An additional ~~3.32~~4.8 acres of the Project site's riparian forest shall be enhanced. On-site enhancement shall include cowbird trapping~~,~~ and removal of exotics~~, and potential removal of existing berms~~.

M-BI-1c ~~Wastewater Management Option 1:~~ Significant direct impacts to ~~6.6~~0.11 acre of freshwater marsh (including ~~6.5~~0.01 acre~~s~~ on site and 0.1 acre off site) shall be mitigated at a 3:1 ratio, including 1:1 creation and 2:1 enhancement. This mitigation requires creation of ~~shall consist of creating 6.6~~0.11 acre~~s~~ of freshwater marsh habitat ~~off~~ on site. ~~Mitigation shall either occur at an approved mitigation bank, or any other land determined acceptable by the Director of DPLU.~~ A conceptual mitigation plan for wetland creation and enhancement is included as Appendix I of EIR Appendix G. In addition, ~~13.2~~0.22 acre~~s~~ of the Project site's riparian forest shall be enhanced. On-site enhancement shall include cowbird trapping~~,~~ and removal of exotics~~, and potential removal of existing berms~~.

~~Wastewater Management Option 2: Significant direct impacts to 7.9 acre of freshwater marsh (including 7.8 acres on site and 0.1 acre off site) shall be mitigated at a 3:1 ratio, including 1:1 creation and 2:1 enhancement. This mitigation shall consist of creating 7.9 acres of freshwater marsh habitat off site. Mitigation shall either occur at an approved mitigation bank, or any other land determined acceptable by the Director of DPLU. A conceptual mitigation plan for wetland creation and enhancement is included as Appendix I of EIR Appendix G. In addition, 15.8 acres of the Project site's riparian forest shall be enhanced. On-site enhancement shall include cowbird trapping, removal of exotics, and potential removal of existing berms.~~

M-BI-1d Significant impacts to 1.3 acres of coast live oak woodland shall be mitigated at a ratio of 2:1 or 3:1. One acre of this habitat shall be mitigated at 2:1 as it is in the fuel modification zone and 0.3 acre shall be mitigated at 3:1 as it would be impacted due to grading. Therefore, a total of 2.9 acres is required to mitigate this habitat type. This mitigation shall consist of preserving 1.5 acres on site and purchasing 1.4 acres of oak woodland in an off-site mitigation bank or on other land as approved by the Director of DPLU.

M-BI-1e Significant impacts to ~~46.25~~46.07 acres of Diegan coastal sage scrub (including 42.3 acres on site and ~~3.95~~3.77 acres off site) shall be mitigated at a 2:1 ratio for a total mitigation requirement of ~~92.50~~92.1 acres. This impact shall be partially mitigated through the preservation of the remaining Diegan coastal sage scrub on site (87.3 acres). The remainder

[2] ~~The manufactured slope will be revegetated for buffer purposes only and will not be counted toward mitigation.~~

of the required mitigation shall be accomplished by purchasing ~~5.20~~4.8 acres off site in a mitigation bank or other land as approved by the Director of DPLU.

M-BI-1f Significant impacts to ~~47.57~~44.77 acres of non-native grassland habitat (including ~~41.2~~38.5 acres on site and ~~6.37~~6.27 acres off site) shall be mitigated at a ratio of 0.5:1 for a total mitigation requirement of ~~23.79~~22.4 acres. Mitigation shall consist of preserving the remaining non-native grassland on site (~~2.9~~5.6 acres) and purchasing ~~20.89~~16.8 acres off site in a mitigation bank or other land as approved by the Director of DPLU.

M-BI-1g Significant impacts to ~~141.56~~144.46 acres of pasture (including ~~133.8~~135.4 acres on site and ~~7.76~~9.06 acres off-site) shall be mitigated at a ratio of 0.5:1 for a total mitigation requirement of ~~70.78~~72.2 acres. Mitigation shall consist of ~~preserving the remaining pasture on site (1.6 acres) and~~ purchasing ~~69.18~~72.2 acres off site of mitigation credit at an approved mitigation bank or on land approved by the Director of DPLU that is equal to or "like functioning" to the impacted pasture.

Jurisdictional Areas

M-BI-2 Significant impacts to Corps and CDFG jurisdictional wetlands shall be mitigated through habitat-based mitigation, as described in M-BI-1a through 1c, above. Impacts to Waters of the U.S. shall be mitigated at a 1:1 ratio (1.6 acres) through enhancement of on-site southern riparian forest. The Project Applicant shall obtain applicable regulatory permits from other agencies.

Sensitive Plants

M-BI-3 Direct significant impacts to Parry's tetracoccus shall be mitigated through the preservation of the remaining population of this species on site.[3] Minor encroachment into the larger northern population (located within the outer limits of the fuel modification zone) shall be avoided during brushing and clearing. The limits of the population shall be flagged or fenced (with drift fence) to demarcate the limits of brush clearing. To mitigate for the loss of the 248 plants in the north-central portion of the site, habitat supporting this plant species at a 2:1 ratio shall be purchased or created off site. This may co-occur with other mitigation/habitat needs of the Project. Off-site lands must be within an approved mitigation bank or lands deemed acceptable by the Director of DPLU.[4] If, for any reason, an appropriate preserve population cannot be located, the Director of DPLU will be contacted and an alternate mitigation will be determined. Alternative mitigation may include propagation of the plant from seed.

Sensitive Wildlife

~~M-BI-4 Significant direct impacts to the least Bell's vireo shall be mitigated through habitat-based mitigation addressed in M-BI-1a, above. Habitat mitigation shall consist of creation of southern riparian forest at a 1:1 ratio and enhancing portions of on-site southern riparian forest habitat. Creation and enhancement shall be conducted in accordance with habitat requirements of the least Bell's vireo.~~

[3] The Project site burned during the October 2007 wildfires. It is anticipated that the population will re-germinate to their original population size.

[4] Parry's tetracoccus, though sensitive, is still relatively abundant in the County. Therefore, locating this plant for preservation is feasible.

M-BI-~~5~~4 Long-term significant direct impacts to the coastal California gnatcatcher shall be mitigated through the habitat preservation and off-site habitat purchase per M-BI-1e, above.

M-BI-~~6~~5 Significant direct impacts to the yellow warbler shall be mitigated through the habitat-based mitigation addressed in M-BI-1a, above. Habitat mitigation shall consist of creation of southern riparian forest at a ratio of 1:1 and enhancing portions of on-site southern riparian forest remaining. Creation and enhancement shall be conducted in accordance with habitat requirements of the yellow warbler.

M-BI-~~7~~6 Significant direct impacts to the yellow-breasted chat shall be mitigated through the habitat-based mitigation addressed in M-BI-1a, above. Habitat mitigation shall consist of creation of southern riparian forest at a ratio of 1:1 and enhancing portions of on-site southern riparian forest remaining. Creation and enhancement shall be conducted in accordance with habitat requirements of the yellow-breasted chat.

M-BI-~~8~~7 Significant direct impacts to raptor foraging areas shall be mitigated through the habitat-based mitigation addressed in M-BI-1f and M-BI-1g, above. Habitat mitigation shall consist of the preservation of non-native grassland and pasture at a 0.5:1 ratio.

Indirect Impacts

M-BI-~~9~~8 No grading, clearing, or construction activity shall be initiated within 300 feet of occupied habitat during coastal California gnatcatcher and southern California rufous-crowned sparrow breeding season (February 15 through August 31), 300 feet of occupied habitat during least Bell's vireo, yellow warbler, and yellow breasted-chat breeding season (March 15 through September 15), 500 feet of occupied tree-nesting raptor habitat during raptor breeding season (January 15 through July 15), or within 800 feet of ground-nesting raptor habitat during raptor breeding season (February 1 through July 15). All grading permits, grading plans, and improvement plans shall state the same. If grading, clearing, or construction would occur during gnatcatcher and/or raptor nesting seasons, a qualified biologist shall conduct a pre-construction survey to determine if these species occur within impacted areas. If there are no gnatcatchers or raptors nesting (including nest building or other breeding/nesting behavior) within this area, development shall be allowed to proceed.

If grading activities, including blasting and associated drilling, in the development area are scheduled to occur during sensitive bird breeding seasons, the Diegan coastal sage scrub in the northern section of the site the adjacent 500 feet of the open space easement areas shall be surveyed by a qualified biologist to determine if nests occupied by these species are present. Drilling is known to create noise at a level of 94 dBA at a distance of 50 feet. This corresponds to 60dBA at a distance of 2,500 feet. Where drilling is required, maximum feasible sound attenuation measures shall be incorporated. The typical level of noise reduction for a 10-foot high barrier is approximately 12 dB. This would reduce the distance of the 60-dBA contour, originally 2,500 feet from the unmitigated drilling activity, to approximately 1,000 feet from the drilling activity.

Therefore, if nests are present and if drilling is necessary, maximum feasible sound attenuation shall be accomplished. This includes no grading or clearing within 500 feet during the breeding season. No drilling would be allowed if nests are located within 1,000 feet. If nests are located between 1,000 and 2,500 feet from the drilling site, a temporary sound barrier deemed appropriate by the monitoring biologist and acoustician~~,~~ will be

installed that completely blocks any part of the drilling site facing sensitive avian habitat. Outside of the nesting season or during the nesting season if pre-construction surveys are negative, no restriction shall be placed on grading, including blasting/drilling activities. A report shall be submitted to the Director of DPLU describing the survey results and dates of clearing or grading activities. This design measure may be modified as necessary with written approval of the Director of DPLU.

M-BI-~~10~~ 9 through ~~12~~11

- The Project shall implement the required RMP (REC 2009b~~d~~; Appendix G of EIR Appendix G) for the Proposed Project, including the following measures:
  - The Project Applicant shall participate in a Landscape Maintenance District as the funding mechanism for the long-term management of open space.
  - Exotic plant species shall be removed from high quality woodlands, wetlands, and grasslands on an as-needed basis to be assessed every five years.
  - Sensitive plant population boundaries shall be mapped every three years.
  - Trash shall be removed from open space annually.
  - All habitats and sensitive plant and animal species shall be monitored annually. Biological surveys shall be conducted every five years for sensitive plant and animal species.
  - Fencing and signs within open space shall be maintained.

  The conceptual RMP (within Appendix G of EIR Appendix G) is a draft document that set guidelines. A final RMP shall be prepared prior to Project grading.

- The presence of the limited building zones between development and the remaining habitat shall provide a buffer to minimize edge effects, such as encroachment and the future fuel modification of open space. The limited building zones reduce potential significant impacts associated with highly invasive non-native plant invasion, domestic animal predation, and human encroachment through signage of the open space and backyard fencing, as proposed on the fencing and signage plans. The limited building zones on the Project site would be within the fuel modification zone. ~~Specifically, between MF-1 and OS-2, the limited building zone is included within the proposed enhanced wetland buffer and the fuel modification zone.~~

- The landscape plan shall include specifics regarding the types of plant species allowed along the Project footprint boundary. The final landscape plans will be reviewed prior to approval to ensure that no invasive non-native plants (as identified by the California Invasive Plant Council) are used adjacent to any biological open space areas.

- The limits of grading shall be flagged or marked with silt fencing prior to grading to prevent inadvertent impacts to adjacent sensitive habitat. Prior to brushing, a qualified biologist shall review the flagging and fencing.

- A qualified biologist shall monitor the limits of grading during clearing, grubbing, and grading. Monitoring shall be conducted once per day with weekly reports submitted to the County DPLU. If inadvertent impacts occur, they shall be reported to the appropriate agency within 24 hours.

M-BI-~~13~~12 To prevent the potential for significant road kill impacts on Pankey Place, a barrier shall be erected on the north side of the road, adjacent to OS-2 and on the south side of the road adjacent to OS-4. The barrier shall be a six-foot high black or green vinyl-coated chain-link fence. It shall be erected at the edge of graded roadway between any trails/landscaping and the open space. The fence openings shall be small enough to deter climbing and encroachment by humans.

Potential Mitigation for Impacts Associated with Cumulative Traffic Mitigation in Conjunction with TIF Payment

As stated above, the Proposed Project may include the improvements of some additional off-site intersections as part of cumulative traffic mitigation in conjunction with payment of TIF. If this occurs, the mitigation measures below also would be implemented:

M-BI-1d(1) If the intersection of Old Highway 395/Stewart Canyon Road/Canonita Drive is improved by the Project, significant impacts to 0.01 acre of coast live oak woodland shall be mitigated at a ratio of 2:1 for a total mitigation requirement of 0.02 acre. This mitigation shall consist of purchasing 0.02 acre of oak woodland in an off-site mitigation bank or on other land as approved by the Director of DPLU.

M-BI-1e(1) If the intersections of Old Highway 395/Stewart Canyon Road/Canonita Drive~~,~~ and Old Highway 395/Pala Mesa Drive~~, and/or SR-76/Old Highway 395~~ are improved by the Project, significant impacts ~~to~~ of up to 0.~~45~~ 23 acre of Diegan coastal sage scrub shall be mitigated at a 2:1 ratio for a total mitigation requirement of up to 0.~~90~~ 46 acre. Mitigation shall consist of purchasing up to 0.~~90~~ 46 acre off site in a mitigation bank or other land as approved by the Director of DPLU.

M-BI-1f(1) If the intersection of Old Highway 395/Pala Mesa Drive is improved by the Project, significant direct impacts to up to 0.03 acre of non-native grassland habitat shall be mitigated at a ratio of 0.5:1 for a total mitigation requirement of up to 0.015 acre. Mitigation shall consist of purchasing up to 0.015 acre off site in a mitigation bank or other land as approved by the Director of DPLU.

M-BI-1g(1) If the intersection of Old Highway 395/Stewart Canyon Road/Canonita Drive is improved by the Project, significant impacts to 0.14 acre of pasture shall be mitigated at a ratio of 0.5:1 for a total mitigation requirement of 0.07 acre. Mitigation shall consist of purchasing 0.07 acre off site of mitigation credit at an approved mitigation bank or on land approved by the Director of DPLU that is equal to or "like functioning" to the impacted pasture.

3.3.7 Conclusion

The implementation of the mitigation measures listed above would reduce all impacts to biological resources to less than significant levels. The Proposed Project would directly impact southern riparian forest, southern willow scrub, freshwater marsh, oak woodland, Diegan coastal sage scrub, non-native grassland, and pasture (Impacts BI-1a through 1g, respectively). These impacts would be fully mitigated through on-site preservation (in some cases to include enhancement) and off-site mitigation or purchase of mitigation credits. 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 (CDFG 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 DPLU 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.

On- and off-site impacts to jurisdictional wetlands and non-wetland Waters of the U.S. (Impact BI-2) would be mitigated by the creation of wetlands off site, as discussed in Mitigation Measures M-BI-1a through 1c, above, as well as enhancement of on-site wetlands. Implementation of these mitigation measures would fully mitigate impacts to these non-vegetated 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. 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 preservation/enhancement ratio, no net loss of wetland habitat would occur. Enhancement of wetland habitat would fully mitigate impacts to Waters of the U.S. 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.

Mitigation for direct impacts to approximately 15 percent of the Parry's tetracoccus (Impact BI-3) on site would be mitigated by purchasing or creating off-site habitat supporting this plant species at a 2:1 ratio. (This may co-occur with other mitigation/habitat needs of the Project.) Implementation of these mitigation measures would avoid or substantially reduce the significant effect because the mitigation ratios for impacts to these habitats were developed based on NCCP Guidelines (CDFG and California Resources Agency 1997), and the wildlife agencies have reviewed and approved these mitigation ratios. The ratio is effective, because these reviewing agencies have reached consensus that retention at these ratios will result in sustainable levels of this plant species.

Mitigation for direct Project impacts to ~~least Bell's vireo,~~ coastal California gnatcatchers, yellow warbler, yellow-breasted chat, and raptors (Impacts BI-4 through ~~8~~7, respectively) would be satisfied through the required mitigation for impacts to habitats. The specified habitat mitigation ratios take into consideration the importance of preserving areas necessary to ensure the continued survival of least Bell's vireo, coastal California gnatcatchers, yellow warbler, yellow-breasted chat, and raptors. 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 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 (CDFG and California Resources Agency 1997) intended to accomplish preservation of sensitive species, and the wildlife agencies have reviewed and approved these mitigation ratios.

Mitigation for indirect impacts to coastal California gnatcatcher, southern rufous-crowned sparrow, least Bell's vireo, yellow warbler, and yellow breasted chat (Impact BI-~~9~~8) would include cessation of grading or construction activities if species nests are located within 300 feet of a construction area (500 to 800 feet for raptors). These bird species would be protected from disturbance associated with movement and noise from construction activities during the breeding season due to the required 300- to 800-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.

Indirect impacts related to nuisance and domesticated animals, spread of non-native plants, and wetland buffers (Impacts BI-~~10~~ 9 through ~~12~~11) during and after Project construction also would be appropriately mitigated. General mitigation for indirect impacts would include long-term management of the proposed

open space; biological monitoring during clearing and grading activities; flagging of sensitive habitats and plants; placement of a fence between proposed residential lots and fuel modification zone; and implementation of the RMP. These mitigation measures would be adequate to avoid or reduce Project impacts, because they would ensure that construction equipment and personnel would stay within the limits of grading, thus preventing indirect impacts to habitats and sensitive species during construction. Species survival in this area would be ensured during grading and construction activities.

Mitigation for impacts associated with potential road kill along proposed Pankey Place (Impact BI-~~13~~12) would include the construction of a fence between the wetland habitat in OS-2/OS-4 and the roadway. This would adequately mitigate impacts to below a level of significance because the presence of a six-foot high barrier would deter wildlife from crossing the roadway and thus decrease the amount of potential road kill along Pankey Place.

Table 3.3-1
VEGETATION COMMUNITIES/HABITATS AND PROPOSED IMPACTS

Vegetation Community/Habitat	Existing On Site (Acres)	On-site Impacts (Acres)	Percent Impacted On Site	On-site Open Space (Acres)	Off-site Direct Impacts (Acres)*
Southern riparian forest (61300)	85.6	~~8.2 or 9.5**~~1.4	~~11~~2	~~76.1~~84.2	~~1.0~~0.7
Southern willow scrub (63320)	1.6	1.6	100	0	~~0.06~~0.8**
Freshwater marsh (52410)	10.3	~~6.5 or 7.8*~~0.01	~~76~~<1	~~2.5~~10.29	0.1**
Coast live oak woodland (71160)	2.8	1.3	46	1.5	0
Diegan coastal sage scrub (32510)	129.6	42.3	33	87.3	~~3.95~~3.77
Non-native grassland (42200)	44.1	~~41.2~~38.5	~~93~~87	~~2.9~~5.6	~~6.37~~6.27
Non-native vegetation (11000)	0.1	0.1	100	0	~~0.37~~0.39
Pasture (18310)	135.4	~~133.8~~135.4†	~~99~~100	~~1.6~~0	~~7.76~~9.06
Orchard (18100)	0	0	0	0	~~11.91~~11.4
Eucalyptus woodland (11100)	0.1	0.1	100	0	~~1.7~~0.3
Disturbed (11300)	4.4	3.9	87	0.5	~~14.21~~13.71
Developed (12000)	2.1	2.1	100	0	~~1.56~~1.75
TOTAL	**416.1**	**~~241.1 or 243.7**~~226.7†**	**~~59~~54**	**~~172.4~~189.4**	**~~48.99~~48.25**

Source: REC 2009a, 2009e

* Includes those proposed off-site improvements demarcated with a 1 or 2 (indicating improvements proposed as either part of the Proposed Project or mitigation for direct impacts, respectively) on Figure 1-35 of this EIR, including the intersections of SR 76/I-15 NB ramp and SR 76/I-15 SB ramp. Although demarcated with a 2, proposed improvements to the intersection of Old Highway 395/Reche Road would not require any grading.

** All or a portion of this impact may be conducted by adjacent projects currently under review. If so, these impacts would not be required as part of the Proposed Project. ~~Under Wastewater Management Options 1 or 2, respectively. The proposed detention basin under Option 2 would impact 1.3 acres each of southern riparian forest and freshwater marsh.~~

† Includes 4.6 acres of impacts to pasture that would be used to create riparian habitat as part of mitigation.

Table 3.3-2
POTENTIAL OFF-SITE IMPACTS TO VEGETATION COMMUNITIES/HABITATS IF OFF-SITE IMPROVEMENTS ARE IMPLEMENTED FOR CUMULATIVE TRAFFIC MITIGATION RATHER THAN PAYMENT OF TIF

Vegetation Community/Habitat	Off-site Cumulative Intersection Impacts (Acres)*			
	Old Highway 395/Stewart Canyon Road/ Canonita Drive	Old Highway 395/Pala Mesa Drive	~~SR 76/Old Highway 395~~	TOTAL
Coast live oak woodland (71160)	0.01	-	-	0.01
Diegan coastal sage scrub (32510)	0.15	0.08	~~0.22~~	0.~~45~~23
Non-native grassland (42200)	-	0.03	-	0.03
Non-native vegetation (11000)	0.02	0.29	-	0.31
Pasture (18310)	0.14	-	-	0.14
Disturbed (11300)	-	0.09	-	0.09
Developed (12000)	-	0.05	~~0.49~~	0.~~54~~05
TOTAL	**0.32**	**0.54**	**~~0.71~~**	**~~1.57~~0.86**

Source: REC 2009e

* Includes those proposed off-site improvements demarcated with a 3 (indicating either improvements would be constructed or TIF payments would be made for cumulative impacts mitigation) on Figure 1-35 of this EIR. Although demarcated with a 3, proposed improvements to the intersection of Old Highway 395/Reche Road would not require any grading. In addition, although also demarcated with a 3, proposed improvements to the intersections of SR 76/I-15 NB ramp and SR 76/I-15 SB ramp have been accounted for in Table 3.3-1, above, as improvements would be completed as part of mitigation for direct impacts.

Table 3.3-3
EXISTING AND IMPACTED ON- AND OFF-SITE JURISDICTIONAL AREAS

	Corps Jurisdiction (acres)				CDFG Jurisdiction (acres)			
	Existing		Impacted		Existing		Impacted	
	On Site	Off Site	On Site	Off Site	On Site	Off Site	On Site	Off Site
Wetlands	94.1	~~1.16~~0.8	~~13.9 or 16.5*~~1.41	~~1.16~~0.8	85.4	~~1.84~~1.6	~~7.5 or 8.8*~~1.41	~~1.84~~1.6
Waters of the U.S.	3.6	~~0~~0.8	1.6	~~0~~0.8	1.4	0	~~1.4~~1.6	0

Source: REC 2009a

~~* Under Wastewater Management Options 1 or 2, respectively. The proposed detention basin under Option 2 would impact 2.6 acres of Corps wetlands and 1.3 acres of CDFG wetlands.~~

Note: Wetland delineations have not been conducted at the off-site intersection improvement areas; therefore, off-site acreages are based on riparian habitat only.

Table 3.3-4
SUMMARY OF REQUIRED MITIGATION FOR DIRECT IMPACTS ASSOCIATED WITH THE PROPOSED PROJECT

Vegetation Community/Habitat	Existing (Acres)	On-site Impacts (Acres)	On-site Open Space (Acres)	Off-site Direct Impacts*	Mitigation Ratio	Mitigation Required (Acres)	Acreage Mitigated On Site	Excess Habitat Remaining On Site After Mitigation	Acreage Mitigated Off Site
Southern riparian forest	85.6	~~8.2 or 9.5**~~1.4	~~77.4 or 76.1**~~ 84.2	~~1.00~~0.7	3:1‡**	~~27.6 or 31.5**~~6.3	~~18.4 or 21.0**~~6.3 (2.1 creation and 4.2 enhancement†‡)	~~42.48 or 35.98**~~88.8	~~9.2 or 10.5** (creation)~~0
Southern willow scrub	1.6	1.6	0	~~0.06~~0.8††	3:1‡**	~~4.98~~7.2	~~3.32~~7.2 (2.4 creation and 4.8 enhancement†‡)	0	~~1.66 (creation)~~0
Freshwater marsh	10.3	~~6.5 or 7.8**~~0.01	~~3.8 or 2.5**~~ 10.29	0.1††	3:1‡**	~~19.8 or 23.7**~~0.33	~~13.2 or 15.8**~~0.33 (0.11 creation and 0.22 enhancement†‡)	~~3.8 or 2.5**~~10.29	~~6.6 or 7.9** (creation)~~0
Coast live oak woodland	2.8	1.3	1.5	0	3:1 or 2:1‡	2.9	1.5	0	1.4
Diegan coastal sage scrub	129.6	42.3	87.3	~~3.95~~3.77	2:1	~~92.50~~92.1	87.3	0	~~5.20~~4.8
Non-native grassland	44.1	~~41.2~~38.5	~~2.9~~5.6	~~6.37~~6.27	0.5:1	~~23.79~~22.4	~~2.9~~5.6	0	~~20.89~~16.8
Non-native vegetation	0.1	0.1	0	~~0.37~~0.39	0:1	0	0	0	0
Pasture	135.4	~~133.8~~ 135.4‡‡	~~1.6~~0	~~7.76~~9.06	0.5:1	~~70.78~~72.2	~~1.6~~0	0	~~69.18~~72.2
Orchard	0	0	0	~~11.91~~11.4	0:1	0	0	0	0
Eucalyptus woodland	0.1	0.1	0	~~1.70~~0.3	0:1	0	0	0	0
Disturbed	4.4	3.9	0.5	~~14.21~~13.71	0:1	0	0	0.5	0
Developed	2.1	2.1	0	~~1.56~~1.75	0:1	0	0	0	0
TOTAL	**416.1**	**~~241.1 or 243.7**~~ 226.7‡‡**	**~~175.0 or 172.4**~~ 189.4**	**~~48.99~~48.25**	--	**~~242.35 or 250.15**~~ 203.43**	**~~128.22 or 133.42**~~108.2**	**~~46.78 or 38.98**~~99.6**	**~~114.13 or 116.73**~~95.2**

Source: REC 2009a, 2009e

* Includes those proposed off-site improvements demarcated with a 1 or 2 (indicating improvements proposed as either part of the Proposed Project or mitigation for direct impacts, respectively) on Figure 1-35 of this EIR, including the intersections of SR 76/I-15 NB ramp and SR 76/I-15 SB ramp. Although demarcated with a 2, proposed improvements to the intersection of Old Highway 395/Reche Road would not require any grading.

~~** Under Wastewater Management Options 1 or 2, respectively. The proposed detention basin under Option 2 would impact 1.3 acres each of southern riparian forest and freshwater marsh.~~

‡** Local, state, and federal agencies have a no net loss of wetland policy. Mitigation is typically required in the form of creation, enhancement, or restoration. 1:1 mitigation will be in the form of creation as described in the Revegetation Plan (Appendix I of EIR Appendix G), 2:1 mitigation will result from enhancement of a portion of existing on-site wetland habitat.

†‡ Creation shall take plan on site. In addition, ~~E~~enhancement shall take place on site within existing on-site wetlands, specifically southern riparian forest.

†† All or a portion of this impact may be conducted by adjacent projects currently under review. If so, these impacts would not be required as part of the Proposed Project.

‡ 3:1 ratio is for impacts within the fuel management zone (1.01 acre). 2:1 ratio is for impacts due to grading (0.3 acre).

‡‡ Includes 4.6 acres of impacts to pasture that would be used to create riparian habitat as part of mitigation.

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Project Boundary
Stewart Canyon Road
Pankey Road
Pala Mesa Heights Drive
Pala Mesa Drive
SR 76
15

Sensitive Species

- Coastal California gnatcatcher (pair) *(Polioptila californica californica)*
- Least Bell's vireo (pair) *(Vireo bellii pusillus)*
- Least Bell's vireo (juvenile) *(Vireo bellii pusillus)*
- Least Bell's vireo *(Vireo bellii pusillus)*
- Northern red-diamond rattlesnake *(Crotalus ruber ruber)*
- Orange-throated whiptail *(Cnemidophorus hyperythrus)*
- Southern California rufous-crowned sparrow *(Aimophila ruficeps canescens)*
- Yellow-breasted chat *(Icteria virens)*
- Yellow warbler *(Dendroica petechia)*
- Palmer's grappling-hook *(Harpagonella palmeri)*
- Parry's tetracoccus *(Tetracoccus dioicus)*

Habitats

- Freshwater marsh (52140)
- Southern riparian forest (61300)
- Southern willow scrub (63320)
- Diegan coastal sage scrub (32510)
- Coast live oak woodland (71160)
- Non-native grassland (42200)
- Eucalyptus (11100)
- Pasture (18310)
- Ornamental (No Holland Code)
- Disturbed (11300)
- Developed (12000)

Note: Raptors observed throughout site or overhead include Cooper's hawk *(Accipiter cooperii)*, turkey vulture *(Cathartes aura)*, American kestrel *(Falco sparverius)*, white-tailed kite *(Elanus leucurus)*, red-shouldered hawk *(Buteo lineatus)*, and red-tailed hawk *(Buteo jamaicensis)*.

Data Source: REC 2009a

N
W E
S

0 500 1,000 2,000
Feet

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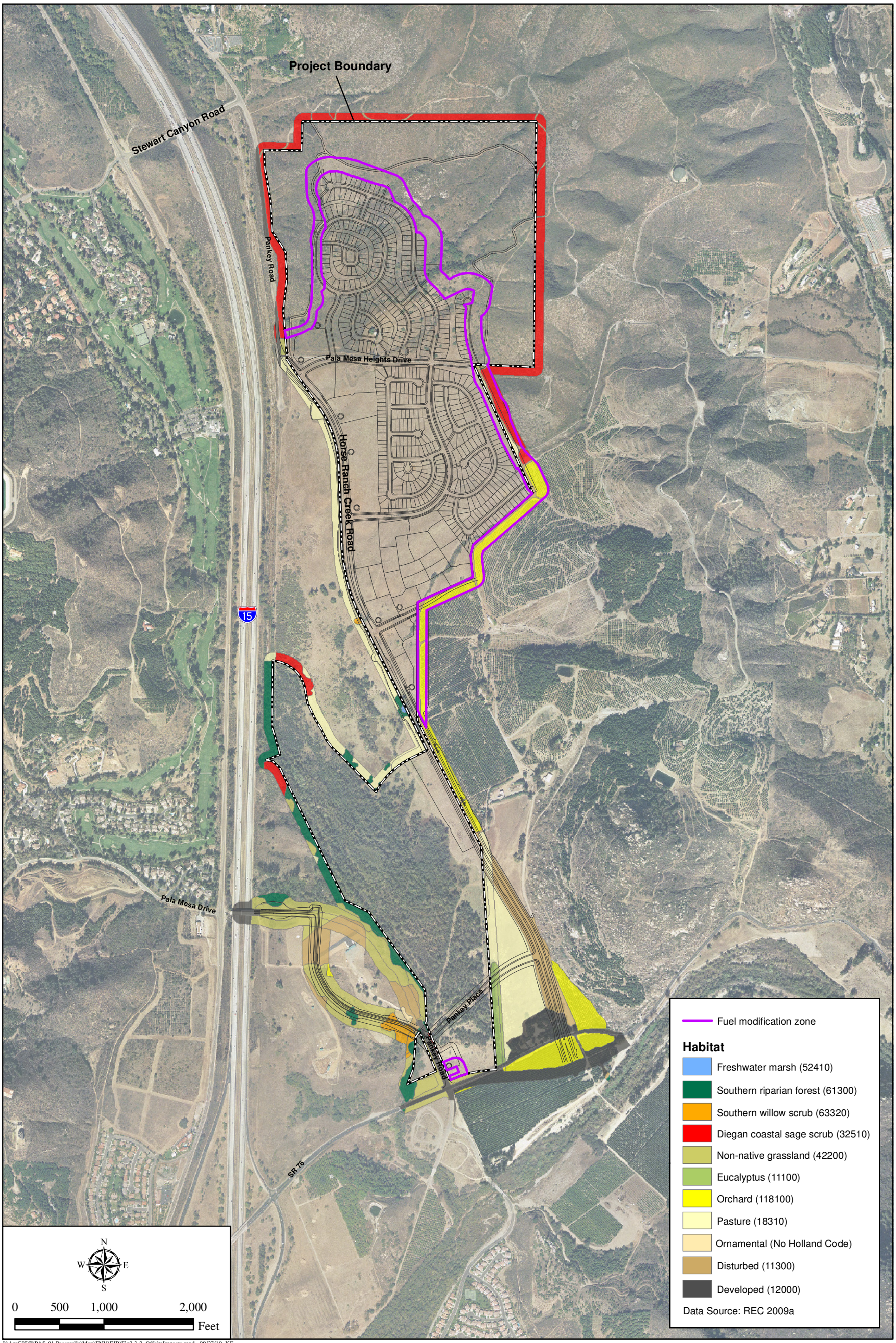
On-site Biological Resources

CAMPUS PARK PROJECT

HELIX

Figure 3.3-1



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Off-site Biological Resources and Project Impacts

CAMPUS PARK PROJECT

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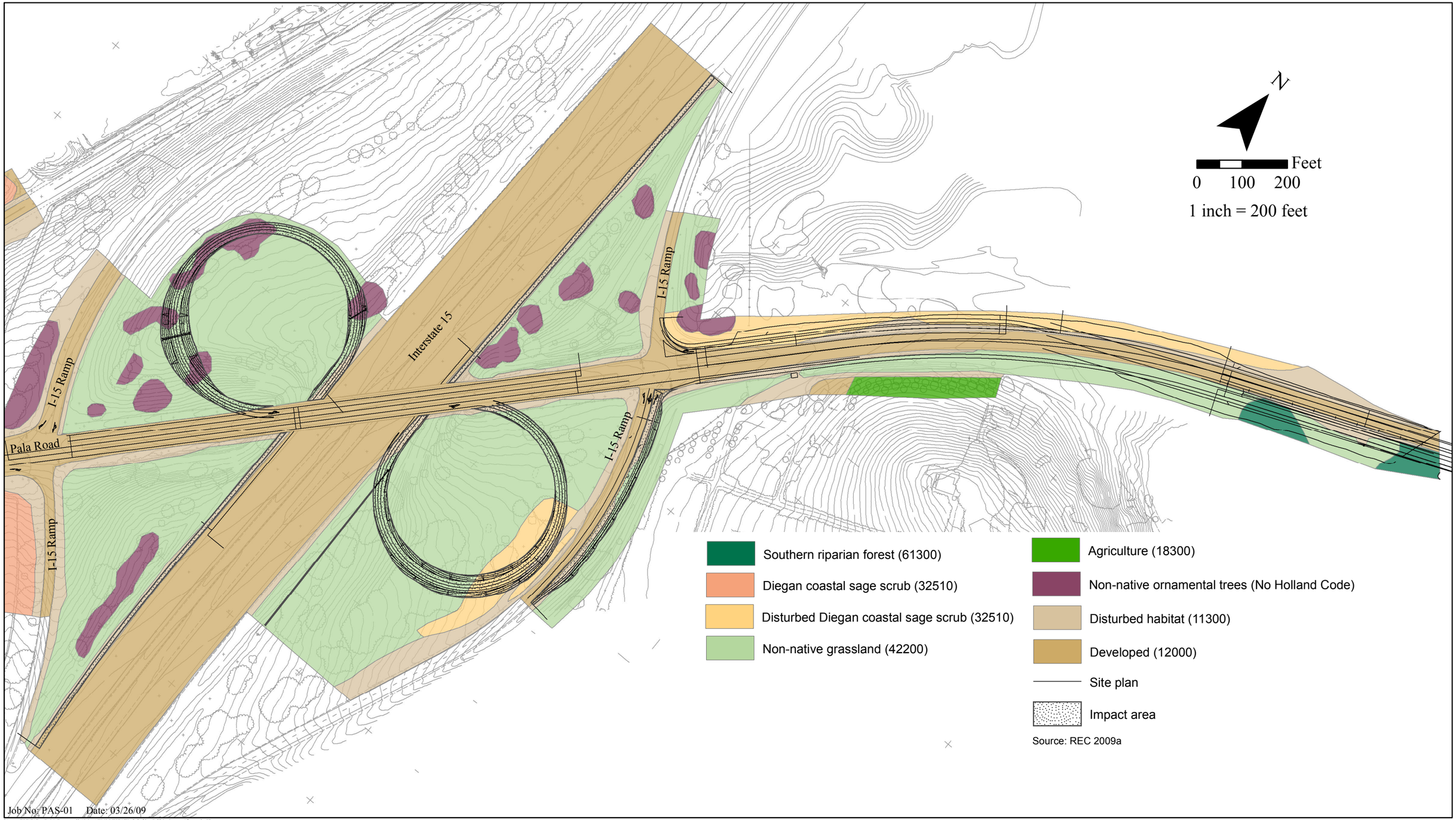
Figure 3.3-2a

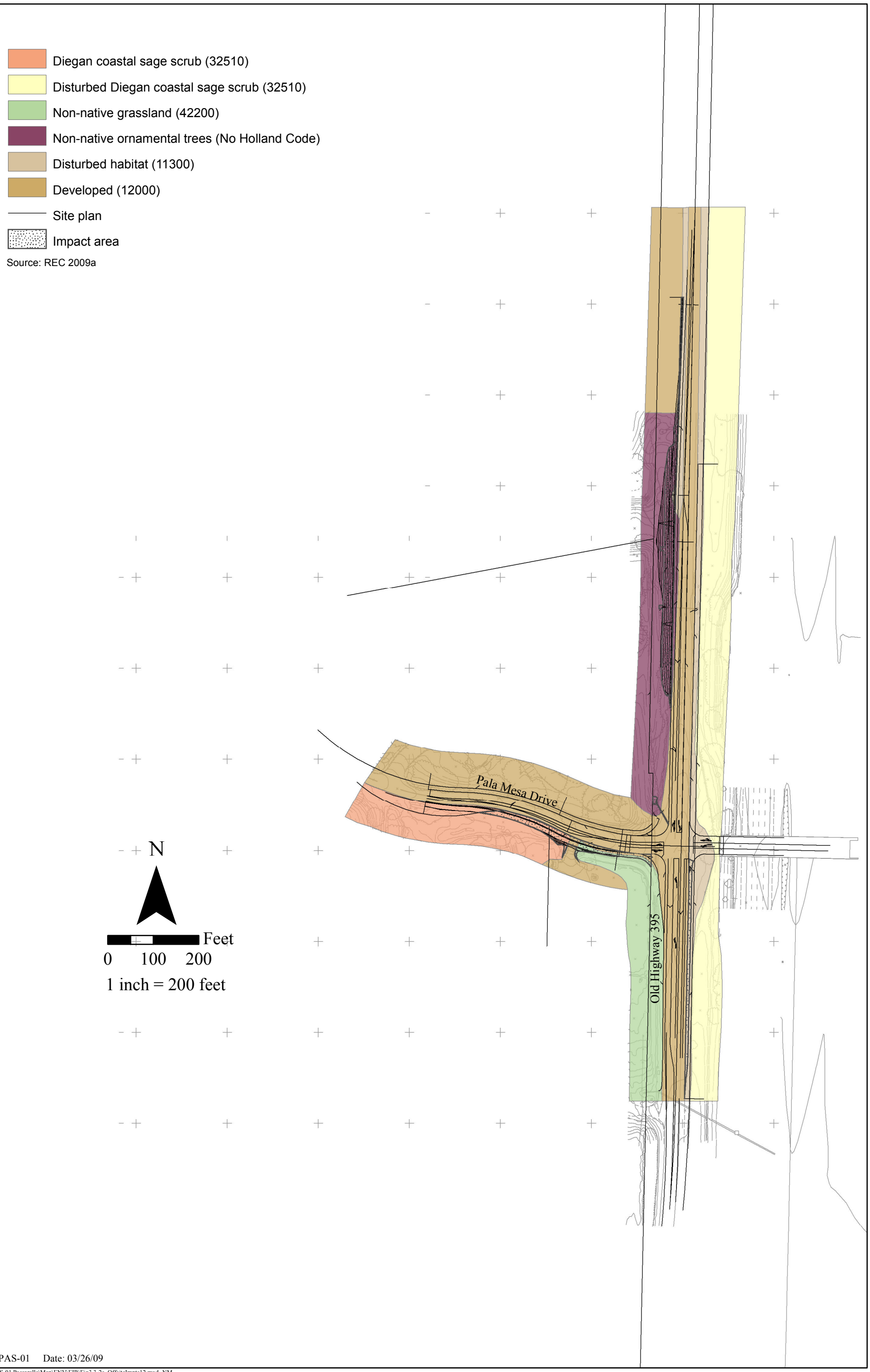


Off-site Intersection Resources and Impacts

CAMPUS PARK PROJECT

Figure 3.3-2b

HELIX



Job No: PAS-01 Date: 03/26/09

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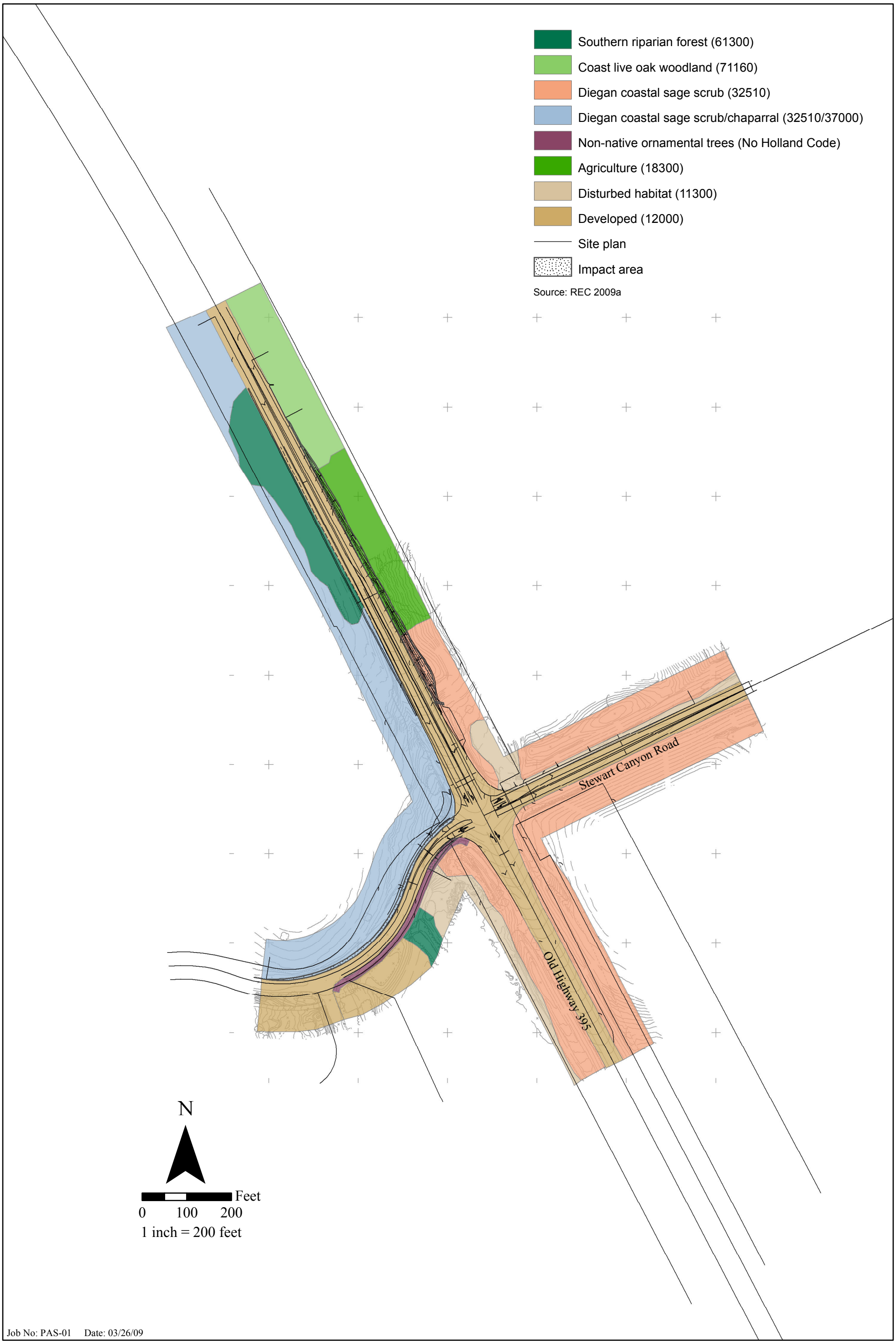
Off-site Intersection Resources and Impacts

CAMPUS PARK PROJECT

Figure 3.3-2c

HELIX



Job No: PAS-01 Date: 03/26/09

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Off-site Intersection Resources and Impacts

CAMPUS PARK PROJECT

HELIX

Figure 3.3-2d

Project Boundary
Stewart Canyon Road
Pankey Road
Pala Mesa Heights Drive
Rice Canyon Road
15
SR-76
Pankey Road
N
W
E
S
0 500 1,000 2,000
Feet
Jurisdictional Areas
ACOE Waters of the U.S.
ACOE Waters of the U.S. and CDFG jurisdictional
ACOE Waters of the U.S. and CDFG jurisdictional
ACOE wetlands and CDFG jurisdictional
ACOE wetlands
CDFG jurisdictional
Habitat
Freshwater marsh (52410)
Southern riparian forest (61300)
Southern willow scrub (63320)
Data Source: REC 2009a
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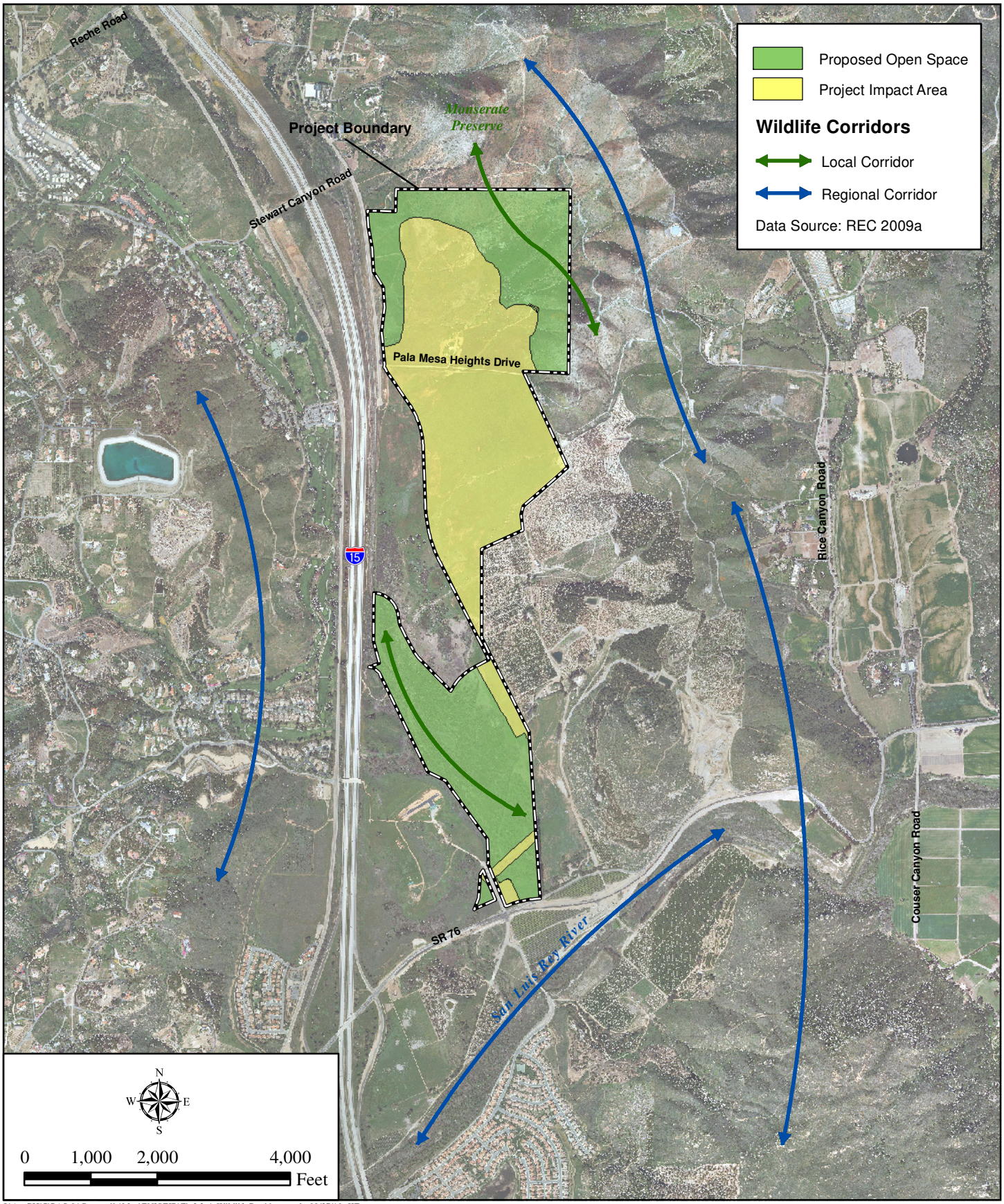
Jurisdictional Wetlands and Waters

CAMPUS PARK PROJECT

HELIX

Figure 3.3-3



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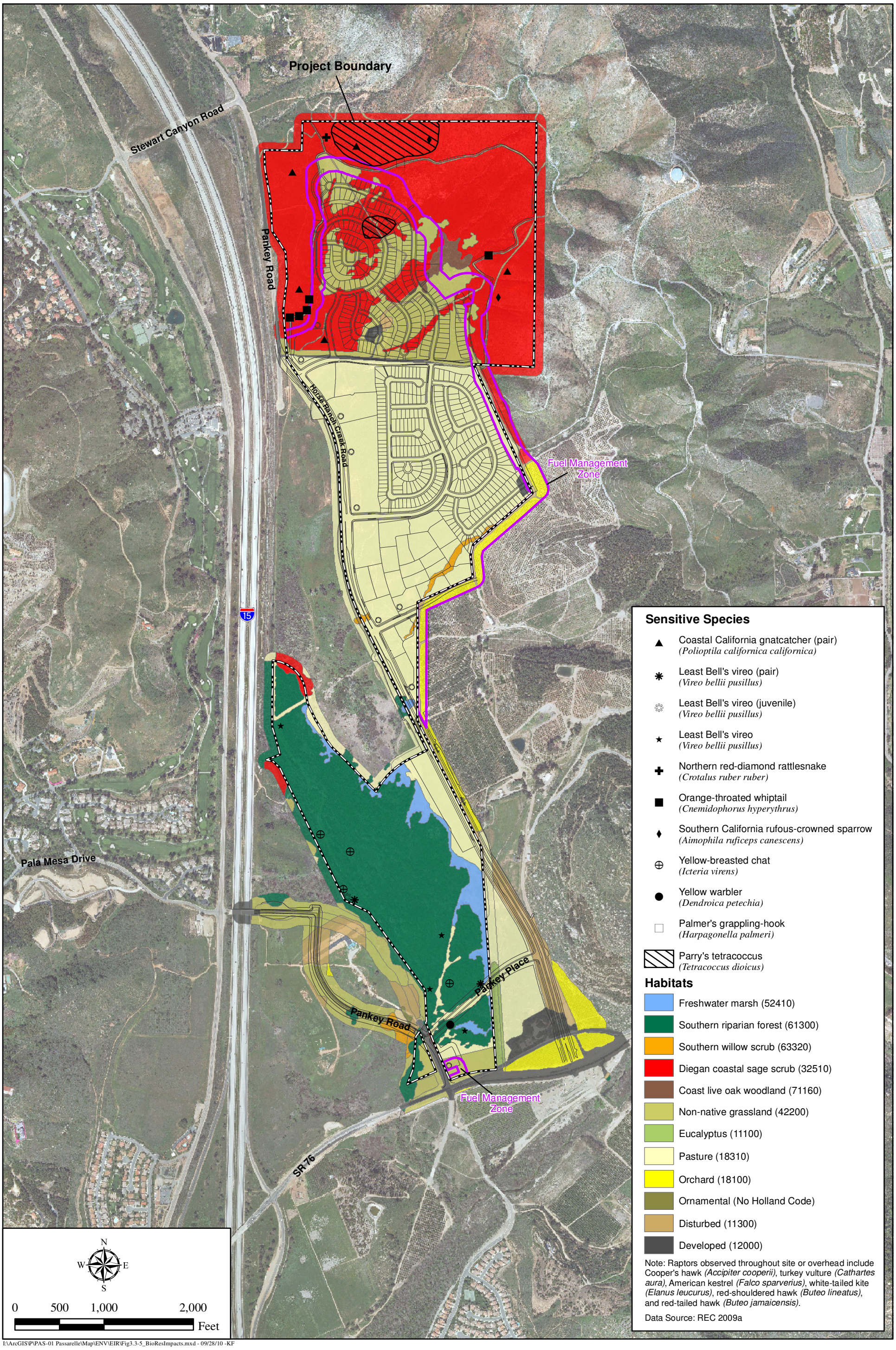
Wildlife Corridors

CAMPUS PARK PROJECT

HELIX

Figure 3.3-4



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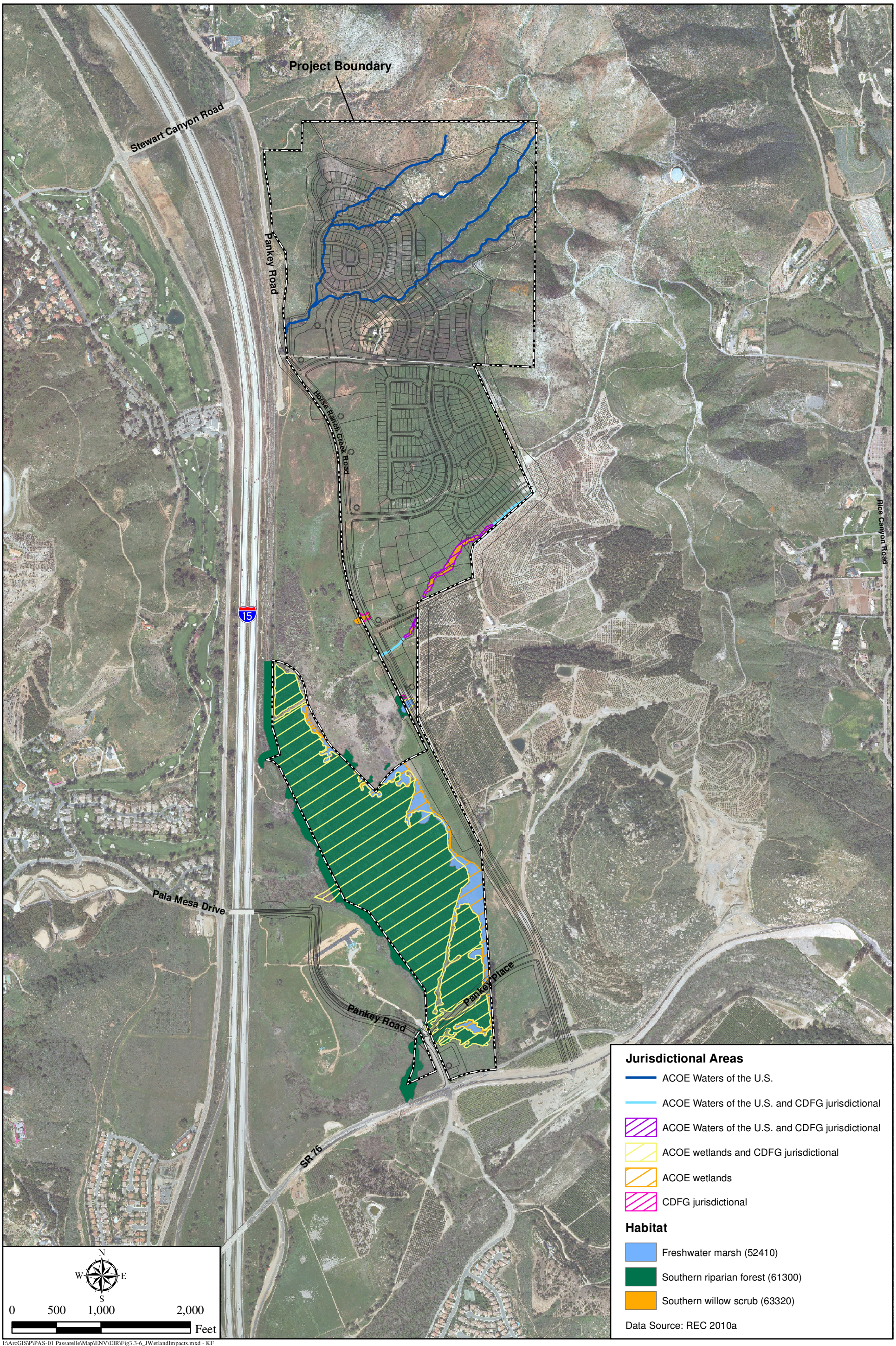
On-site and Off-site Biological Resources/Impacts

CAMPUS PARK PROJECT

HELIX

Figure 3.3-5



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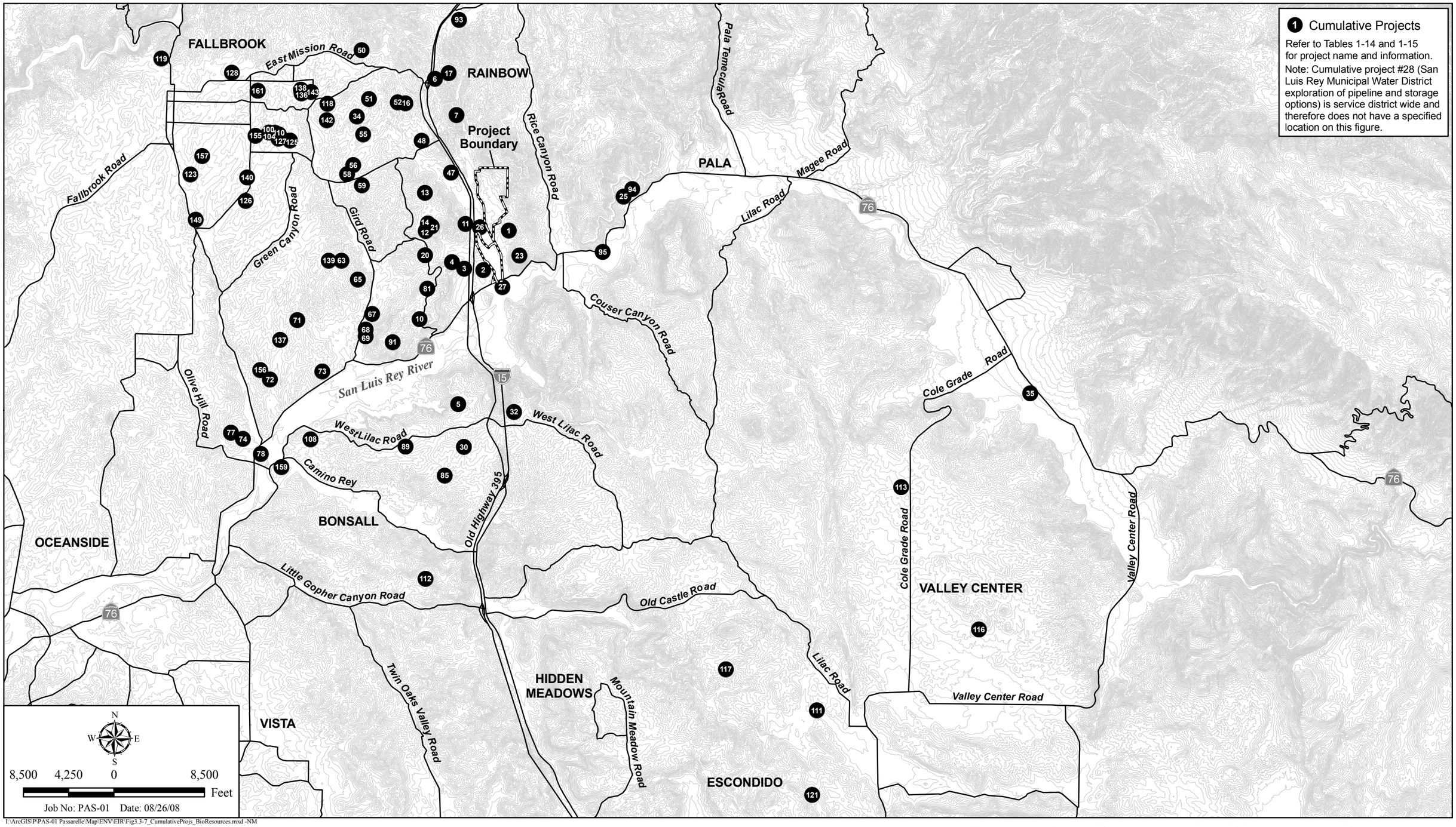
Impacts to Jurisdictional Wetlands and Waters

CAMPUS PARK PROJECT

HELIX

Figure 3.3-6

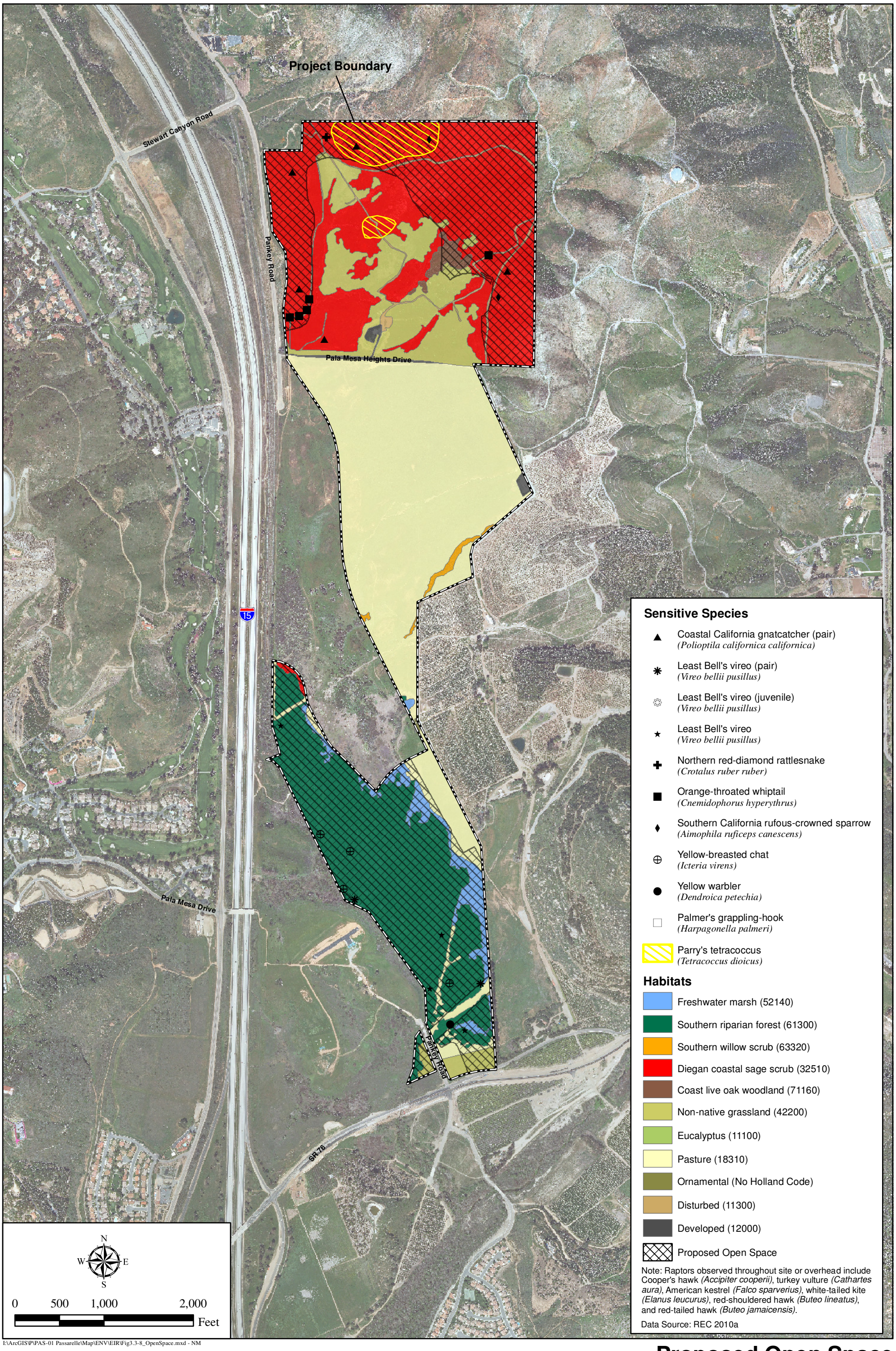


Cumulative Projects for Biological Resources

CAMPUS PARK PROJECT

HELIX

Figure 3.3-7



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Proposed Open Space

CAMPUS PARK PROJECT

HELIX

Figure 3.3-8