2.2 Biological Resources

This section of the SEIR summarizes the results of the *Biological Technical Report for the Sunroad Centrum 250 Project,* prepared by REC Consultants (February 2017) for the proposed Project, included as Appendix C of this SEIR. This section of the SEIR presents the existing biological resources in the Project area, evaluates impacts that would occur as a result of the proposed Project, and provides mitigation measures that would be implemented to reduce significant impacts to the extent feasible.

One comment letter received during the NOP scoping period pertains to biological resources (see Appendix A). The comment letter, provided by the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) (collectively the "Wildlife Agencies"), indicated that it may be necessary re-evaluate the Minor Amendment concurrence provided for the Sunroad Centrum project on November 12, 2003, should there be substantive changes from the previous project. It was recommended that the SEIR evaluate opportunities to maximize on-site conservation of grassland and burrowing owl habitat. Additionally, recommendations for avoiding, minimizing, and adequately mitigating project-related impacts to biological resources were provided. Most of the southern and western section of the site, south of the Lone Star Road alignment, is classified in the proposed Specific Plan Amendment as a Minor Amendment Area. A small area in the center of the site, corresponding to the mima mound area, is classified as a Minor Amendment Area Subject to Special Consideration with "G Designator". The G Designator applies to areas that have steep slopes and are biologically sensitive, and are subject to the Sensitive Resource Area Regulations of the Zoning Ordinance. The entire area to the north of Lone Star Road is classified as a Major Amendment Area with G Designator. That area is designated as an open space preserve. The Project would comply with Multiple Species Converstion Program (MSCP) requirements, including necessary Wildlife Agency consultation pertaining to Major and Minor Amendment areas.

The Project site was part of the 1994 EIR, which included a Biological Technical Report and mitigation measures for projected impacts. The 2000 SEIR was prepared specifically for the Project site and was certified in December 2000. The 2000 FSEIR superseded portion of the 1994 EIR and all relevant mitigation measures from the 1994 EIR were incorporated into the 2000 FSEIR; therefore, with certification of the 2000 FSEIR, most of the 1994 EIR is no longer relevant to the Project site. Additional or revised mitigation measures were included in the subsequent December 2003 Resource Conservation Plan (RCP) for the Project. A conditional concurrence for a Minor Amendment was completed in 2003. This project was never developed.

The Project was approved for development in 2012 to subdivide the site into 55 lots consisting of 52 technology business park lots ranging in size from 1.8 acres to 5.3 acres, one lot for a sewer pump station, one storm water detention lot, and a 51.34-acre dedicated open space lot. A 0.41-acre easement within the subdivision is identified as an open space easement established for the protection of biological resources (vernal pools). This project was never developed.

2.2.1 Existing Conditions

2.2.1.1 *Environmental Setting*

The Project site includes nine undeveloped parcels located approximately 1.25 miles north of the US-Mexican border. Harvest Road (unpaved) bisects the site north-south. Portions of the site have been altered by historical agricultural activity, but are not currently farmed.

The site is highest in the central area and slopes downward in all directions. The northwestern area slopes steeply down into Johnson Canyon, along the northern property boundary. Site elevation ranges from approximately 445 feet above mean sea level (AMSL) in Johnson Canyon at the northeastern corner of the site, to approximately 600 feet amsl in the central portion of the property.

Otay Mesa is an ancient marine terrace, and, with the exception of Johnson Canyon, site geology is mapped as Otay Formation (Oligocene to Miocene) of sandstone, siltstone, and claystone, interbedded with bentonite lenses. The Otay Formation consists of alluvial fan deposits along the western slope of the San Ysidro Mountains, and includes dacite/andecite rocks from eroded volcanic plugs in those Mountains. Johnson Canyon slopes are Otay Formation alluvial fan conglomerate, while the canyon bottom is much older Pleistocene alluvium.

Six soil types in four soil series are mapped on-site, as shown in Figure 2.2-1, *On-site and Adjacent Soil Classifications*: Diablo clay 2-9% slopes (DaC), Diablo clay 9-15% slopes (DaD), and Diablo clay 15-30% slopes, eroded (DaE2); Linne clay loam 9-30% slopes (LsE); Salinas clay 0-2% slopes (ScA); and Stockpen gravelly clay loam 2-5% slopes (SuB). These soils are described below (USGS 1973).

- The **Diablo** series consists of well-drained, moderately deep to deep clays derived from soft, calcareous sandstone and shale. These soils are on uplands and have slopes of 2-50%. In a representative profile, the upper approximately 27 inches are clay, overlying approximately five inches of calcareous heavy sandy loam, over a substratum of soft, calcareous decomposed sandstone. DaC is gently sloping to moderately sloping and is 34-40 inches deep over rock. DaD is strongly sloping and is 26-37 inches deep over rock. DaE2 is 20-32 inches deep over rock. The Diablo series is the most common soil series on-site and is mapped in all areas of the site except for small areas in the center, extreme south and extreme north of the site.

- The **Linne** series consists of well-drained, moderately deep clay loams derived from soft calcareous sandstone and shale. In a representative profile the surface layer is approximately 15 inches of calcareous heavy clay, over approximately 13 inches of heavy clay loam, over calcareous clay loam, with

a substratum of soft, white, calcareous shale at a depth of approximately 37 inches. LsE occurs on uplands and is a rolling to hilly soil with an average slope of 16%. It is only mapped in the northeastern portion of the site.

- The **Salinas** series consists of well drained and moderately well drained clay loams that formed in sediments washed from Diablo, Linne, Las Flores, Huerhuero, and Olivenhain soils. These soils are on flood plains and alluvial fans and have slopes of 0-9%. In a representative profile the surface layer is clay loam about 22 inches thick, over approximately 24 inches of calcareous clay loam, over a substratum of calcareous clay loam and loam. In some areas the surface layer is clay. ScA is nearly level with a surface layer of clay and a substratum of clay to clay loam. It is only present on-site in a small pocket running southwest to northeast at the southern central edge of the site.

- The **Stockpen** series consists of moderately well drained, moderately deep gravelly clay loams. These soils are on marine terraces and have slopes of 0-5%. In a representative profile, the surface layer is gravelly clay loam about three inches thick, over subsoil of calcareous gravely clay and clay about 31 inches thick. The substratum is clay. The gently sloping SuB is the second most common soil series on-site and occurs in the central region of the site, corresponding to mima mound topography.

Regional Context

The Project site is located on eastern Otay Mesa in southern San Diego County. The Otay Mesa area consists of a relatively level mesa top that meets the foothills of the San Ysidro Mountains at the eastern end of the mesa, and slopes down to the coastal terrace at the western end. The northern limit is formed by the Otay River Valley, and tributary canyons cut through the mesa down to the river valley below. The southern limit of the area within the United States is the US-Mexican border. Historically, the flat land in eastern Otay Mesa was used for agriculture. In the 1960s, land use began to shift from agriculture, with its relatively high water and labor costs, to industrial and commercial development. In the 1980s, the Mexican maquiladora program further increased the demand for industrial distribution and warehousing just north of the border.

The Project site falls within the South County segment of the MSCP. The site lies within the northwestern area of the EOMSP, which provides comprehensive development guidelines for the area. Most of the southern and western section of the site, south of the Lone Star Road alignment, is classified in the EOMSP Amendment (2015) as a Minor Amendment Area; the entire property to the north of Lone Star Road is classified as a Major Amendment Area with G-Designator; and a small area in the center of the site is classified as a Minor Amendment Area Subject to Special Consideration and with G-Designator (see Figure 2.2-2, *Project Boundary and Surrounding MSCP Amendment Areas*).

Vegetation/Land Cover Categories

Seven vegetation categories or land cover types, classified according to Oberbauer et al. (2008), were observed within the Project area in 2015/2016, and are shown in Figure 2.2-3, *Biological Resources*. Vegetation/land cover categories and acreages are summarized in Table 2.2-1, *Vegetation/Land Cover Categories and Acreages*, and described in the following paragraphs. Changes in vegetation since the 2000 SEIR are also noted in the paragraphs below. (Some small changes in acreage are attributable to the refinement of mapping based on use of current satellite imagery and GIS-based digital mapping).

Wetland Vegetation Categories

Disturbed Wetland (County Habitat Code 11200), 0.11 Acre

Disturbed wetlands are areas permanently or periodically inundated by water, which have been significantly modified by human activity. These wetlands are often unvegetated, but may contain scattered native or non-native vegetation. This habitat type includes portions of wetlands with obvious artificial structures and lined channels, Arizona crossings, detention basins, culverts, and ditches.

Two areas of disturbed wetland occur on the Project site. One area is a shallow swale along the western edge of the Project site in which water intermittently ponds after rain. The swale does not appear to drain to another location, and may have formed when an agriculture-related berm was created along the western side. The only hydrophytic vegetation observed within this swale during biological surveys of the Project site were pale spike-rush (*Eleocharis macrostachya*), and spike-rush (*Eleocharis* sp.). No obligate vernal pool indicator plants have been observed in the swale and it was reclassified as disturbed wetland in 1998. In addition, none were observed in 2015-2016. The size of "wetland" within the swale varies depending on rainfall; based on review of historical satellite imagery and 1998 habitat mapping it appears to occupy approximately 0.09 acre.

The second area of disturbed wetland is within an abandoned excavated agriculture-related pond in the central area of the Project site. The upper banks of the former pond consist of minimally vegetated soil and upland vegetation. Much of the bottom also supports only upland vegetation, such as filarees (*Erodium* spp.), red brome (*Bromus madritensis* subsp. *rubens*), telegraph weed (*Heterotheca grandiflora*), and oats (*Avena* spp.) The basin has relatively low cover that includes many of the non-native grasses that occur in the surrounding non-native grassland described below. Along the lower banks are dead and drought-damaged hydrophytic shrubs and trees such as a red willow (*Salix laevigata*), a black willow (*S. gooddingii*), small amounts of mule-fat (*Baccharis salicifolia* subsp. *salicifolia*), and tamarisk (*Tamarix ramosissima*) among upland plants. Within the lowest part of the basin bottom is a small area of disturbed wetland where water ponds after rain, and patches of herbaceous hydrophytes such as spike-rush grow. This small disturbed wetland covers approximately 0.02 acre.

Non-Native Riparian (County Habitat Code 65000), 0.39 Acre

Non-native riparian habitat consists of densely vegetated riparian thickets dominated by non-native, invasive species. This habitat is common along major river channels, often where disturbance has occurred. This designation is used only where non-native, invasive species account for greater than 50 percent of the total vegetative cover within a mapping unit. Characteristic plants include non-native species such as giant reed (*Arundo donax*), pampas grass (*Cortaderia* spp.), Bermuda grass (*Cynodon dactylon*), eucalyptus (*Eucalyptus* spp.), non-native palms (*Phoenix* spp. and *Washingtonia* sp.), and tamarisk (*Tamarix* spp.), as well as native species such as arrow weed (*Pluchea sericea*), western cottonwood (*Populus fremontii*), and willows (*Salix* spp.).

On-site non-native riparian habitat is a thicket of tamarisk with a sparse understory composed almost entirely of non-natives such as dwarf nettle (*Urtica urens*) and scarlet pimpernel (*Anagallis arvensis*). Other invasives along the disturbed edges included stinkwort (*Dittrichia graveolens*) and milk thistle (*Silybum marianum*). Scattered natives species saltgrass (*Distichlis spicata*), salt heliotrope (*Heliotropium curassavicum* var. *oculatum*), and Coulter's fleabane (*Laennecia coulteri*) were also observed along the edges of the riparian vegetation.

San Diego Mesa Claypan Vernal Pool (County Habitat Code 44322), 0.21 Acre

Vernal pools are seasonally flooded depressions that support a distinctive living community adapted to extreme variability in hydrologic conditions (seasonally very dry and very wet conditions). In San Diego, vernal pools often retain pooled water for about two weeks after significant rain events. Vernal pools are differentiated from other temporary wetlands by the following criteria: (1) the basin is at least partially vegetated during the normal growing season or is unvegetated due to the heavy clay (or hardpan) soils that do not support plant growth; and (2) the basin contains at least one vernal pool indicator species (e.g. *Psilocarphus* spp., *Downingia cuspidata*, *Eryngium aristulatum* var. *parishii*, or crustaceans such as *Branchinecta* spp., and *Streptocephalus* spp.). Two types of vernal pools are found in San Diego County: San Diego mesa hardpan vernal pools and San Diego mesa claypan vernal pools. The pools on Otay Mesa are of the claypan type, occurring on fine-textured soils where water ponds due to a clay impermeable layer rather than a hardpan layer. These claypan pools are almost entirely restricted to marine terraces between San Diego and Ensenada, Mexico, and have been much reduced by agriculture and development.

The claypan vernal pools are typically associated with a small-scale topography of low hummocks, called mima mounds, clustered on the mesa top. The vernal pools form in the depressions between the mima mounds. In drier years, the pools are typically isolated with very small watersheds of surrounding mima mound slopes. During wet years, pools between mima mounds may join if water levels are high enough. The area of mima mound topography on-site is clearly visible in satellite imagery, and occurs over the Stockpen soil unit. This soil type has a surface layer of gravelly clay loam to three inches deep over a subsoil of calcareous gravelly clay and clay from three to 31 inches,

and is often associated with mima mounds.

Seven vernal pools have been mapped on the Project site. The group of pools on-site is known as the J22 complex and has been documented since at least 1978, when it was mapped in the "San Diego Vernal Pool Study, 1978" prepared for CDFW (Beauchamp 1979). Although only three J22 pools were documented in the 1979 publication and in Bauder's 1986 "San Diego Vernal Pools" report for CDFW (Bauder 1986), the 1993 EOMSP BTR indicated seven pools were present (County of San Diego 1993). One of the seven vernal pools in the 1994 EIR BTR was a swale parallel to an artificial berm, which has since been reclassified as a disturbed wetland (see above). One more vernal pool was identified by REC in 1998, so the total number of pools remains seven. Vernal pool plants documented as occurring in the J22 pools include dwarf woolly-marbles (*Psilocarphus brevissimus*), annual hairgrass (*Deschampsia danthonioides*), water pygmyweed (*Crassula aquatica*), American pillwort (*Pilularia americana*), flowering quill wort (*Triglochin* [*Lilaea*] *scilloides*), waterwort (*Elatine* sp.), San Diego button-celery (*Eryngium aristulatum* var. *parishii*), prostrate navarretia (*Navarretia fossalis*), and pale spike-sedge.

Due to the severe drought beginning in 2011, no evidence of vernal pool ponding or vernal pool indicator species was observed in 2015-2016. The seven previously documented vernal pool locations are shown in Figure 2.2-3. All seven pools occupy approximately 0.21 acre.

Upland Vegetation Categories

Native Grassland (Habitat Code 42100) 1.96 Acres

Native grassland, and more specifically valley needle grass grassland, is described as "A midheight (to 2 ft) grassland dominated by perennial, tussock-forming *Stipa* (*Nasella*) *pulchra*. Native and introduced annuals occur between the perennials, often actually exceeding the bunchgrasses in cover. In San Diego County, native perennial herbs such as *Sanicula*, *Sidalcea*, *Sisyrinchium*, *Eschscholzia,* or *Lasthenia* are present. The percentage cover of native species at any one time may be quite low, but is considered native grassland if 20 percent aerial cover of native species is present" (Oberbauer et al. 2008). Native grassland usually occurs on fine-texture (often clay) soils, moist or even waterlogged during winter, but very dry in summer.

Patches with varying concentrations of needle grass occur on the Project site within the non-native grassland. These patches currently lack the plant density that would qualify them as native grassland. Larger and denser patches occur on the north-facing slope of Johnson Canyon. These larger patches, apparently limited to the Diablo clay soil 15 to 30 percent slope, are overwhelming dominated by native needle grass (*Stipa cernua* and *pulchra*). Individual bunchgrasses are well spaced, to the degree that the pattern of the large individual bunches is visible in satellite imagery. Native herbs such as red-skin onion (*Allium haematochiton*) and morning-glory (*Calystegia macrostegia*) grow among the bunchgrasses. The native grassland patches had visibly lower cover of

invasive species than any other habitat on-site. The areas of native grassland did not have distinct boundaries, but were mapped over approximately 1.96 acres based on site observations and Google Earth satellite imagery.

Non-Native Grassland (County Habitat Code 42200), 240.24 Acres

According to the County of San Diego, non-native grassland is described as "A dense to sparse cover of annual grasses with flowering culms 0.2-0.5 (1.0) m high. Often associated with numerous species of showy-flowered, native annual forbs ("wildflowers"), especially in years of favorable rainfall. In San Diego County the presence of *Avena, Bromus, Erodium,* and *Brassica* are common indicators. In some areas, depending on past disturbance and annual rainfall, annual forbs may be the dominant species; however, it is presumed that grasses would soon dominate. Germination occurs with the onset of the late fall rains; growth, flowering, and seed-set occur from winter through spring. With a few exceptions, the plants are dead through the summer-fall dry season, persisting as seeds. Remnant native species are variable. This can include grazed and even dry-farmed (i.e., disked) areas where irrigation is not present" (Oberbauer et al. 2008). Additional habitat identification information provided in the County's "Report Format and Content Requirements" (2010) specifies that "Non-native grasses typically comprise at least 30 percent of the vegetation […]. Usually, the annual grasses are less than 1 m (3 ft) in height, and form a continuous or open cover. Emergent shrubs and trees may be present, but do not comprise more than 15 percent of the total vegetative cover." Characteristic non-native grassland species include foxtail chess (*Bromus madritensis* ssp. *rubens*), ripgut grass (*Bromus diandrus*), wild oats (*Avena* spp.), fescues (*Vulpia* spp.), red-stem filaree (*Erodium cicutarium*), mustards (*Brassica* spp.), lupines (*Lupinus* spp.) and goldfields (*Lasthenia* spp.), among others.

The non-native grassland community located on the Project site is characterized by annual non-native grasses such as oats, brome grasses (*Bromus* spp.), and glaucous barley (*Hordeum murinum* subsp. *glaucum*); and forbs such as black mustard (*Brassica nigra*), short-pod mustard (*Hirschfeldia incana*), London rocket (*Sisymbrium irio*), filarees, and Russian-thistle (*Salsola* sp.). Plant density and dominance vary throughout the site. Some areas are strongly dominated by Russian-thistle, other areas are characterized by thick, tall stands of black mustard, and some areas are dominated by London rocket. Within the mima mound area, vegetation is characterized by shorter and more open grasses and abundant prickly Russian-thistle (*Salsola tragus*), with scattered native herbs such as needle grass, splendid mariposa lily (*Calochortus splendens*), common goldenstar (*Bloomeria crocea* var. *crocea*), and fascicled tarweed (*Deinandra fasciculata*). The Lone Star Road alignment, formerly a dirt road, supports greater numbers of native herbs and wildflowers such as small-flower soap plant (*Chlorogalum parviflorum*), fascicled tarweed, rayless gumplant (*Grindelia camporum*), and common goldfields (*Lasthenia gracilis*).

Other Upland Land Cover Categories

Developed Land (County Habitat Code 12000), 2.97 Acres

Urban and/or developed land consists of "Areas that have been constructed upon or otherwise physically altered to an extent that native vegetation is no longer supported. Developed land is characterized by permanent or semi-permanent structures, pavement or hardscape, and landscaped areas that require irrigation. Areas where no natural land is evident due to a large amount of debris or other materials being placed upon it may also be considered urban/developed (e.g. car recycling plant, quarry)" (Oberbauer et al. 2008). Additional habitat identification information provided in the County's "Report Format and Content Requirements" (2010) includes "Land that has been constructed upon or otherwise covered with a permanent unnatural surface shall be considered Developed…" A portion of the parcel overlapping Otay Mesa Road is developed land lacking native vegetation.

Disturbed Land (County Habitat Code 11300), 7.26 Acres

The County of San Diego describes disturbed land as "Areas that have been physically disturbed (by previous legal human activity) and are no longer recognizable as a native or naturalized vegetation association, but continue to retain a soil substrate. Typically vegetation, if present, is nearly exclusively composed of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance, or shows signs of past or present animal usage that removes any capability of providing viable natural habitat for uses other than dispersal. Examples of disturbed land include areas that have been graded, repeatedly cleared for fuel management purposes and/or experienced repeated use that prevents natural revegetation (i.e. dirt parking lots, trails that have been present for several decades), recently graded firebreaks, graded construction pads, construction staging areas, off-road vehicle trails, and old homesites" (Oberbauer et al. 2008). Additional habitat identification information provided in the County's "Report Format and Content Requirements" (2010) specifies that "Disturbed land includes areas in which the vegetative cover comprises less than 10 percent of the surface area (disregarding natural rock outcrops) and where there is evidence of soil surface disturbance and compaction from previously legal human activity; or where the vegetative cover is greater than 10 percent, there is soil surface disturbance and compaction, and the presence of building foundations and debris…resulting from legal activities (as opposed to illegal dumping). Examples include recently graded firebreaks, graded construction pads, construction staging areas, off-road vehicle trails, and old homesites."

Harvest Road and the larger unpaved roads and trails throughout the site are considered disturbed land. These roads and trails have small amounts of herbaceous vegetation at the edges, but are almost entirely bare highly compacted soil. Most trails in the southern and central areas are likely associated with historical agricultural activity. Disturbed land in the more sloping northern section of the site includes off-road recreational vehicle trails used by trespassers, and a trail across the creek in Johnson

Canyon.

Flora

A total of 101 plant taxa have been observed on the Project site. Of these, 50 were native, 50 non-native, and one (identified to genus only) undetermined. Characteristic species of each habitat are included in the habitat descriptions above. Non-native grassland had the greatest observed species diversity, with 90 taxa. The taxa observed in the greatest number of vegetation categories were the non-native annual grasses (brome grasses in particular), black mustard, fascicled tarweed, nodding needle grass, and purple needle grass.

Fauna

A total of 104 animal taxa were documented on or over the site: 45 invertebrate taxa, one amphibian, six reptile taxa, 42 bird taxa, and ten mammal taxa. Of these, all but eight are native species. The most common wildlife species included funnel weaver spider (Family Agelenidae), orthopterans (crickets and grasshoppers), checkered white butterfly (*Pontia protodice*), western white-throated swift (*Aeronautes saxatalis*), horned lark (*Eremophila alpestris actia*), song sparrow (*Melospiza melodia*), meadowlark (*Sturnella vulgaris*), and Botta's pocket gophers (*Thomomys bottae*).

Special-status Plant Species

A sensitive or special-status plant is any plant taxon (species, subspecies, or variety) that is officially listed by the State of California or the Federal government as Endangered, Threatened, or Rare; a candidate for one of those listings; included in California Rare Plant Ranks (CRPR) 1 through 4; or included in the County of San Diego Sensitive Plant Lists A through D. A list of special-status plants with the potential to occur on the Project site was generated from the CNDDB RareFind5 database and a list provided by the County of San Diego. The resulting list includes any special-status plant documented within the Project site's USGS 7.5' quadrangle (Otay Mesa), as well as any taxa specifically identified by the County for this Project.

Special-status Plant Species Documented On-site

Six special-status plant species have been documented on-site since 1993: San Diego sunflower, small-flower bindweed, coast barrel cactus, variegated dudleya, San Diego button-celery, and prostrate navarretia. Information on each of these is provided below, and locations are shown in Figure 2.2-3.

San Diego sunflower (*Bahiopsis laciniata*, Asteraceae) is CRPR 4.2 and County Group D shrub with small, rough, dark green leaves and bright yellow daisy-like flowers; it typically grows in drier and hotter parts of coastal sage scrub (and sometimes chaparral), often on south- and west-facing slopes. This species was observed on-site in the mima mound area among the coastal sage scrub plants in 1999, but has not been

observed on-site since the site burned (burn date unknown).

Small-flower bindweed (*Convolvulus simulans*, Convolvulaceae) is a CRPR 4.2 and County Group D species that prefers clay soils in open habitat such as grasslands or openings in chaparral and coastal scrub. This species was not detected on-site in surveys prior to 2015, but in February 2015, a patch was observed growing on sloping cracked-clay soil immediately upslope of the creek in Johnson Canyon and below native grassland. In 2016, a single plant was observed on the apron of an abandoned burrowing owl burrow in the southeastern corner of the site. These locations are shown in Figure 2.2-3.

Coast barrel cactus (*Ferocactus viridescens,* Cactaceae) is a CRPR 2B.1, County Group B, and MSCP-covered species that is limited to San Diego County and Baja California. In San Diego County this species occurs occasionally on dry slopes below 1500 meters AMSL and is found along the coastal slope from Oceanside south to Boundary Monument. Coast barrel cactus is threatened by urbanization, off-road vehicles and commercial exploitation. This species was found in non-native grassland on-site, especially within the mima mound area. Approximately 110 individuals were documented on-site in 1998, 1999, in and 2001. In 2015 to 2016, presence of coast barrel cactus in the biological open space was confirmed.

Variegated dudleya (*Dudleya variegata*, Crassulaceae) is a CRPR 1B.2, County Group A, Narrow Endemic, MSCP-covered species that is restricted in distribution to southern San Diego County and northwestern Baja California. It occurs in clayey or loamy soils in sage scrub, grassland, and chaparral habitat, including isolated rocky substrates in open grasslands, and in proximity to vernal pools in mima mound topography. Typically, this dudleya grows in small areas devoid of shrub cover.

Variegated dudleya has been documented on-site in several locations in the past: In 1993 361 individuals were documented in the J22 vernal complex, of which 73 were south of Lone Star Road and 288 north of Lone Star Road. In 1998/1992, a total population size of 100 to 200 individuals were found in three locations. In 2001, those three locations were not detected, but a different group of several hundred plants was found on the western side of the Project site, north of the Lone Star Road alignment, and approximately ten more individuals were observed east of that group. In May 2006, 11 individuals were observed near the northern 1998 location, north of Lone Star Road. The 1998-2006 observation locations are shown in Figure 2.2-3. No variegated dudleya was detected in 2015 or 2016. A focused survey in a year of adequate rainfall would be necessary to estimate the size of any remaining populations onsite.

San Diego button-celery (*Eryngium aristulatum* var. *parishii*, Apiaceae) is a Federal and State Endangered, CRPR 1B.1, County Group A and MSCP-covered species. It is a prostrate, herbaceous, deciduous, biennial or perennial species that occurs in or near vernal pools in Riverside and San Diego Counties and in northern Baja California, and typically blooms between March and May. The 1979 San Diego vernal pool survey reported this species in the J22 vernal pool complex. The 1993 BTR prepared for the

EOMSP 1994 EIR documented approximately 65 individuals in three of the J22 vernal pools. It was documented in five of the vernal pools on-site in 1998 (see Figure 2.2-3), but not counted at that time. In 2001, it was not observed in any of the seven mapped pools, but was found in a mima mound depression to the southeast of the vernal pool that is south of Lone Star Road (see Figure 2.2-3); and in 2004, approximately 30 individuals were observed in this same depression. The location of the 2001 and 2004 observations is within the area of mima mound topography closer to the southeastern boundary of the mima mound area, near where ground level begins to slope downhill toward the southeast. These plants were growing in the concave area between mima mounds. Based on review of prior vernal pool and sensitive species mapping, including the EOMSP BTR, San Diego button-celery was not previously documented at this location. No San Diego button-celery was detected in 2015 or 2016. A focused survey in a year of adequate rainfall and vernal pool ponding would be necessary to estimate the size of any remaining population onsite.

Spreading navarretia (*Navarretia fossalis*, Polemoniaceae) is a Federal Threatened, CRPR 1B.1, County Group A, MSCP-covered species. This white-flowered annual occurs in western Riverside and southwestern San Diego Counties, as well as in northwestern Baja California. It generally occurs in vernal pools or roadside depressions below 450 meters AMSL, and can be locally common despite its rarity. Historically, prostrate navarretia occurred in relatively few of the San Diego County vernal pools. The species is known from just three areas within the County including San Marcos, National City, and Otay Mesa. During the 1991 County of San Diego surveys approximately 12 individuals were detected in the J22 vernal pool complex north of Lone Star Road. It has not been documented on-site since that time.

Special-status Plant Species with Moderate to High Potential to Occur On-site

Based on results of decades of surveying the Project area, the only special-status species with high potential to occur on-site are those that were historically found on-site but not detected in recent years: San Diego sunflower, variegated dudleya, and San Diego button-celery. Each of these is described above. (Because prostrate navarretia has not been reported on-site since the 1979 vernal pools survey, it is unlikely to have high potential to occur on-site.)

Three species may have moderate potential to occur on-site: San Diego goldenstar (*Bloomeria clevelandii*), Palmer's grappling-hook, (*Harpagonella palmeri*), and golden-ray pentachaeta (*Pentachaeta aurea* subsp. *aurea*). Evaluations of each of these are provided in Appendix C of the Project BTR.

Special-status Animal Species

For the purposes of this Project, sensitive or special-status wildlife is any animal taxon (species or subspecies) that is officially listed by the State of California or the Federal government as Endangered, Threatened, or Rare; a candidate for one of those listings; classified as Fully Protected, Species of Special Concern, or Watch List by CDFW; or

included in the County of San Diego Sensitive Animals Lists.

A list of special-status animal species with the potential to occur on the Project site was generated from the CNDDB RareFind5 database, SanBIOS database, and a list provided by the County of San Diego. The resulting list includes any special-status animals documented within the Project site's USGS 7.5' quadrangle and surrounding quadrangles, within an applicable elevation range, as well as any taxa specifically identified by the County for the proposed Project.

Special-status Animal Species Observed on or over the Site

Fourteen special-status wildlife species have been documented on or over the site since 1993: San Diego fairy shrimp, San Diego ring-neck snake, Cooper's hawk, grasshopper sparrow, Southern California rufous-crowned sparrow, ferruginous hawk, turkey vulture, northern harrier, white-tailed kite, burrowing owl, California horned lark, loggerhead shrike, barn owl, and San Diego black-tailed jackrabbit. Information on each of these is provided below.

San Diego fairy shrimp (*Branchinecta sandiegensis*) is a Federal Endangered and County Narrow Endemic and Group 1 MSCP-covered branchiopod that inhabits vernal pools and other unvegetated ephemeral basins in Orange and San Diego Counties and Baja California. Suitable pools are typically more than 30 centimeters deep, within 64 kilometers of the Pacific Ocean, and less than 701 meters AMSL. Mapped USFWS-designated critical habitat for San Diego fairy shrimp includes approximately 72.5 acres on-site. Protocol dry season surveys were conducted on August 20, 1998, and an additional wet season sample was collected from the abandoned agricultural pond basin in January 1999 after fairy shrimp were observed in ponded water in the bottom of the basin. San Diego fairy shrimp cysts were found in all vernal pools and the small disturbed wetland northeast of the abandoned agricultural pond, and adults were found in the disturbed wetland within the agricultural pond (see locations in Figure 2.2-3). In February 2016, wet season sampling was attempted in order to update survey results; however, the pools did not receive adequate rainfall to pond, and wet season sampling was not possible. All vernal pools and both disturbed wetlands occurring on the Project site are considered occupied by San Diego fairy shrimp.

San Diego ring-neck snake (*Diadophis punctatus similis*) has no State or Federal special-status, but is a County Group 2 taxon. It typically occurs in moist habitats such as wet meadows, farmland, grassland, and woodlands along the coast into the Peninsular Ranges, but is generally hidden during the day. One individual was observed on-site during the 1999 Quino Checekrspot Butterfly (QCB) surveys, in the northern part of the mima mound area. None were observed in 2015-2016.

Cooper's hawk (*Accipiter cooperii*) is a CDFW Watch List, and County Group 1 MSCP-covered raptor that inhabits riparian woodlands with cottonwoods and sycamores, oak woodlands, eucalyptus groves and other forested areas at 500 to 3,000 feet AMSL. Nesting occurs in second-growth conifer stands or deciduous riparian woodland areas.

Cooper's hawk forages in open areas near forests, and in winter, open woodlands and fields may also be used. One Cooper's hawk was observed flying over the site in 2015. It may have been drawn to the power plant on the south side of Otay Mesa Road by a recorded Cooper's hawk call played at the power plant (to deter bird nesting). After flying from north of the site to the power plant, it turned and flew back to the north. None were observed in 2016.

Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) is a CDFW Watch List and County Group 1 MSCP-covered taxon. This bird favors moderately vegetated slopes of coastal sage scrub dominated by coastal sagebrush, and coastal bluff scrub and chaparral with grass and forb patches, zero to 3,000 feet AMSL. It nests on the ground at the base of rocks, grass tufts, or saplings, or slightly above ground in the branches of shrubs or trees. This species was observed within the non-native grassland and former coastal sage scrub during 1999 Quino checkerspot butterfly surveys. None were observed in 2015-2016.

Grasshopper sparrow (Ammodramus savannarum) is a State Species of Special Concern, County Narrow Endemic, MSCP-covered and County Group 1 taxon. It is San Diego County's bird most restricted to native grassland, which is one of southern California's most threatened habitats. Native grassland is dominated by Stipa (Nassella) bunchgrasses, and, where used by grasshopper sparrows, usually contains some shrubs characteristic of coastal sage scrub. Native grassland has been removed and degraded by development, invasive plant species, and conversion to agriculture, and grasshopper sparrows are now uncommon and localized. Nests are hidden on the ground under clumps of grass and very difficult to find. During the 2001 QCB survey, grasshopper sparrows were noted in the mima mound area, calling in territorial behavior. Although the mima mound area supported better quality habitat at that time, in a matrix of grassland and coastal sage scrub shrubs, native grassland and limited shrubs remain onsite and habitat is still suitable for grasshopper sparrow. Based on habitat descriptions and mapping in the 2001 QCB report, the grasshopper sparrows were detected north of the Lone Star Road alignment within the northern biological open space, where mima mound topography has not been altered by agricultural activity. No grasshopper sparrows were detected during 2015 and 2016 surveys.

Burrowing owl (*Athene cunicularia*) is a State Species of Special Concern, USFWS Bird of Conservation Concern, and County Narrow Endemic and Group 1 MSCP-covered raptor that hunts for small rodents in open grassland and agricultural land. This owl is unusual in that it enlarges and then lives and nests in burrows of small mammals, particularly California ground squirrel (*Spermophilus beecheyi*). Burrowing owls have drastically declined in San Diego County since the 1970s, from approximately 250 to 300 pairs to approximately 46 pairs in 2007. They appear to have suffered, like other grassland birds, from loss of habitat, sensitivity to habitat fragmentation, proliferation of terrestrial predators, and high mortality from collision with cars. East Otay Mesa is the area with largest number of remaining breeding burrowing owls; migratory burrowing owls are also present in the area during winter months.

No burrowing owls, burrows, or sign were detected on-site during the 1998, 1999, or 2001 site surveys. During the 2015 burrowing owl survey, a group of approximately seven abandoned burrows was found on-site just east of Harvest Road and south of the east-west dirt road (see Figure 2.2-3). The burrow holes were filling with soil, spider webs, and plant debris, and no burrowing owl sign (or evidence of use by any other animals) was observed on the aprons. In early 2016, the burrows were further degraded, and appeared to have been eroded and filled with silt by rainstorms early in the year. Remains of another two to three even older burrows were found in 2015 down-slope and slightly east of these, immediately north of Otay Mesa Road, east of Harvest Road (see Figure 2.2-3); these burrows were degraded to the point that they were only marginally identifiable, and one could not be identified as a burrowing owl burrow with certainty.

During the 2016 breeding season protocol surveys, additional inactive burrows were found. The survey field work was supplemented by use of Google Earth satellite imagery. That imagery shows burrows in 2012 and 2014. All burrows found during the survey are shown in Figure 2.2-3. In total, 15 burrows were found within the Project footprint, and 24 were found in the northern biological open space. No burrowing owls were observed on or near the site, and no burrows were currently or recently active. Most burrow holes were filled, and very few had prey remains on the aprons. Only one burrow had detectable remains of pellets, and those were degraded into small piles of shell and fossorial mammal bones and fur. Because burrows are unoccupied, the habitat is considered non-native grassland, per County guidelines.

Ferruginous hawk (*Buteo regalis*) is a USFWS Bird of Conservation Concern, CDFW Watch List, and County Narrow Endemic and Group 1 MSCP-covered species that is an uncommon winter visitor to San Diego County. This raptor forages over larger tracts of grassland, especially those less than 12 miles inland, as well as desert and sparsely brushy land. It tends to avoid areas near human activity and areas without large open spaces. One ferruginous hawk was observed soaring high over the site in December 1998. None were observed in 2015-2016.

Turkey vulture (*Cathartes aura*) is not a State or Federal special-status species, but is a County Group 1 and MSCP-covered species. Turkey vultures soar over dry open country such as coastal sage scrub, mixed and chamise chaparral, grassland, mixed conifer and closed cone forest habitats, as well as riparian habitat and roadsides, in search of the carrion upon which they feed. One turkey vulture was observed soaring over the site in 2015. None were observed in 2016.

Northern harrier (*Circus cyaneus*), a State Species of Special Concern and County Group 1 MSCP-covered species, forages over grasslands like many other raptors, but is unusual in building its nest on the ground within grassland, marsh or other dense vegetation. According to the San Diego Bird Atlas, a breeding population of four to six pairs was present on Otay Mesa at the time of that book's publication (2004), and even more birds may be present in winter. Breeding pairs have been observed on-site repeatedly during the REC team surveys, beginning in 1999. In February 2016, a pair

and a single male were observed on and over the site. The female limited her activity to a specific area in grassland north of Lone Star Road and the mima mound area (see location in Figure 2.2-3). One male foraged over a larger area of grassland, while the other male was observed only over the mima mound area grassland.

White-tailed kite (*Elanus leucurus*) is a CDFW Fully Protected and County Group 1 MSCP-covered raptor. This species is widespread over the coastal slope and prefers riparian woodlands, oak groves, or sycamore groves adjacent to grassland. In California, this species was known to feed almost exclusively on California vole (*Microtus californicus*), but composition of prey varies geographically and California white-tailed kites may be adapting to other locally available rodent prey such as mice. One pair was observed foraging over non-native grassland in the northern part of the site during the 1998 to 1999 surveys. None were observed in 2015-2016.

California horned lark (*Eremophila alpestris actia*), a CDFW Watch List and County Group 2 species, favors open patches of bare land alternating with low vegetation in grasslands, montane meadows, and sagebrush plains. Horned larks occurred throughout non-native grassland and disturbed areas on-site in 2016. Locations of pairs, flocks, and pinpointed individuals are shown in Figure 2.2-3.

Loggerhead shrike (*Lanius ludovicianus*), a USFWS Bird of Conservation Concern, State Species of Special Concern, and County Group 1 MSCP-covered species, inhabits open country with scattered trees and shrubs, agricultural land, desert washes and desert-edge scrub, broken chaparral and, occasionally, open woodland. Suitable hunting perches are an important part of the habitat. In 2015, a loggerhead shrike was observed in a snag on the bank of the agricultural pond (see locations in Figure 2.2-3). None were observed in 2016.

Barn owl (*Tyto alba*) is not a State or Federal special-status species, but is a County Group 2 species that forages in dense grassland or agricultural fields. Barn owls nest in cut bank burrows and cliff recesses, as well as bases of palm leaves and a wide variety of artificial cavities. In winter, this species often roosts in dense conifers or in nest boxes if available. Of the owls occurring in San Diego County, this species is most adapted to suburban and urban environments. During the 1998 to 1999 surveys, one barn owl was observed on/over the site. In 2016, feathers and a pellet were found below a perch in the mima mound portion of non-native grassland at the location shown in Figure 2.2-3.

San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), a State Species of Special Concern and County Group 2 mammal, inhabits grasslands, agricultural fields, margins of citrus groves, and sparse shrublands on the coastal side of the southern California mountains from Ventura County south into San Diego County (and continuing into Baja California), and mostly west of the National Forest lands within San Diego County. In 2015 two individuals were observed, and in 2016 approximately five, including two juveniles, were observed in non-native grassland at the locations shown in Figure 2.2-3.

Special-status Animal Species with Moderate Potential to Occur On-site

Five species may have moderate potential to occur on-site: Riverside fairy shrimp (*Streptocephalus woottoni*), Coronado skink (*Plestiodon skiltonianus interparietalis*), coast patch-nosed snake (*Salvadora hexalepis virgultea*), golden eagle (*Aquila chrysaetos*), and prairie falcon (*Falco mexicanus*). Riverside fairy shrimp has been assumed present and it discussed below. Golden eagle is discussed in this section because of its high sensitivity and relevance to the Project.

Golden eagle (*Aquila chrysaetos*) is a USFWS Bird of Conservation Concern, CDFW Watch List, CDFW Fully Protected, and County Narrow Endemic and Group 1 MSCP-covered raptor that lives in the mountains and foothills, adjacent grassland, and other open areas and canyons in San Diego County. No golden eagles were observed on or over the Project site during any of the REC team surveys between 1998 and 2016. No suitable nesting cliffs or trees are present within the Project site.

Special-status Animal Species with Presence Assumed On-site

Riverside fairy shrimp (*Streptocephalus woottoni*), like the San Diego fairy shrimp, is a Federal Endangered and County Narrow Endemic and Group 1 MSCP-covered branchiopod. It occupies vernal pools and other unvegetated ephemeral basins in inland Riverside, Orange, and San Diego counties (Ramona area), and coastal San Diego County and Baja California. Riverside fairy shrimp critical habitat does not occur on-site; the closest habitat is approximately 1,513 feet from the Project boundary. This fairy shrimp does not appear until later in the season compared to San Diego fairy shrimp, as it requires deeper basins and longer inundation. The most likely location for Riverside fairy shrimp on-site is within the abandoned agricultural pond basin, which has the potential to pond more deeply than the vernal pools on-site. Riverside fairy shrimp was not detected on-site in the 1998 dry season survey of the vernal pools and northern disturbed wetland, nor in the 1999 wet season survey of the agricultural pond basin. However, because the water level in the agricultural basin was lower than previously observed and ponded water was likely too shallow to support Riverside fairy shrimp in 1999, these negative finds were considered inconclusive. For the purposes of the 2000 BTR, the agricultural pond basin (disturbed wetland) was assumed occupied by Riverside fairy shrimp.

Other Special-status Animal Species with Project Significance

Quino checkerspot butterfly (*Euphydryas editha quino*) is Federal Endangered, and County Narrow Endemic and Group 1 taxon. This rare butterfly inhabits open grassy areas in the interior foothills, including the slopes of the nearby San Ysidro Mountains. Its primary larval host plant is dot-seed plantain (*Plantago erecta*); desert/woolly plantain (*Plantago patagonica*), purple owl's-clover (*Castilleja exserta*), and possibly also (dark-tip) bird's beak (*Cordylanthus rigidus* [subsp. *Setigerus*]) and Coulter's snapdragon (*Antirrhinum coulterianum*) may also be used. No QCB critical habitat occurs on-site; the closest is approximately 1,300 feet north and west of the Project

boundary. In 1998, the Project site was evaluated by REC principal biologist Elyssa Robertson (Quino permit TE 0786714-1) for the potential to support QCB. Based on absence of host plants, historical disturbance of site, and density of non-native grassland, it appeared that the potential for QCB to occur on-site was not high. However, a protocol survey was conducted by RBRiggan and Associates in 1999 over the northern mima mound area. In the 1999 survey, no QCB were detected, and no primary host plant dot-seed plantain was found on-site. A "small number of widely scattered individuals" of purple owl's-clover was observed in the survey area. No other potential host plants were reported. The 1999 report concluded "Given the complete lack of *Plantago erecta* on this site (and virtual lack of *Castilleja exserta* or any possible alternative larval food plants for the Quino Checkerspot), and the lack of any Quino sightings on the Sunroad Centrum property, it would appear that the site can be developed without concern for a possible take of the Quino Checkerspot".

In 2001, QCB surveys were conducted by RBRiggan & Associates over the mima mound area and an "extremely limited, low density, localized population" of dot-seed plantain was found on the Project site. This dot-seed plantain population consisted of two groups of a few scattered individuals each. A limited population of purple owl's-clover was also found in the mima mound area. No QCB were detected. The 2001 report concluded "in that neither larvae nor adults of the Quino Checkerspot Butterfly were identified during the protocol survey; and, only an extremely limited population of food plants suitable for the Quino Checkerspot were identified within the boundaries of the property, it would appear that development of the Sunroad Centrum Property will have no effect on the endangered Quino Checkerspot Butterfly."

In 2015 and early 2016, primary host plant dot-seed plantain was found on-site, where vegetation was recolonizing the disturbed Lone Star Road alignment. Nectar plants, including common goldfields (*Lasthenia gracilis*), were also observed. Based on the presence of dot-seed plantain, a third protocol survey was conducted in 2016. Results of the survey were negative for QCB. The 2016 report concluded "although a medium density population of a Quino larval host plant was identified on-site, no larvae nor adults of the Quino Checkerspot were identified during the 2016 protocol survey. Therefore, any proposed future development of the Sunroad Centrum 250 property will have no effect on the endangered Quino Checkerspot Butterfly."

Other Federal and State Protected Birds

Raptors and native birds are also afforded protection under Federal and State law. California Fish and Game Code Section 3503 makes it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by the Fish and Game Code or any regulation made pursuant to the Code. The Federal Migratory Bird Treaty Act prohibits the killing or transport of native migratory birds, or any part, nest, or egg of any such bird unless allowed by another regulation (such as for "game" birds), Therefore, all native, non-game birds on the Project site, and the nests and eggs of all native non-game birds, are protected during the nesting season even if these birds are not special-status or otherwise protected. Birds are assumed to nest on-

site. Northern harriers appear to regularly nest in northern non-native grassland on-site, and California horned larks likely nest on-site.

California Fish and Game Code Section 3503.5 specifically protects all birds in the orders Falconiformes or Strigiformes (raptors, including owls). It is unlawful to take, possess, or destroy any such raptors or their nests and eggs except as otherwise provided in the Fish and Game Code. Seven raptor species were directly observed on or over the site: Cooper's hawk, red-tailed hawk (*Buteo jamaicensis*), ferruginous hawk, northern harrier, white-tailed kite, barn owl (*Tyto alba*), and American kestrel (*Falco sparverius*). Although burrowing owl was not directly observed, evidence of past use of the site by this raptor was observed.

Wetlands / Jurisdictional Waters

Wetland and water features occurring on the Project site consist of the following four features or sets of features:

1. The creek with non-native riparian vegetation in Johnson Canyon;
2. Vernal pools;
3. Small area of disturbed wetland in the abandoned agricultural pond; and
4. Small area of disturbed wetland along berm northeast of the agricultural pond.

These wetlands/waters, shown on Figure 2.2-3, are afforded protection by the County of San Diego, State of California, and US Environmental Protection Agency through the US Army Corps of Engineers (USACE). Jurisdictions are summarized below.

County of San Diego Wetlands/Waters

The County of San Diego, through its Resource Protection Ordinance (RPO), controls impacts to sensitive habitats including wetlands and floodplains. For the RPO, "wetland" is defined in Section 86.602(q)(1) as "lands having one or more of the following attributes:

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

In Section 86.602(q)(2), the RPO definition of a wetland is qualified to exclude lands that have those wetland attributes solely due to man-made structures such as culverts, ditches, road crossings, or agricultural ponds, provided that the Director of Planning and Development Services determines that they:

(i) have negligible biological function or value as wetlands;
(ii) are small and geographically isolated from other wetland systems;
(iii) are not vernal pools; and,
(iv) do not have substantial or locally important populations of wetland dependent sensitive species.

Also excluded in Section 86.602(q)(2) are lands that have been degraded by past legal land disturbance activities, to the point that they meet the following criteria, as determined by the Director of Planning and Development Services:

(i) have negligible biological function or value as wetlands even if restored to the extent feasible; and
(ii) do not have substantial or locally important populations of wetland dependent sensitive species.

Allowed uses of and impacts to RPO wetlands are limited by the RPO. The wetlands must be protected by upland buffers, which also have use and impact limitations. (Wetlands that do not qualify as RPO wetlands are less strictly regulated by the County, but are still considered County wetland *habitats* and are protected as sensitive habitat.)

Based on the definitions listed above, all four (sets of) features would currently qualify as RPO wetlands.

1. The creek with non-native riparian vegetation in Johnson Canyon, because it is an ephemeral to intermittent creek with areas of riparian and wetland vegetation, as well as areas of non-soil substrate, and is a tributary to the Otay River.
2. Vernal pools, because they are specifically included as RPO wetlands.
3. Small area of disturbed wetland in the abandoned agricultural pond because it contained live San Diego fairy shrimp during the last completed protocol survey (any fairy shrimp on Otay Mesa are part of a locally important population).
4. Small area of disturbed wetland along berm northeast of the agricultural pond because it contained San Diego fairy shrimp cysts during the last completed protocol survey (again, any fairy shrimp on Otay Mesa are part of a locally important population).

US Army Corps of Engineers (USACE) Wetlands/Waters

Pursuant to Section 404 of the Clean Water Act (CWA), the USACE regulates the discharge of dredged and/or fill material into waters of the United States. The term "waters of the United States" is defined in USACE regulations at 33 CFR Part 328.3(a) as:

(1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters, which are subject to the ebb and flow of the tide;
(2) All interstate waters including interstate wetlands;

(3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect foreign commerce including any such waters:
(i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
(ii) From which fish or shell fish are or could be taken and sold in interstate or foreign commerce; or
(iii) Which are used or could be used for industrial purpose by industries in interstate commerce...
(4) All impoundments of waters otherwise defined as waters of the United States under the definition;
(5) Tributaries of waters identified in paragraphs (a) (1)-(4) of this section;
(6) The territorial seas;
(7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1)-(6) of this section.
(8) Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with the U.S. Environmental Protection Agency (EPA).

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States.

In the absence of wetlands, the limits of USACE jurisdiction in non-tidal waters, such as intermittent streams, extend to the ordinary high water mark (OHWM) which is defined in 33 CFR 328.3(e) as:

> *...that line on the shore established by the fluctuation of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.*

The term “wetlands,” a subset of “waters of the United States,” is defined in 33 CFR 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." In 1987 the USACE published a manual to guide its field personnel in determining jurisdictional wetland boundaries. The methodology set forth in the 1987 “Wetland Delineation Manual and the 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region” generally require that, in order to be considered a wetland, the vegetation, soils, and hydrology of an area exhibit at least minimal hydric characteristics. The Johnson Canyon drainage in the

northeastern corner of the site would fall under USACE jurisdiction, as a Waters of the US (which could contain USACE wetlands).

California Waters of the State

Wetlands and waters are also protected by the State of California under the Porter-Cologne Water Quality Control Act (CWC) as “Waters of the State,” which is defined as “any surface water or groundwater, including saline waters, within the boundaries of the state.” The Porter-Cologne Act designated the State Water Resources Control Board (SWRCB) and the RWQCBs as the principal state agencies with primary responsibility for the coordination and control of water quality.

As with the CWA definition of wetlands, certain exemptions exist: exemptions from CWA section 404 permits are also excluded from the State dredge and fill procedures. These exemptions are prior converted cropland, constructed treatment wetlands, and certain aquatic areas determined not to be waters of the State, such as treatment wetlands and sedimentation/storm water detention basins.

Because the RWQCB claims jurisdiction over all surface waters except for those specifically exempted, and the on-site wetland/water features periodically contain surface water and are not covered by those exemptions, all four (sets of) features would fall under RWQCB jurisdiction.

California Department of Fish and Wildlife Lakes and Streams

Pursuant to Division 2, Chapter 6, Section 1602 of the California Fish and Game Code, the CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake, which supports fish or wildlife. CDFW defines a "stream" (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." CDFW's definition of "lake" includes "natural lakes or man-made reservoirs." CDFW jurisdiction within altered or artificial waterways is based upon the value of those waterways to fish and wildlife. CDFW does not typically claim jurisdiction over small isolated waters such as vernal pools or detention basins.

Because CDFW jurisdiction over lakes and streams does not extend to small isolated waters, only the Johnson Canyon drainage in the northeastern corner of the site would be CDFW-jurisdictional.

Habitat Connectivity, Wildlife Corridors, and Nursery Sites

The County defines a corridor as “A specific route that is used for movement and migration of species. A corridor may be different from a ‘linkage’ because it represents a smaller or more narrow avenue for movement.” A linkage is “An area of land which

supports or contributes to the long-term movement of wildlife and genetic exchange by providing live-in habitat that connects to other habitat areas." (County of San Diego 2010). Wildlife corridors or linkages between significant wildlife areas are important because of their role in preserving species diversity and viability. Without some connection or corridor to other areas, wildlife areas become virtual islands surrounded by development. For viable wildlife habitat, it is important to design development with the goal of maximizing large contiguous open space and minimizing isolated wildlife habitat.

The Project site and overall EOMSP area are located at the southwestern edge of an extensive natural open space system that includes Bureau of Land Management (BLM) land to the north and east, City of San Diego lands around Lower Otay Reservoir, and the Otay River Valley to the north of the site. The San Ysidro Mountains to the east are one the largest continuous undisturbed tracts of natural open space in southwestern San Diego County. These mountains have been identified as a high-priority core preserve area under the MSCP program. Lower Otay Reservoir to the north is the major year-round water source in the area. The Otay River Valley is a major linkage between the fragments of habitat remaining to the west of the site, and the large areas of open space to the north and east of the site. Johnson Canyon and O'Neal Canyon provide access to the river valley from Otay Mesa, as well as relatively protected habitat and riparian resources. O'Neal Canyon, with its steep canyon walls, trees, natural habitats, stream, and rocky pools, provides cover, food, and water for wildlife. It is a major linkage between the San Ysidro Mountains and the Otay River Valley and is used by large mammals, golden eagles, California gnatcatchers, and a variety of other wildlife species. Johnson Canyon, which traverses the northern edge of the Project site, is of somewhat lower value as a movement corridor because it ends west of Alta Road and no longer directly connects to the mountains. The western portion of the Project site supports poor habitat for wildlife movement because the open agricultural fields provide little topographical or vegetative cover, and the region west and south of the Otay River is largely developed or otherwise constrained by human activity.

The slopes of Johnson Canyon in the northern part of the Project site provide wildlife corridor function. The portion of Johnson Canyon and its drainage on and adjacent to the site represents the upper end of a wildlife corridor that leads to the Otay River Valley, but it does not provide a high quality corridor to the extensive open space to the east. However, it does provide a degree of connectivity between the northern section of the site and the Lone Star mitigation bank/preserve located on the canyon approximately 0.6 mile downstream and 0.3 mile overland to the east. Because the site is bordered by Otay Mesa Road and industrial development to the south, and SR-125 to the west, it does not provide a corridor or connectivity in those directions.

Native wildlife nursery sites are sites where wildlife concentrates for hatching and/or raising young, such as rookeries, spawning areas and bat colonies (County of San Diego 2010). Although wildlife species breed on-site, breeding activity is not concentrated; and the site would not be considered a wildlife nursery.

2.2.1.2 *Methodology*

REC and its subcontractors performed numerous general and focused site surveys between 1998 and 2001 for the 2000 BTR and associated RCP (including RCP revisions completed in 2003). Additional mitigation-related surveys were conducted on-site in 2004, 2005, and 2006. General and focused surveys were undertaken in 2015 and 2016 to confirm or update documentation of biological resources on-site since the 2000 SEIR. Focused surveys were conducted for rare plants, vernal pools, fairy shrimp, wetlands, Quino checkerspot butterfly, and burrowing owl. Table 2.2-2 summarizes all site surveys for the Project, with survey type and conditions during each survey.

General and Special-status Species Survey Methodology

Existing biological resources that occur on the Project site were investigated through field reconnaissance and literature review by REC biologists. Literature review included California Native Plant Society (CNPS) Rare Plant Inventory, California Natural Diversity Database (CNDDB), *San Diego Bird Atlas*, *The Jepson Manual* 2nd edition, *Jepson eFlora*, *Rare Plants of San Diego*, and the "Biological Technical Report for the East Otay Mesa Specific Plan Area" (County of San Diego 1993). The Project site was surveyed for plants and animals via intensive surveys between 1998 and 2016. Wildlife species were identified directly by sight or vocalizations and indirectly by scat, tracks, pellets, feathers, or burrows. Plant species were identified by REC biologists in the field and/or collected for later identification. Field notes were maintained by throughout the surveys. Species of interest were mapped by hand on printed satellite imagery and/or mapped with a hand-held Garmin GPS unit. Although the surveys focused on sensitive plant and wildlife species, all species observed were noted by biologists. Additionally, all on-site habitats were mapped and the presence or absence of suitable habitat for sensitive (special-status) species was documented. Mapping of vegetation and habitats on the Project site was conducted on printed Google Earth satellite images scaled at approximately 1 inch = 200 feet based on field observations, and confirmed or refined using additional Google Earth satellite imagery.

Additionally, focused surveys and population checks were conducted for special-status (sensitive) plant species (1998, 2001, 2004, 2005, 2006, and 2015), fairy shrimp (1998-1999 and 2016), burrowing owl (2016), and Quino checkerspot butterfly (1999 and 2016). Special-status species observed during the focused surveys were included in the site plant and animals lists.

Burrowing Owl Methodology

Burrowing owl (*Athene cunicularia*) surveys were conducted according to the California CDFW March 2012 Staff Report on Burrowing Owl Mitigation, Appendix D, and County of San Diego survey guidelines (2010), as required by the County of San Diego. In 2016, a breeding season protocol survey for all potentially suitable habitat was conducted throughout the site. In addition to the field transects, this survey used Google Earth to identify burrows on-site in 2012 and 2014 and then check those specific

locations in the field. A preliminary breeding season survey was conducted in 2015 in conjunction with spring plant surveys.

Quino Checkerspot Butterfly Survey Methodology

In 1999, Quino QCB surveys were conducted by Royce B. Riggan (Federal permit PRT-780195) of RBRiggan & Associates over an area corresponding to the northern portion of mima mound topography. The methods outlined in the "Survey Protocol for the Endangered Quino Checkerspot Butterfly *(Euphydryas editha quino)* for the 1999 Field Season (USFWS 1999) were used during these surveys. The results of the survey were negative and no primary host plant dot-seed plantain (*Plantago erecta*) was observed on-site. However, in 2001, QCB surveys were again conducted by RBRiggan & Associates over the mima mound area and an "extremely limited, low density, localized population" of dot-seed plantain was found on the Project site. The 2001 survey was conducted according to the Year 2000 survey protocols. No QCB were detected and the report concluded that the Project site was not occupied by QCB.

In 2016, a third protocol survey was conducted by Gretchen Cummings (Federal permit TE-031850-4). The 2016 survey series was conducted according to the Proposed 2016 Quino Checkerspot Survey Protocol (USFWS 2016), which combined elements of past USFWS protocols (2002, early 2014, and late 2014) to use for the 2016 season, with reporting and required survey areas unchanged from the late 2014 protocol. As was the case in 2001, small areas of dot-seed plantain were found but no QCB were detected.

Fairy Shrimp Survey Methodology

Protocol dry season surveys were conducted by Charles Black in 1998, and an additional wet season sample was collected by him in early 1999. In February 2016, protocol wet season sampling was attempted by Greg Mason (Federal permit TE-58862A) of Alden Environmental, Inc. in order to update survey results; however, the pools did not receive adequate rainfall to pond, and the 2016 wet season sampling was not possible.

Special-status Plants Survey Methodology

Focused special-status plant surveys conducted in 1998 and 2001, with a special emphasis on those species historically documented on-site. In 2004, 2005, and 2006, additional surveys were conducted to evaluate the variegated dudleya (*Dudleya variegata*) population on-site and search for other previously documented special-status species. In 2015, focused surveys were conducted in early spring, mid-spring, and early summer. However, conditions were poor due to drought. In 2016, the site was reassessed for a focused special-status plant survey, but due to ongoing drought, plant germination and growth were still below average and a focused survey series was not conducted. However, locations of known occurrences were checked during other site visits and all observed plants were documented. All Otay 250 surveys are summarized in Table 2.2-2.

2.2.1.3 *Regulatory Framework*

Federal

Federal Endangered Species Act

The US Congress passed the Federal Endangered Species Act (ESA) in 1973 to provide a means for conserving the ecosystems that Endangered and Threatened species require in order to avoid extinction. The Federal ESA has four major components: 1) Section 4, which provides for listing species and designating critical habitat; 2) Section 7, which requires Federal agencies, in consultation with the USFWS, to ensure that their actions are not likely to jeopardize the continued existence of species or result in the modification or destruction of critical habitat; 3) Section 9, which prohibits against "taking" listed species; and 4) Section 10, which provides for permitting incidental take of listed species.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 (as amended) was passed by Congress to prohibit the killing or transportation of native migratory birds and the parts, nests and eggs of such birds, except as allowed by other legislation. All birds in California except those specifically excluded (such as non-native birds and certain "game" birds) are protected by this act.

Bald and Golden Eagle Protection Act

The Bald Eagle Protection Act was enacted in 1940 to prohibit the take, transport, or sale of bald eagles, their eggs, or any part except where expressly allowed by the Secretary of Interior, and was amended in 1962 to also cover golden eagles and in 2010 to prohibit "take of important use areas."

Clean Water Act

The 1948 Federal Water Pollution Control Act was amended in 1972 to become the CWA, which established the basic structure for regulating discharges of pollutants into the waters of the United States and regulating surface water quality standards. The CWA made it unlawful to discharge any pollutant from a point source into navigable waters of the United States unless a permit is obtained.

Under Section 404 of the CWA, the USACE regulates the discharge of dredged and/or fill material into Waters of the US. This agency claims jurisdiction over waters of the US, including wetlands in or adjacent to Waters of the US. Impacts to USACE wetlands and other Waters of the US generally require a permit from the USACE. Such impacts may be permitted under pre-approved Nationwide permits, but Individual permits may be required when projects propose impacts greater than what is covered by individual permits. Compensatory mitigation is required to achieve the USACE goal of "no net

loss."

State

California Endangered Species Act

The California Endangered Species Act (CESA) of 1984 generally parallels the main provisions of the Federal ESA and is administered by the CDFW; it prohibits take of any species that the California Fish and Game Commission has classified as Threatened or Endangered, or that is experiencing a significant decline that could lead to such as designation, and it permits take incidental to otherwise lawful development projects with approval from CDFW.

California Environmental Quality Act

CEQA of 1970 (as amended) requires that proposed projects be reviewed for environmental impacts, including impacts to biological resources. CEQA does not specifically define what constitutes an "adverse effect" on a biological resource; instead, lead agencies are charged with determining what should be considered a significant impact according to the CEQA guidelines, and establishing the appropriate mitigation measures regarding biological impacts. CEQA guidelines provide criteria that the County of San Diego uses in determining whether a project may have significant effects.

California Fish and Game Code

California Fish and Game Code regulates the taking and possession of birds, mammals, fish, amphibians, and reptiles, as well as impacts to natural resources such as Waters of the State. It includes the CESA described above, Streambed Alteration Agreement regulations (Sections 1600-1616), provisions for legal hunting and fishing, tribal agreements for activities involving take of native wildlife, protection of nests and eggs of all birds except as otherwise provided by Fish and Game Code (Section 3503), protection of all raptors and their nests and eggs except as otherwise provided (Section 3503.5), and the California Native Plant Protection Act (Section 1900-1913).

California Native Plant Protection Act

The California Native Plant Protection Act of 1977 directed CDFW to carry out the legislature's intent to "preserve, protect and enhance Rare and Endangered plants in this State" and gave CDFW the power to designate native plants as Endangered or Rare and to protect such designated plants from take.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act provides State-wide coordination for protection of Waters of the State. It established the SWRCB as the State agency with primary responsibility for the control of water quality, and nine RWQCBs to oversee

water quality at the regional level. Impacts to Waters of the State require notification/permitting through the RWQCB and usually also require compensatory mitigation, although this mitigation is typically handled through USACE and/or CDFW.

Natural Communities Conservation Planning Act

The State of California passed the Natural Communities Conservation Planning (NCCP) Act (Fish and Game Code 2800 *et seq.*) in 1991. Under this Act, NCCP Plans are designed to conserve natural communities at the ecosystem scale while accommodating compatible land use. It is broader in its orientation and objectives than the California and Federal Endangered Species Acts, which are designed to identify and protect individual species that have already declined significantly in number. CDFW is the principal State agency that implements the NCCP Program. NCCP Plans developed in accordance with the Act provide for comprehensive management and conservation of multiple wildlife species, and identify and provide for regional or area-wide protection and perpetuation of natural wildlife diversity while allowing compatible and appropriate development and growth. For planning purposes, some subregions 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 lead agency oversees development of a conservation plan, and CDFW and USFWS provide the necessary support and guidance. Because the Project site is within the County of San Diego MSCP subarea, the NCCP is largely supplanted by the MSCP plan; however, portions of eastern Otay Mesa are classified as Amendment Areas, in which take to State and Federally protected species must still be negotiated with the Wildlife Agencies (see MSCP below).

Local

County of San Diego Resource Protection Ordinance

The RPO was adopted in 1989 and amended in 1991 and 2007. It restricts, to varying degrees, impacts to natural resources including wetlands, wetland buffers, floodplains, steep slopes, sensitive habitat lands, and historical sites. Certain permit types are subject to the requirement to prepare Resource Protection Studies under the RPO. RPO-permitted uses in wetlands, as defined by the ordinance, are aquaculture, scientific research, wetland restoration projects, limited removal of diseased or invasive plant species, and limited road, driveway, or trail crossings when specific findings are made for these uses. In addition, the ordinance requires that a wetland buffer be provided to further protect the wetland resources. Improvements necessary to protect the adjacent wetlands and those uses allowed within the actual wetland are the only allowed uses within the buffer.

The RPO also limits impacts to sensitive habitat lands. Habitats considered sensitive or significant under CEQA are not necessarily considered RPO sensitive habitat lands. RPO sensitive habitat lands include, but are not limited to:

- Lands that include habitats of rare or endangered species or subspecies of animals or plants as defined under Section 15380 of CEQA Guidelines (State- and Federal-listed species or species that would qualify for such listing);
- Lands that contain unique vegetation communities that are rare or substantially depleted; and
- Lands which are critical to the proper functioning of a balanced natural ecosystem or which served as a functioning wildlife corridor.

Examples of lands that would not automatically be considered RPO sensitive habitat lands include, but are not limited to: coastal sage scrub, oak woodland, chaparral, and non-native grasslands, provided that these habitats: (a) do not include populations of State- and Federal-listed species); (b) are not critical to a balanced ecosystem; or (c) are not part of a functioning wildlife corridor. Impacts to RPO sensitive habitat lands are only allowed when: (a) all feasible measures have been applied to reduce impacts; and (b) mitigation provides an equal or greater benefit to the affected species.

The RPO includes the provision that when "the extent of environmentally sensitive lands on a particular legal lot is such that no reasonable economic use of such lot would be permitted by these regulations, then an encroachment into such environmentally sensitive lands to the minimum extent necessary to provide for such reasonable use may be allowed".

Multiple Species Conservation Program

The MSCP is a long-term regional conservation plan designed to establish a connected preserve system that protects the County's sensitive species and habitats. The MSCP covers 582,243 acres in over 12 jurisdictions, and each jurisdiction would have its own subarea plan. The Subarea Plan for the County's main jurisdictional area (now also known as the South County MSCP) covers 252,132 acres in the southwestern area, and is implemented by the Biological Mitigation Ordinance (BMO), which outlines the specific criteria and requirements for projects within the MSCP boundaries. As an NCCP Plan, the MSCP allows the County to authorize take for certain Federal- and state-protected "covered" species and thereby simplifies the administrative process of environmental permitting and development in the County.

MSCP Amendment Areas: In some areas, locations of preservation and development were not resolved at the time the County Subarea Plan was published, and these areas are called Amendment Areas. Amendment Areas are not included in County take authorizations otherwise provided by the MSCP until an amendment process is completed; processing involves consultation with not only County biologists, but also representatives of CDFW and USFWS to ensure compliance with CEQA, ESA, and CESA.

Major Amendment Areas contain habitat of higher value, including dedicated or designated preserve areas. Projects in Major Amendment Areas must be fully processed by USFWS and CDFW in conformance with all applicable laws and

regulations, including those listed above.

Minor Amendment Areas contain habitat that could be lost without significant negative impacts to the County Subarea Plan. Minor Amendments require approval of the USFWS field office supervisor and the CDFW Natural Communities Conservation Program Manager. Processing a Minor Amendment requires preparation of a CEQA document, a biological resources report, identification of any mitigation required by the BMO, and concurrence by the wildlife agencies. Before development may occur, the Minor Amendment must be granted and the required mitigation implemented. Minor Amendment requests are currently being processed on a case-by-case basis. Most of the Minor Amendment Area is covered by non-native grasslands habitat.

Minor Amendment Areas with Special Considerations are transitional areas located primarily between the Minor and Major Amendment Areas where the likelihood of the presence of biologically sensitive resources is higher. If particularly sensitive species are identified as occurring in one of these Areas, on-site preservation may be required. The process for a Minor Amendment Area with Special Considerations is similar to a Minor Amendment area, but on-site preservation may be required if particularly sensitive species are identified. Minor Amendment Areas with Special Considerations are processed on a case-by-case basis.

Amendment Areas on the Project site are shown in Figure 2.2-2. Most of the southern and western section of the site, south of the Lone Star Road alignment, is classified as a Minor Amendment Area. A small area in the center of the site, corresponding to the mima mound area, is classified as a Minor Amendment Area Subject to Special Consideration with “G Designator”. The G Designator applies to areas that have steep slopes and/or are biologically sensitive, and are subject to the Sensitive Resource Area Regulations of the Zoning Ordinance. The entire area to the north of Lone Star Road is classified as a Major Amendment Area with G-Designator.

East Otay Mesa Specific Plan and Amendments

The EOMSP is a regulatory document that established standards for development, environmental conservation, and public facilities to implement the objectives of the County of San Diego General Plan and Otay Subregional Plan. The Specific Plan area contains approximately 3,013 acres of land, of which approximately 2,110 acres are planned as a modern industrial and business center and approximately 552 acres would be set aside for conservation or very low-density residential use. Planning for the EOMSP began in the 1990s in response to expansion of industrial development in the City portion of Otay Mesa, opening of the Otay Mesa Border Crossing, and improvement of Otay Mesa Road/SR-905, which prompted County property owners to plan for future development in eastern Otay Mesa. The Board of Supervisors approved the original Specific Plan in 1994. Amendments to the original plan have been approved and implemented since that time, the latest of which is the eighth amendment approved in April 2015. The Project site is located in the northwestern section of the EOMSP area, as shown in Figure 2.2-2.

2.2.2 Analysis of Project Effects and Determination as to Significance

2.2.2.1 *Guidelines for Determination of Significance*

Based on the County of San Diego Guidelines for Determining Significance- Biological Resources, the Project would result in a significant impact relative to biological resources if the Project would:

1. Have a substantial adverse effect, either directly or through habitat modifications, on any candidate, sensitive, or special status species listed in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service.
3. Have a substantial adverse effect on Federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
4. Interfere substantially with the movement of a native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
5. Conflict with one or more local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance and/or would conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

2.2.2.2 *1994 East Otay Mesa Specific Plan EIR*

The 1994 EIR included an analysis of biological regulations pertinent at the time of adoption, as well as existing conditions and impacts related to the East Otay Mesa Specific Plan project. The 1994 EIR identified the following biological resources impacts:

- The East Otay Mesa Specific Plan would result in significant impacts to the following habitats:
    - Diegan coastal sage scrub
    - Grassland
    - Southern interior cypress forest
    - Wetlands
    - Vernal pools
    - Rock outcrop/bedrock

- Impacts to vernal pools and coastal sage scrub that contain sensitive species were determined to be significant and unmitigable.

- The East Otay Mesa Specific Plan was determined to result in potentially impacts to wildlife corridors including O'Neal Canyon and Otay River Valley.

- Impacts to the following sensitive plant and animal species would be significant and unmitigable for the entire East Otay Mesa Specific Plan:

  Plants
  - Golden-spined cereus (*Bergerocactus emoryi*)
  - Orcutt's brodiaea (*Brodiaea orcuttii*)
  - Dunn's Mariposa lily (*Calochortus dunnii*)
  - Tecate Cypress (*Cupressus forbesii*)
  - Variegated dudleya (*Dudleya variegata*)
  - San Diego button-celery (*Eryngium aristulatum* var. *parishii*)
  - Otay tarplant (*Hermizonia conjugens*)
  - San Diego marsh elder (*Iva hayesiana*)
  - Cleveland's goldenstar (*Muilla clevelandii*)
  - Little mousetail (*Myosurus minimus*)
  - Prostrate navarretia (*Navarretia fossalis*)

  Animals
  - Western spadefoot toad (*Spea hammondii*)
  - California gnatcatcher (*Polioptila californica*)
  - Burrowing owl (*Athene cunicularia*)
  - Raptors (as an assemblage)
  - Riverside fairy shrimp (*Streptocephalus woottoni*)
  - Vernal Pool fairy shrimp (*Branchinecta lynchi*)

The 1994 EIR mitigation measures have either been incorporated in the subsequent environmental documents as described below or superseded by these subsequent environmental documents, also indicated below. Mitigation measures for Biological Resources can be found on pages 4.3-69 through 4.3-108 of the 1994 EIR.

2.2.2.3 *2000 East Otay Mesa Specific Plan Sunroad Centrum SEIR*

The 2000 East Otay Mesa Specific Plan Sunroad Centrum SEIR addressed the existing conditions, impacts, and mitigation measures for biological resources within the 250.5-acre project site for Tentative Map 5538. In addition to the biological resources identified in the 1994 EIR, the 2000 SEIR identified new biological resource impacts, requiring new mitigation. This mitigation is pertinent to the proposed Project and remains valid. The 2000 SEIR concluded that the new mitigation measures would mitigate the previously significant and unmitigable impacts identified in the 1994 EIR to below a level

of significance within the Project area. Because the 2000 SEIR represents a project area consistent with the proposed Project, and because the 2000 SEIR retains the relevant mitigation for the 1994 EIR in addition to mitigation for new impacts, the 2000 SEIR supersedes the 1994 EIR. The 2000 SEIR incorporated mitigation measures from the 1994 EIR that remained relevant and applicable to the Sunroad Centrum project. Because the proposed Project maintains the same footprint as that approved with the 2000 SEIR for Tentative Map 5538, these mitigation measures remain relevant to the proposed Project and are incorporated into the mitigation measures provided in this SEIR.

2.2.2.4 *2012 Sunroad Otay Tech Centre Addendum*

In 2012, an Addendum was prepared for the Sunroad Otay Tech Centre project. This Addendum analyzed the impacts of the Sunroad Otay Tech Centre project on biological resources and noted a number of mitigation measures previously identified in the 2000 SEIR that had been satisfied (as described above), including the recordation of two biological open space easements (the 51.3-acre open space easement dedicated as a condition of Tentative Map 5139RPL6R and the 0.41-acre on-site open space easement recorded on lot 55 of Tentative Map 5139RPL6R) and a monetary contribution toward the preservation of land in Hollenbeck Canyon.

The 2012 Addendum found that the Sunroad Otay Tech Centre project was responsible for implementing the RCP prepared for the 2000 SEIR (Appendix B of the 2000 SEIR) as mitigation for newly identified biological resources impacts prior to grading on the project site. Additionally, that project was conditioned to provide off-site mitigation for 80 variegated dudleya plants. No new biological regulations applied to the Project site, and no new biological mitigation was required.

2.2.2.5 *Proposed Project*

The way that project impacts are organized and analyzed has changed since the time of the Project's 2000 SEIR. Some policies, such as the RPO, have also changed. The 2017 BTR update follows the current "Guidelines for Determining Significance and Report Format and Content Requirements" (2010) and "Report Format and Content Requirements" (2010). As a result, the impact analysis in this and following sections is more detailed, and impacts are analyzed more specifically than in the certified 2000 SEIR.

Guidelines for the Determination of Significance for Special-status Species

The following analysis determines if the Project would have a substantial adverse effect, either directly or through habitat modifications, on one or more species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.

A. The project would impact one or more individuals of a species listed as Federally or State Endangered or Threatened.
B. The project would impact an on-site population of a County List A or B plant species, or a County Group 1 animal species, or a species listed as a State Species of Special Concern.
C. The project would impact the local long-term survival of a County List C or D plant species or a County Group 2 animal species.
D. The project may impact arroyo toad aestivation, foraging or breeding habitat.
E. The project would impact golden eagle habitat.
F. The project would result in a loss of functional foraging habitat for raptors.
G. The project would impact the viability of a core wildlife area, defined as a large block of habitat (typically 500 acres or more not limited to project boundaries, though smaller areas with particularly valuable resources may also be considered a core wildlife area) that supports a viable population of a sensitive wildlife species or supports multiple wildlife species.
H. The project would cause indirect impacts, particularly at the edge of proposed development adjacent to proposed or existing open space or other natural habitat areas, to levels that would likely harm sensitive species over the long term. The following issues should be addressed: increasing human access; increasing predation or competition from domestic animals, pests or exotic species; altering natural drainage; and increasing noise and/or nighttime lighting to a level above ambient that has been shown to adversely affect sensitive species.
I. The project would impact occupied burrowing owl habitat.
J. The project would impact occupied cactus wren habitat, or formerly occupied coastal cactus wren habitat that has been burned by wildfire.
K. The project would impact occupied Hermes copper habitat.
L. The project would impact nesting success of the following sensitive bird species through grading, clearing, fire fuel modification, and/or other noise generating activities such as construction:
    - Tree-nesting raptors
    - Ground-nesting raptors
    - Golden eagle (*Aquila chrysaetos*)
    - Coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*)
    - Southwestern willow flycatcher (*Empidonax traillii extimus*)
    - Coastal California gnatcatcher (*Polioptila c. californica*)
    - Light-footed clapper rail (*Rallus longirostris levipes*)
    - Least Bell's vireo (*Vireo bellii pusillus*)

Analysis of Project Effects for Special-Status Species

A. *Guideline: The project would impact one or more individuals of a species listed as Federally or State Endangered or Threatened.*

Two Federal and/or State Endangered species have been documented within the Project's direct impact area: San Diego button-celery (State and Federal Endangered)

and San Diego fairy shrimp (Federal Endangered). In addition, Riverside fairy shrimp (Federal Endangered) was assumed present.

The 2000 SEIR for the Project assumed that all San Diego button-celery individuals and vernal pools in the J22 complex would be avoided. Indirect impacts were analyzed and mitigated to a less than significant through design modifications and open space preservation. The Project would also directly impact approximately 46 percent (about 30 individuals) of all San Diego button-celery (Federal and State Endangered) plants documented on-site (about 65 individuals) through loss of a previously undetected group of approximately 30 plants in a mima mound depression south of Lone Star Road, and southeast of the vernal pool located south of Lone Star Road..The Project could also result in indirect impacts to San Diego button-celery close to Lone Star Road, due to edge effects (**Impact BI-1**). These direct and indirect impacts would be considered significant and require mitigation. San Diego button-celery was not found onsite during the 2015-2016 surveys. San Diego button-celery has been reported onsite in previous studies and may have been undetectable in 2015-2016 due to drought conditions. In accordance with County guidelines, potential impacts and mitigation were evaluated based on the earlier reports. Spring surveys during a year of average or better rainfall would be necessary to update the number of San Diego button-celery individuals impacted. Impacts to San Diego button-celery would be mitigated to below a level of significance with implementation of mitigation measures specified in Section 2.2.5, *Mitigation*, below.

Based on the 2000 SEIR, development of the Project would directly impact San Diego fairy shrimp (Federal Endangered) through loss of two small disturbed wetlands in which it was found : In addition, although 72.5 acres of the site is designated critical habitat in 2007, based on the recent surveys, 26.8 acres of suitable habitat (pools typically more than 30 centimeters deep, within 64 kilometers of the Pacific Ocean, and less than 701 metersAMSL) exist on-site. The remaining 45.7 acres of designated critical habitat are currently non-native grass lands located within the open space easement. Therefore, critical habitat would be preserved.

The Project could also result in significant indirect impacts to San Diego fairy shrimp in vernal pools that are close to Lone Star Road and vulnerable to edge effects. These direct and indirect impacts would be considered significant and require mitigation (**Impact BI-2**). Impacts to San Diego fairy shrimp would be mitigated to below a level of significance with mitigation measures specified in Section 2.2.5, *Mitigation*, below.

Riverside fairy shrimp (Federal Endangered) is assumed present in the disturbed wetland of the agricultural basin, as stated in the 2000 BTR. Therefore, based on the 2000 SEIR, direct Project impacts to this species are assumed significant and would require mitigation (**Impact BI-3**). Impacts to Riverside fairy shrimp would be mitigated to below a level of significance with mitigation measures specified in Section 2.2.5, *Mitigation*, below.

In summary, development of the Project site would result in significant impacts to three State/Federal Endangered species (San Diego button-celery, San Diego fairy shrimp, and Riverside fairy shrimp). Significant impacts to these species would require mitigation.

B. Guideline: The project would impact an on-site population of a County List A or B plant species, or a County Group 1 animal species, or a species listed as a State Species of Special Concern.

The following three County List A or B plant species were documented within the Project's direct impact area in the surveys conducted for the 2000 SEIR and the more recent surveys: variegated dudleya (Group A), San Diego button-celery (Group A), and coast barrel cactus (Group B). For the purposes of quantifying impacts in the 2017 BTR update, the 1994 EOMSP BTR dudleya plant count is used because it included dudleya found in the same general areas as in later surveys, and is the only population count with a precise number. Based on the numbers provided in the 1994 EOMSP BTR, 73 (in the SPA Industrial land use area south of Lone Star Road) of the 361 individuals associated with the J22 vernal pool complex would be impacted (20 percent of the J22 population found at that time) (**Impact BI-4**). The Project's direct impacts to variegated dudleya would be considered significant and require mitigation. Variegated dudleya was not found onsite during the 2015-2016 surveys and may have been undetectable in 2015-2016 due to drought conditions. Therefore, in accordance with County guidelines, potential impacts and mitigation were evaluated based on earlier reports. Spring surveys during a year of average or better rainfall would be necessary to update the number of variegated dudleya individuals impacted. Impacts to variegated dudleya would be mitigated to below a level of significance with mitigation measures specified in Section 2.2.5, *Mitigation*, below.

Significant Project impacts to San Diego button-celery are described in A, above (**Impact BI-1**).

Approximately half (55 individuals) of the coast barrel cacti found on-site were located within the Project impact area and would be relocated. This significant direct impact would require mitigation. As described below, an approved Barrel Cactus Transplantation Plan was implemented and received County sign-off for completion in 2012; therefore, mitigation for significant direct impacts to this species is complete.

Twelve County Group 1 or State Species of Special Concern animal species have been documented in or over the Project's direct impact area: San Diego fairy shrimp (Group 1), Riverside fairy shrimp (Group 1) (assumed present), Cooper's hawk (Group 1), Southern California rufous-crowned sparrow (Group 1), grasshopper sparrow (Species of Special Concern, Group 1), burrowing owl (Species of Special Concern, Group 1), ferruginous hawk (Group 1), turkey vulture (Group 1), northern harrier (Species of Special Concern, Group 1), white-tailed kite (Group 1), loggerhead shrike (Species of Special Concern, Group 1), and black-tailed jackrabbit (Species of Special Concern).

Significant Project impacts to San Diego fairy shrimp (and Riverside fairy shrimp) are described in A, above.

The Project would impact burrowing owl habitat (**Impacts BI-5** and **BI-13**).Fifteen abandoned burrows were found within the Project development footprint [and another 24 within proposed the Open Space Easement (Lot 20 of the proposed Tentative Map)]. However, no active or recently active burrows were found on-site during the 2015 and 2016 surveys. This direct impact to 195.99 acres of non-native grassland burrowing owl habitat would be significant and requires mitigation but because the burrows are unoccupied, the habitat is considered non-native grassland and the mitigation ratio is 0.5:1. Imapcts to non-native grassland were previously anzlyzed in the 2000 SEIR. Although the Project would result in a direct impact to 195.99 acres of non-native grassland burrowing owl habitat, impacts to burrowing owl would be mitigated to below a level of significance with mitigation measures specified in Section 2.2.5, *Mitigation*, below.

Imapcts to foraging habitat were previously analyzed in the 2000 SEIR. The turkey vulture that was observed foraging on-site would be impacted by loss of foraging habitat; this direct impact could be considered significant and require mitigation (**Impact BI-6**). Impacts to turkey vulture would be mitigated to below a level of significance with mitigation measures specified in Section 2.2.5, *Mitigation*, below.

Northern harriers have been observed foraging and nesting on-site since REC's 1998 surveys through the present. The location of nesting behavior observed in 2016 would not be directly impacted. However, as documented in the 2000 SEIR, development of the Project site would result in direct impacts to northern harrier breeding and foraging habitat. These impacts would be considered significant and require mitigation (**Impact BI-7**). Impacts to northern harriers would be mitigated to below a level of significance with mitigation measures specified in Section 2.2.5, *Mitigation*, below.

White-tailed kites were observed foraging over the site during surveys conducted for the 2000 SEIR. Development of the Project site would result in the loss of non-native grassland habitat, which would impact foraging habitat for this species. This direct impact would be considered significant and require mitigation (**Impact BI-8** and **BI-13**). Impacts to white-tailed kites would be mitigated to below a level of significance with mitigation measures specified in Section 2.2.5, *Mitigation*, below.

Imapcts to foraging and nesting habitat were previously analyzed in the 2000 SEIR. The Project would impact the 2015 observed location of a loggerhead shrike and its foraging and nesting habitat; this direct impact would be considered significant and require mitigation (**Impact BI-9**). Impacts to loggerhead shrike would be mitigated to below a level of significance with mitigation measures specified in Section 2.2.5, *Mitigation*, below.

Imapcts to breeding and foraging habitat were previously analyzed in the 2000 SEIR. The Project would impact the 2016 observed locations of approximately three black-

tailed jackrabbits and remove a substantial portion of their breeding and foraging habitat on-site This direct impact would be considered significant and require mitigation (**Impact BI-10**). Impacts to black-tailed jackrabbits would be mitigated to below a level of significance with mitigation measures specified in Section 2.2.5, *Mitigation*, below.

In summary, development of the Project site would result in significant direct impacts to three County List A or B plant species (variegated dudleya, San Diego button-celery, coastal barrel cactus), and eight County List 1 or Species of Special Concern (San Diego fairy shrimp, Riverside fairy shrimp, turkey vulture, northern harrier, white-tailed kite, loggerhead shrike, San Diego black-tailed jackrabbit, and burrowing owl. Significant direct impacts to these species would require mitigation. As described below, mitigation for significant direct impacts to coast barrel cactus is complete.

As described above, 11 County Group 1 or State Species of Special Concern animal species have been documented in or over the Project's direct impact area. Of these, three would not experience significant impacts.

The Project would directly impact non-native grassland over which one Cooper's hawk was flying. However, because the Cooper's hawk was not observed foraging over the site, and its observed activity in the Project area was limited to investigating the recorded Cooper's hawk call from the adjacent power plant, loss of non-native grassland on-site should not be assumed a significant impact to this particular species. Significant loss of foraging habitat for raptors as a group is addressed in F, below.

The Project would directly impact approximately half of the former open coastal sage scrub vegetation growing in the mima mound area on-site, where Southern California rufous-crowned sparrows were observed. Because the patchy coastal sage vegetation has not regenerated since it burned (date unknown), it appears unlikely that these sparrows would still use the site; therefore, Project impacts to Southern California rufous-crowned sparrow would not be considered significant.

The one ferruginous hawk soaring high over the site did not appear to be foraging on-site, and loss of non-native grassland on-site should not be assumed to be a significant impact to this particular species. Significant loss of foraging habitat for raptors as a group is addressed in F, below.

C. *Guideline: The project would impact the local long-term survival of a County List C or D plant species or a County Group 2 animal species.*

Two County List D (and no List C) plant species have been documented on-site: San Diego sunflower (observed in the 1999 surveys; not observed in the 2015-2016 surveys) and small-flower bindweed (not previously detected; observed in the 2015-2016 surveys).

The locally common San Diego sunflower has not been observed on-site since the former sparse coastal sage scrub vegetation in the mima mound area burned; if this

species does return, a substantial portion would be expected to occur within the mima mound area of the open Space Easement (Lot 20 of the proposed Tentative Map). Therefore, Project impacts to this CRPR 4.2 species would be less than significant.

A population of small-flower bindweed occurs on-site near the northern property boundary. This location would be preserved within the Open Space Easement (Lot 20 of the proposed Tentative Map). Only a single individual was found within the development footprint, near the southeastern property boundary. Therefore, Project impacts to this species would be less than significant.

Four County Group 2 animal species have been observed on-site within or near the Project impact area: San Diego ring-neck snake, California horned lark, barn owl, and San Diego black-tailed jackrabbit. San Diego ring-neck snake, California horned lark, and barn owl are discussed below; impacts to San Diego Black-tailed jackrabbit are significant and discussed above in B.

The exact location of the San Diego ring-neck snake observation is not known; however, in the 1999 QCB report, San Diego Ring-neck snake was documented in the northern part of the mima mound area. Its location would be protected within the Open Space Easement (Lot 20 of the proposed Tentative Map). Therefore, Project impacts to this species would be less than significant.

California horned larks observed on-site were on and adjacent to dirt roads within non-native grassland in the Project impact area. The direct loss of their observed locations and habitat would impact this species on-site, but is not expected to impact the long-term survival locally due to their lower degree of sensitivity (CDFW Watchlist rather than Species of Special Concern) and the abundance of non-native grassland to remain on-site in the Open Space Easement (Lot 20 of the proposed Tentative Map) and offsite nearby. Project impacts to this species are anticipated to be less than significant.

One barn owl was observed on/over the site during the 1998-1999 surveys, and recent use was documented in 2016. Although the site may lack suitable roosts, barn owl(s) likely use the site for foraging. Barn owls are relatively well adapted to suburban and urban environments, and may roost in trees or structures near the Project site. Because barn owls are not uncommon, are unlikely to roost on-site, and are relatively tolerant of urban/suburban conditions, loss of foraging habitat on-site would be less than significant.

In summary, Project impacts to the long-term survival of County List D plants San Diego sunflower and small-flower bindweed, and County Group B animals San Diego ring-neck snake, California horned lark, and barn owl, are unlikely to adversely impact the local long-term survival of these species, and Project impacts to the long-term survival of these species would be considered less than significant.

D. *Guideline: The project may impact arroyo toad aestivation, foraging or breeding habitat.*

No arroyo toads were observed on the Project site or are expected to occur on the site. Although disturbed wetlands and riparian areas occur on-site, there are no riparian areas with sandy streamsides, stable terraces and areas of quiet water or sandy/gravel-bottom, silt-free pools suitable for breeding. No suitable breeding habitat was observed adjacent to the site during field surveys. Without breeding habitat, upland habitat on-site would not be considered potential foraging or aestivation habitat. No CNDDB records of arroyo toad in the Otay Mesa quad were found. The nearest documented occurrence is approximately ten miles east of the Project site in the Otay Mountain quad (CDFW 2015). Therefore, potential Project impacts to arroyo toad aestivation or breeding habitat would be less than significant.

E. *Guideline: The project would impact golden eagle habitat.*

A pair of golden eagles is reported to nest in O'Neal Canyon, and their foraging radius could potentially overlap the Project site. The Wildlife Agencies review all nests and important eagle-use areas within ten miles of a project to determine impacts (Federal Register/Vol. 74, No. 175). If the Wildlife Agencies' review determines that development of the Project may reduce eagle foraging habitat, this would trigger federal requirements under the Eagle Protection Act and would be potentially significant and require mitigation. However, there are no historical sightings of eagles nesting on or using the site, and little evidence to support a finding that the site is an important eagle-use area. Therefore, this impact would be less than significant.

F. Guideline: The project would result in a loss of functional foraging habitat for raptors.

The County of San Diego (2010) defines raptor foraging habitat as "land that is a minimum of 5 acres (not limited to project boundaries) of fallow or open areas with any evidence of foraging potential (i.e., burrows, raptor nests, etc.)." The site qualifies as raptor foraging habitat due to its extensive grassland acreage, as well as the presence of suitable prey animals such as California ground squirrel and Botta's pocket gopher (*Thomomys bottae*). Seven raptor species were seen on or over the site: Cooper's hawk, red-tailed hawk, ferruginous hawk, northern harrier, white-tailed kite, American kestrel, and barn owl. Evidence of past site use by burrowing owl was also observed. Implementation of the Project would result in the direct loss of 195.99 acres of non-native grassland (**Impact BI-13**). Loss of raptor foraging habitat was addressed in the 2000 SEIR. This direct loss of functional raptor foraging habitat would be considered significant and require mitigation (**Impact BI-11**). Impacts to foraging habitat for raptors would be mitigated to below a level of significance with mitigation measures specified in Section 2.2.5, *Mitigation*, below.

G. *Guideline: The project would impact the viability of a core wildlife area, defined as a large block of habitat (typically 500 acres or more not limited to project boundaries, though smaller areas with particularly valuable resources may also be considered a core wildlife area) that supports a viable population of a sensitive wildlife species or supports multiple wildlife species.*

Development of the Project site has been clustered in the southern half of the site, closest to existing development. The southern half of the site is unlikely to be a core wildlife area because it is bounded by SR-125 to the west, Otay Mesa Road and industrial development to the south, and rural residential development to the east. The only critical area/feature needed for wildlife movement, the portion of Johnson Canyon that occurs in the northeastern corner of the site, would be preserved within the Open Space Easement (Lot 20 of the proposed Tentative Map). Therefore, implementation of the Project would not impact the viability of a core wildlife area and this potential impact would be less than significant.

H. *Guideline: The project would cause indirect impacts, particularly at the edge of proposed development adjacent to proposed or existing open space or other natural habitat areas, to levels that would likely harm sensitive species over the long term. The following issues should be addressed: increasing human access; increasing predation or competition from domestic animals, pests or exotic species; altering natural drainage; and increasing noise and/or nighttime lighting to a level above ambient that has been shown to adversely affect sensitive species.*

As discussed above and previously analyzed in the 2000 SEIR, the Project could cause indirect impacts to preserved land in the Open Space Easement (Lot 20 of the proposed Tentative Map) by increasing human access; increasing predation or competition from domestic animals, pests or exotic species; altering natural drainage (and in particular impacting vernal pool hydrology); and increasing noise and/or nighttime lighting to a level above ambient. These indirect impacts would potentially be significant and require mitigation. Impacts to preserved land in the Open Space Easement (Lot 20 of the proposed Tentative Map) would be mitigated to below a level of significance with mitigation measures specified in Section 2.2.5, *Mitigation*, below.

I. *Guideline: The project would impact occupied burrowing owl habitat.*

As previously described, the Project would impact burrowing owl habitat. No active or recently active burrows were found on-site during the 2015 and 2016 surveys. However, direct impacts to burrowing owl habitat would be significant and would require mitigation (**Impact BI-1**), but because the burrows are unoccupied, the habitat is considered non-native grassland (per County guidelines) and the mitigation ratio is 0.5:1. Impacts to burrowing owl habitat would be mitigated to below a level of significance with mitigation measures specified in Section 2.2.5, *Mitigation*, below.

J. *Guideline: The project would impact occupied cactus wren habitat, or formerly occupied coastal cactus wren habitat that has been burned by wildfire.*

One occurrence of sixteen coastal cactus wren individuals has been reported approximately 0.28 mile north-northeast of the Project site (CNDDB 2015). However, no occupied or formerly occupied coastal cactus wren habitat was identified on-site. Therefore, Project impacts to coastal cactus wren would be less than significant.

K. *Guideline: The project would impact occupied Hermes copper habitat.*

Habitat suitable for the Hermes copper butterfly, specifically mature spiny redberry in proximity to buckwheat scrub, has not been found on-site; therefore, Project impacts to this species would be less than significant.

L. *Guideline: The project would impact nesting success of [above recognized species] through grading, clearing, fire fuel modification, and/or other noise generating activities such as construction.*

Tree-nesting raptors, golden eagles, coastal cactus wren, southwestern willow flycatcher, coastal California gnatcatcher, light-footed clapper rail, and least Bell's vireo have not been documented on-site and would not be expected to nest on or adjacent to the site. Northern harrier is a ground-nesting raptor, and appears to have been nesting on-site over the course of REC's team surveys. Direct Project-related impacts to northern harrier nesting success, due to grading, clearing, fire fuel modification, and/or other noise generating activities such as construction, would, as addressed in the 2000 SEIR, be considered significant and require mitigation (**Impact BI-7**). Impacts to northern harrier nesting success would be mitigated to below a level of significance with mitigation measures specified in Section 2.2.5, *Mitigation*, below.

Guidelines for the Determination of Significance for Riparian or Sensitive Natural Communities

The following analysis determines if the Project would have a substantial adverse effect on any riparian habitat or other sensitive habitat identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.

Any of the following conditions would be considered significant:

A. Project-related grading, clearing, construction or other activities would temporarily or permanently remove sensitive native or naturalized habitat (as identified in County of San Diego Guidelines, excluding those without a mitigation ratio) on or off the project site.
B. Any of the following would occur to or within jurisdictional wetlands and/or riparian habitats as defined by USACE, CDFW and the County of San Diego: removal of vegetation; grading; obstruction or diversion of water flow; adverse

change in velocity, siltation, volume of flow, or runoff rate; placement of fill; placement of structures; construction of a road crossing; placement of culverts or other underground piping; any disturbance of the substratum; and/or any activity that may cause an adverse change in native species composition, diversity and abundance.

C. The project would draw down the groundwater table to the detriment of groundwater-dependent habitat, typically a drop of three feet or more from historical low groundwater levels.
D. The project would cause indirect impacts, particularly at the edge of proposed development adjacent to proposed or existing open space or other natural habitat areas, to levels that would likely harm sensitive habitats over the long term. The following issues should be addressed: increasing human access; increasing predation or competition from domestic animals, pests or exotic species; altering natural drainage; and increasing noise and/or nighttime lighting to a level above ambient that has been shown by the best available science to adversely affect the functioning of sensitive habitats.
E. The project does not include a wetland buffer adequate to protect the functions and values of existing wetlands. If the project is subject to the Resource Protection Ordinance, buffers of a minimum of 50 feet and a maximum of 200 feet to protect wetlands are required based on the best available science available to the County at the time of adoption of the ordinance.

Analysis of Project Effects for Riparian or Sensitive Natural Communities

A. *Guideline: Project-related grading, clearing, construction or other activities would temporarily or permanently remove sensitive native or naturalized habitat (as identified in County of San Diego Guidelines, excluding those without a mitigation ratio) on or off the project site.*

Development of the Project site would result in significant impacts associated with the permanent removal of 195.99 acres of naturalized non-native grassland habitat and 0.11 acre of disturbed wetlands (see Table 2.2-3, *Direct Vegetation/Habitat Impacts*) (**Impact BI-14**). These impacts would be significant and require mitigation. Mitigation for impacts to non-native grassland has been completed.

B. *Guideline: Any of the following will occur to or within jurisdictional wetlands and/or riparian habitats as defined by USACE, CDFW and the County of San Diego: [those identified in B].*

The Project site supports three wetland/riparian habitats: disturbed wetlands, non-native riparian, and vernal pools.

The disturbed wetlands areas within the agricultural stock pond and man-made swale are County of San Diego RPO wetlands. Therefore, loss of the disturbed wetlands would be a significant direct impact and require mitigation (**Impact BI-14**). Impacts to disturbed wetlands would be mitigated to below a level of significance with mitigation

measures specified in Section 2.2.5, *Mitigation*, below.

Non-native riparian habitat in the northeastern corner of the site is an RPO wetland because, although it is currently dominated by tamarisk, it was southern willow scrub habitat before the tamarisk changed it. The drainage within this habitat is also USACE- and CDFW-jurisdictional as Waters of the US and streambed, respectively (**Impact BI-15**). Because the non-native riparian habitat would be protected in the Open Space Easement (Lot 20 of the proposed Tentative Map), Project impacts to this resource would be less than significant. *(The Project would no longer impact any southern willow scrub habitat.)*

Vernal pools are RPO wetlands. All documented vernal pools would be preserved in the Open Space Easement (Lot 20 of the proposed Tentative Map); therefore, impacts to vernal pool RPO wetlands would be less than significant.

C. *Guideline: The project would draw down the groundwater table to the detriment of groundwater-dependent habitat, typically a drop of three feet or more from historical low groundwater levels.*

The Project would not draw down the groundwater table. Project impacts to groundwater-dependent habitat would be less than significant.

D. Guideline: The project would cause indirect impacts, particularly at the edge of proposed development adjacent to proposed or existing open space or other natural habitat areas, to levels that would likely harm sensitive habitats over the long term. The following issues should be addressed: [those identified in D].

As discussed above, the Project could cause indirect impacts to preserved land in open space through increased human access; increasing competition from exotic species; alteration of natural drainage (and in particular impacting vernal pool hydrology). These indirect impacts are potentially significant and would require mitigation (**Impact BI-12**). Indirect impacts to preserved land in open space through increased human access would be mitigated to below a level of significance with mitigation measures specified in Section 2.2.5, *Mitigation*, below.

E. *Guideline: The project does not include a wetland buffer adequate to protect the functions and values of existing wetlands. If the project is subject to the Resource Protection Ordinance, buffers of a minimum of 50 feet and a maximum of 200 feet to protect wetlands are required based on the best available science available to the County at the time of adoption of the ordinance.*

All remaining wetlands (vernal pools and the Johnson Canyon drainage) would be preserved within the in the northern Open Space Easement (Lot 20 of the proposed Tentative Map). Within the northern Open Space Easement (Lot 20 of the proposed Tentative Map), the vernal pool closest to development is the westernmost vernal pool, which is 28 feet from the Open Space Easement (Lot 20 of the proposed Tentative

Map) boundary and 34 feet from the Lone Star Road right-of-way. This distance is probably greater than the width of the pool's watershed. The Fuel Modification Zone (FMZ) along the northern edge of Lone Star Road does not encroach into the northern Open Space Easement (Lot 20 of the proposed Tentative Map); therefore, the watershed of westernmost vernal pool and adjacent upland, which serve as a buffer, would not be impacted, and an adequate buffer is provided. All other vernal pools in the northern Open Space Easement (Lot 20 of the proposed Tentative Map) and the Johnson Canyon drainage are much further from the road and Open Space Easement (Lot 20 of the proposed Tentative Map) boundary, and would have much larger buffers. Additional buffering for wetlands in the northern Open Space Easement (Lot 20 of the proposed Tentative Map) would be provided by the required Limited Building Zone (LBZ) along the southern boundary of the northern Open Space Easement (Lot 20 of the proposed Tentative Map). This LBZ would ensure that no structures requiring additional fuel modification can be built within 30 feet of the Open Space Easement (Lot 20 of the proposed Tentative Map). For the vernal pool preserved in the Open Space Easement (Lot 20 of the proposed Tentative Map) south of Lone Star Road, the closest habitat impact would be over 50 feet from the vernal pool. This southern vernal pool Open Space Easement (Lot 20 of the proposed Tentative Map) is comprised of the pool and its entire watershed. A buffer is provided through conservation of the watershed (0.37 acre of non-native grassland around the pool). A 30-foot LBZ would also surround this Open Space Easement (Lot 20 of the proposed Tentative Map), as required. No FMZ encroaches into the Open Space Easement (Lot 20 of the proposed Tentative Map). The combination of vernal pool watershed preservation within the Open Space Easement (Lot 20 of the proposed Tentative Map), restriction of any fuel modification within the Open Space Easement (Lot 20 of the proposed Tentative Map), and the LBZ around the Open Space Easement (Lot 20 of the proposed Tentative Map) would provide an adequate buffer for the southern vernal pool. Therefore, potential Project impacts pertaining to this guideline would be considered less than significant.

Guidelines for the Determination of Significance for Federal Jurisdictional Wetlands

The Project would have a substantial adverse effect on Federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

A. Any of the following would occur to or within jurisdictional wetlands…as defined by USACE…: removal of vegetation; grading; obstruction or diversion of water flow; adverse change in velocity, siltation, volume of flow, or runoff rate; placement of fill; placement of structures; construction of a road crossing; placement of culverts or other underground piping; any disturbance of the substratum; and/or any activity that may cause an adverse change in native species composition, diversity and abundance.

B. The project would draw down the groundwater table to the detriment of [Federally protected] groundwater-dependent [wetland] habitat, typically a drop of three feet or more from historical low groundwater levels.
C. The project does not include a wetland buffer adequate to protect the functions and values of existing [Federally protected] wetlands.

Analysis of Project Effects to Federal Jurisdictional Wetlands

A. Guideline: Any of the following will occur to or within jurisdictional wetlands…as defined by USACE…: removal of vegetation; grading; obstruction or diversion of water flow; adverse change in velocity, siltation, volume of flow, or runoff rate; placement of fill; placement of structures; construction of a road crossing; placement of culverts or other underground piping; any disturbance of the substratum; and/or any activity that may cause an adverse change in native species composition, diversity and abundance.

No Federally protected wetlands would be impacted. The on-site vernal pools are not currently USACE-jurisdictional wetlands. Therefore, this guideline is no longer applicable, and potential impact would be less than significant.

B. Guideline: The project would draw down the groundwater table to the detriment of [Federally protected] groundwater-dependent [wetland] habitat, typically a drop of three feet or more from historical low groundwater levels.

The Project would not draw down the groundwater table and no Federally protected wetlands would be impacted. Therefore, this guideline is not applicable, and potential impact would be less than significant.

C. Guideline: The project does not include a wetland buffer adequate to protect the functions and values of existing [Federally protected] wetlands.

No Federally protected wetlands potentially requiring a buffer would be impacted. (Wetlands formerly identified as USACE-jurisdictional are no longer classified as such because they are isolated. The Federally protected Waters of the US within Johnson Canyon in the northeastern corner of the site would be protected within the open Space Easement (Lot 20 of the proposed Tentative Map) Therefore, this guideline is not applicable, and potential impact would be less than significant.

Guidelines for the Determination of Significance for Wildlife Movement and Nursery Sites

The following analysis determines if the project would interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impedes the use of native wildlife nursery sites.

Any of the following conditions would be considered significant:

A. The project would prevent wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction.
B. The project would substantially interfere with connectivity between blocks of habitat, or would potentially block or substantially interfere with a local or regional wildlife corridor or linkage.
C. The project would create artificial wildlife corridors that do not follow natural movement patterns.
D. The project would increase noise and/or nighttime lighting in a wildlife corridor or linkage to levels likely to affect the behavior of the animals identified in a site specific analysis of wildlife movement.
E. The project does not maintain an adequate width for an existing wildlife corridor or linkage and/or would further constrain an already narrow corridor through activities such as (but not limited to) reduction of corridor width, removal of available vegetative cover, placement of incompatible uses adjacent to it, and placement of barriers in the movement path.
F. The project does not maintain adequate visual continuity (*i.e.*, long lines-of-site) within wildlife corridors or linkage.

Analysis of Project Effects for Wildlife Movement and Nursery Sites

A. *Guideline: The project would prevent wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction.*

As analyzed in the BTR prepared for the EOMSP 1994 EIR, the western portion of the SPA (in which the site is located) supports poor habitat for wildlife movement because the open agricultural fields provide little topographical or vegetative cover. (County of San Diego 1993). Furthermore, the site is bordered by Otay Mesa Road and industrial development to the south, and SR-125 to the west. The only part of the site that is likely to serve as a wildlife corridor is Johnson Canyon along the northern edge of the site. Development of the Project is concentrated in the southern portion of the site, and Johnson Canyon would be protected in the Open Space Easement (Lot 20 of the proposed Tentative Map). The site is not considered a wildlife nursery per County guidelines. Therefore, Project impacts to wildlife access for these types of resources would be less than significant.

B. *Guideline: The project would substantially interfere with connectivity between blocks of habitat, or would potentially block or substantially interfere with a local or regional wildlife corridor or linkage.*

As summarized above, the site is bordered by Otay Mesa Road and industrial development to the south, and SR-125 to the west. The only part of the site that is likely to serve as a wildlife corridor is Johnson Canyon along the northern edge of the site. Development of the Project is concentrated in the southern portion of the site, and Johnson Canyon would be protected in the Open Space Easement (Lot 20 of the

proposed Tentative Map) contiguous with undeveloped land to the north, northwest, and east. Therefore, Project impacts to habitat connectivity and wildlife corridors/linkages would be less than significant.

C. *Guideline: The project would create artificial wildlife corridors that do not follow natural movement patterns.*

The Project would not create any wildlife corridors. It would preserve the most likely wildlife corridor (the on-site portion of Johnson Canyon) in the Open Space Easement (Lot 20 of the proposed Tentative Map). Therefore, Project impacts pertaining to creation of artificial wildlife corridors would be less than significant.

D. *Guideline: The project would increase noise and/or nighttime lighting in a wildlife corridor or linkage to levels likely to affect the behavior of the animals identified in a site specific analysis of wildlife movemen.*

It is assumed that noise and nighttime lighting would increase near the southern edge of the Open Space Easement (Lot 20 of the proposed Tentative Map) due to Project development. However, the southern portion of the Open Space Easement (Lot 20 of the proposed Tentative Map) is on the mesa top. The fields on the mesa provide little topographical or vegetative cover and are poor habitat for wildlife movement. The most likely wildlife corridor (the on-site portion of Johnson Canyon) is located along the northern edge of the site, within the Open Space Easement (Lot 20 of the proposed Tentative Map), and would be protected from significant increases in noise and nighttime lighting by both distance and the sheltering topography of the canyon slope. Therefore, Project noise- and lighting-related impacts to wildlife corridors or linkages would be less than significant. See Sections 2.6 *Noise* and 3.1.1 *Aesthetics* of this SEIR for more information.

E. *Guideline: The project does not maintain an adequate width for an existing wildlife corridor or linkage and/or would further constrain an already narrow corridor through activities such as (but not limited to) reduction of corridor width, removal of available vegetative cover, placement of incompatible uses adjacent to it, and placement of barriers in the movement path.*

The most likely wildlife corridor (the on-site portion of Johnson Canyon) is located along the northern edge of the site, within the Open Space Easement (Lot 20 of the proposed Tentative Map). The Open Space Easement (Lot 20 of the proposed Tentative Map) would prevent reduction in the width of, or increased constraints upon, any wildlife corridor/linkage in Johnson Canyon; therefore, Project impacts would be less than significant.

F. *Guideline: The project does not maintain adequate visual continuity (i.e., long lines-of-site) within wildlife corridors or linkage.*

The fields on the mesa provide little topographical or vegetative cover for wildlife movement, and the most likely wildlife corridor (the on-site portion of Johnson Canyon) is located along the northern edge of the site, within the Open Space Easement (Lot 20 of the proposed Tentative Map). Therefore, Project impacts to visual continuity within any wildlife corridor/linkage would be less than significant.

Guidelines for the Determination of Significance

The following analysis determines if the Project would conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, and/or conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or State habitat conservation plan.

Any of the following conditions would be considered significant:

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

J. The project would reduce the likelihood of survival and recovery of listed species in the wild.
K. The project would result in the killing of migratory birds or destruction of active migratory bird nests and/or eggs (Migratory Bird Treaty Act).
L. The project would result in the take of eagles, eagle eggs or any part of an eagle (Bald and Golden Eagle Protection Act).

Analysis of Project Effects on Local Policies, Ordinances and Adopted Plans

A. *Guideline: For lands outside of the MSCP, the project would impact coastal sage scrub (CSS) vegetation in excess of the County's 5% habitat loss threshold as defined by the Southern California Coastal Sage Scrub Natural Communities Conservation Planning Process (NCCP) Guidelines.*

The Project is within the MSCP and would comply with MSCP requirements, including Wildlife Agency consultation pertaining to Minor and Major Amendment areas. This guideline is not applicable, and potential impacts would be less than significant.

B. *Guideline: The project would preclude or prevent the preparation of the subregional Natural Communities Conservation Planning Process (NCCP). For example, the project proposes development within areas that have been identified by the County or resource agencies as critical to future habitat preserves.*

Because the Project is within the MSCP, and would comply with MSCP requirements including any Wildlife Agency consultation pertaining to Minor and Major Amendment areas, it would not interfere with preparation of the NCCP. This guideline is not applicable, and potential impacts would be less than significant.

C. *Guideline: The project will impact any amount of wetlands or sensitive habitat lands as outlined in the Resource Protection Ordinance (RPO).*

Development of the Project would impact RPO wetlands. The Project would also impact RPO sensitive habitat lands. The mima mound depression south of Lone Star Road that supported approximately 30 San Diego button-celery individuals in 2004 would be considered sensitive habitat land based on the following criterion: "Lands that include habitats of Endangered species under Section 15380 of CEQA Guidelines (State- and Federally listed species or species that would qualify for such listing)." This area would be directly impacted. Project impacts to RPO wetlands and sensitive habitat lands would be significant and require mitigation (**Impact BI-14**). Impacts to RPO wetlands would be mitigated to below a level of significance with mitigation measures specified in Section 2.2.5, *Mitigation*, below.

D. *Guideline: The project would not minimize and/or mitigate coastal sage scrub habitat loss in accordance with Section 4.3 of the Natural Communities Conservation Planning Process (NCCP) Guidelines.*

The Project would not impact any coastal sage scrub habitat. Coastal sage scrub habitat no longer occurs on-site; it was replaced by non-native grassland after the area burned (date unknown). This guideline is not applicable, and potential impacts would be less than significant.

E. *Guideline: The project does not conform to the goals and requirements as outlined in any applicable Habitat Conservation Plan (HCP), Habitat Management Plan (HMP), Special Area Management Plan (SAMP), Watershed Plan, or similar regional planning effort.*

The Project would conform to the goals and requirements of the MSCP, Major and Minor Amendment Areas, and EOMSP. Impacts pertaining to this guideline would be less than significant.

F. *Guideline: For lands within the Multiple Species Conservation Program (MSCP), the project would not minimize impacts to Biological Resource Core Areas (BRCAs), as defined in the Biological Mitigation Ordinance (BMO).*

The Project is within the MSCP and qualifies as a BRCA. Project design minimizes impacts to the BRCA by: (a) developing the least environmentally sensitive section of the site (non-native grassland adjacent to development); and (b) preserving the higher value resources, designated as Major Amendment Area, in the Open Space Easement (Lot 20 of the proposed Tentative Map) (vernal pools, approximately half of the mima mound area, native grassland, and the wildlife corridor of Johnson Canyon). Therefore, Project impacts related to this guideline would be less than significant.

G. *Guideline: The project would preclude connectivity between areas of high habitat values, as defined by the Southern California Coastal Sage Scrub Natural Communities Conservation Planning Process (NCCP) Guidelines.*

Coastal sage scrub habitat no longer occurs on-site; it was replaced by non-native grassland after the area burned (date unknown). For other types of habitat, the Project would not preclude connectivity because the Project development is located in the southern portion of the site, closest to existing development. The site is bordered by Otay Mesa Road and industrial development to the south, and SR-125 to the west. Land to the east (on the south side) is rural residential with horse pasture. In the Project area, the site is located at the southern limit of undeveloped habitat, and would preserve the northern area closest to nearby preserve land. The Project would not block connectivity between areas of high value habitat, and would contribute to such connectivity by preserving the northern portion of the site, along Johnson Canyon, within the Open Space Easement (Lot 20 of the proposed Tentative Map). Therefore, Project impacts to high-value habitat connectivity would be less than significant.

H. *Guideline: The project does not maintain existing movement corridors and/or habitat linkages as defined by the Biological Mitigation Ordinance (BMO).*

As defined in the BMO, a "corridor is a specific route that is used for movement and migration of species. A corridor may be different from a 'linkage' because it represents a smaller or more narrow avenue for movement." A "linkage" is defined in the BMO as "an area of land which supports or contributes to the long-term movement of wildlife and genetic material."

As analyzed in the BTR prepared for the EOMSP 1994 EIR, the mesa in the Project area supports poor habitat for wildlife movement because the open agricultural fields provide little topographical or vegetative cover (County of San Diego 1993). Furthermore, the site is bordered by Otay Mesa Road and industrial development to the south, and SR-125 to the west. The only part of the site that is likely to serve as a wildlife corridor or linkage is Johnson Canyon along the northern edge of the site. Development of the Project is concentrated in the southern portion of the site, and Johnson Canyon would be protected in the Open Space Easement (Lot 20 of the proposed Tentative Map). Therefore, Project impacts to maintaining existing movement corridors and/or habitat linkages would be less than significant.

I. *Guideline: The project does not avoid impacts to MSCP narrow endemic species and would impact core populations of narrow endemics.*

Development of the project would impact approximately 73 of 361 MSCP Narrow Endemic variegated dudleya individuals, or approximately 20 percent of the J-22 population, based on the 1993 EOMSP BTR. The Project would impact two locations in which MSCP Narrow Endemic San Diego fairy shrimp was detected. These significant impacts would require mitigation (**Impacts BI-2** and **BI-4**). Impacts to MSCP narrow endemic variegated dudleya and San Diego fairy shrimp would be mitigated to below a level of significance with mitigation measures specified in Section 2.2.5, *Mitigation*, below.

J. *Guideline: The project would reduce the likelihood of survival and recovery of listed species in the wild.*

Development of the Project site would result in the loss of two San Diego fairy shrimp locations and one previously documented San Diego button-celery location. These impacts would reduce the likelihood of survival and recovery of these listed species in the wild and would require mitigation(**Impacts BI-1** and **BI-2**). Impacts to San Diego fairy shrimp and San Diego button-celery would be mitigated to below a level of significance with mitigation measures specified in Section 2.2.5, *Mitigation*, below.

K. Guideline: The project would result in the killing of migratory birds or destruction of active migratory bird nests and/or eggs (Migratory Bird Treaty Act).

The Project would include mitigation measures, such as restrictions on clearing, grading, and construction, that would prevent killing of migratory birds or destruction of active migratory bird nests/eggs; therefore, potential Project impacts would be less than significant.

L. Guideline: The project would result in the take of eagles, eagle eggs or any part of an eagle (Bald and Golden Eagle Protection Act).

The Project would not result in take of eagles, eagle eggs, or any part of an eagle; therefore, Project impacts would be less than significant.

2.2.3 Cumulative Impact Analysis

Cumulative impacts occur as a result of the additive effect of multiple or ongoing direct and indirect impacts to a resource over time. A project's direct and indirect impacts may not be individually significant, but the additive effect when viewed in the context of past, present and probable future project impacts may cause significant loss or degradation of a resource.

The geographic scope for a cumulative impact analysis includes past, present and future development projects (tentative tract maps, major use permits, etc.) within a geographic area sufficiently large to provide a reasonable basis for evaluating cumulative impacts. The geographic scope of the analysis is based on the nature of the geography surrounding the Project site and the characteristics and properties of each resource and the region to which they apply. In this case, the cumulative impact study area would be the entirety of Otay Mesa, as bounded by the Otay River Valley to the north, I-805 to the west, the US-Mexican border to the south, and the San Ysidro Mountains to the east, with limited extensions northward to Lower Otay Reservoir and eastward to Jamul. Based on this geographic scope, 60 other projects were included in the cumulative analysis list for this Project. The source of this list is an August 2013 search of the SANGIS Discretionary Permit GIS Database, (SanGIS 2012), the 2009 "Corrections Corporation of America Otay Mesa Facility Biological Technical Report" (Helix 2009), and a list provided by the County of San Diego in 2016. Cumulative projects are identified in Table 2.2-4, *Projects Included in Cumulative Impact Analysis*, and key locations are shown in Figure 2.2-5, *Cumulative Projects.*

Cumulative Impact Analysis for Special-Status Species

Several of the cumulative projects listed in Table 2.2-4 have or would result in loss of habitat or edge effects that significantly impact special-status plant and wildlife species. One such project is the SR-11 East Otay Mesa Point-of-Entry project, which would result in direct and indirect impacts to special-status species including small-flower bindweed, variegated dudleya, coast barrel cactus, San Diego fairy shrimp (critical

habitat), burrowing owl, northern harrier, white-tailed kite, turkey vulture, loggerhead shrike, California horned lark, and San Diego black-tailed jackrabbit, as well as 171.9 acres of non-native grassland. Two other projects that have large impacts to non-native grassland are Otay Business Park (176.1 acres) and Otay Crossings Commerce Park (273.3 acres).

Due to the rarity and restricted distribution of San Diego button-celery, San Diego fairy shrimp, Riverside fairy shrimp (assumed present), coast barrel cactus, variegated dudleya, loggerhead shrike, San Diego black-tailed jackrabbit, and burrowing owl, Project impacts to these species would be considered cumulatively significant (**Impacts BI-1** though **BI-10**). The loss of 195.99 acres of non-native grassland raptor foraging habitat (**Impacts BI-11** and **BI-13**) in an area where substantial acreage of non-native grassland has already been developed would also be cumulatively significant.

Cumulative Impact Analysis for Riparian or Sensitive Natural Communities

The proposed Project would not directly impact any documented vernal pool, but could result in significant indirect impacts to hydrology and genetic diversity. Therefore, indirect Project impacts to vernal pools would be potentially cumulatively significant and require mitigation (**Impact BI-12**). Because recent and ongoing development on Otay Mesa is rapidly impacting and fragmenting non-native grassland habitat, loss of 195.99 acres of non-native grassland would be cumulatively significant (**Impact BI-13**). Due to the historical degree of wetland loss in San Diego County, loss of 0.11 acre of disturbed wetland would also be cumulatively significant.

Cumulative Impact Analysis for Federal Jurisdictional Wetlands

Because the Project does not impact any Federally protected jurisdictional wetlands (or waters), it would not contribute to cumulative impacts to these resources.

Cumulative Impact Analysis for Wildlife Movement and Nursery Sites

The only part of the site that is likely to serve as a wildlife corridor is Johnson Canyon along the northern edge of the site. Development of the Project is concentrated in the southern portion of the site, and Johnson Canyon would be protected in the Open Space Easement (Lot 20 of the proposed Tentative Map). The site is not a wildlife nursery per County guidelines. Therefore, cumulative Project impacts to wildlife access to these types of resources would be less than significant.

Cumulative Impact Analysis for Local Policies, Ordinances and Adopted Plans

The Project would impact RPO wetlands, RPO sensitive habitat lands, and a Narrow Endemic species (San Diego fairy shrimp); and potentially reduce the chance of survival and recovery for listed species San Diego Fairy Shrimp and San Diego button-celery (**Impacts BI-1**, **BI-2** and **BI-14**). Given the rarity and restricted distribution of these species, Project impacts would be cumulatively significant. Cumulative Impacts would

be mitigated to below a level of significance with mitigation measures specified in Section 2.2.5, *Mitigation*, below.

2.2.4 Significance of Impacts Prior to Mitigation

The proposed Project would result in the following significant direct, indirect, and cumulative impacts to biological resources:

BI-1: Implementation of the proposed Project would result in significant direct, indirect, and cumulative impacts to San Diego button-celery.

BI-2: Implementation of the proposed Project would result in significant direct, indirect, and cumulative impacts to San Diego fairy shrimp.

BI-3: Implementation of the proposed Project would result in significant direct, indirect, and cumulative impacts to Riverside fairy shrimp.

BI-4: Implementation of the proposed Project would result in significant direct and cumulative impacts to variegated dudleya.

BI-5: Implementation of the proposed Project would result in significant direct and cumulative impacts to burrowing owl habitat.

BI-6: Implementation of the proposed Project would result in significant impacts to turkey vulture.

BI-7: Implementation of the proposed Project would result in significant impacts to northern harrier.

BI-8: Implementation of the proposed Project would result in significant impacts to white-tailed kite.

BI-9: Implementation of the proposed Project would result in significant direct and cumulative impacts to loggerhead shrike.

BI-10: Implementation of the proposed Project would result in significant direct and cumulative impacts to black-tailed jackrabbit.

BI-11: Implementation of the proposed Project would result in significant direct and cumulative impacts to raptor foraging habitat.

BI-12: Implementation of the proposed Project would result in significant indirect impacts to preserved land in the Biological Open Space.

BI-13: Implementation of the proposed Project would result in the permanent removal of 195.99 acres of naturalized non-native grassland habitat, which results in a direct

and cumulative impact.

BI-14: Implementation of the proposed Project would result in the permanent removal of 0.11 acre of disturbed wetland habitat, which results in a direct and cumulative impact.

BI-15: If impacted disturbed wetlands are considered to be Waters of the State, the proposed Project would result in direct impacts to Federally-protected wetlands.

2.2.5 Mitigation

The following mitigation measures, which incorporate mitigation measures from the 2000 SEIR, are proposed to reduce impacts to biological resources to less than significant:

M-BI-1: To mitigate direct impacts to San Diego button-celery (BI-1), the plants located on-site shall be salvaged and translocated to a preserved vernal pool within the Open Space Easement (Lot 20 of the proposed Tentative Map), in conjunction with the approved Fairy Shrimp Translocation and Five Year Monitoring Mitigation Plan. An addendum to the Fairy Shrimp Plan shall be prepared and would specify the methods, monitoring, and success criteria for the San Diego button-celery salvage and translocation. This plan will be reviewed by the County and Wildlife Agencies; additional measures may be required by the Wildlife Agencies during Minor Amendment re-evaluation and will be incorporated into Project design. Wet season protocol surveys will be conducted prior to grading. If a focused survey in a year of adequate rainfall and vernal pool ponding should demonstrate that this group of button-celery is no longer extant, this mitigation measure for direct impacts would not be required.

M-BI-2: The following mitigation measures would be implemented to mitigate Project impacts to San Diego fairy shrimp (BI-2) to below a level of significance:

M-BI-2a: Creation of wetlands suitable for both San Diego and Riverside species of fairy shrimp would fully mitigate impacts to these species to below a level of significance. The restoration effort would incorporate measures to salvage these species from on-site ponds and relocate them into the created pools within the Open Space Easement (Lot 20 of the proposed Tentative Map). The pools would be monitored for fairy shrimp at intervals specified in the RCP for a five-year period. Quarterly reports would be prepared by the applicant's consultant for the first year and annual reports thereafter. If the success criteria listed in the RCP are not met at the end of a given year, remedial action would be taken, pursuant to the direction and approval from the US Army Corps of Engineers and US Fish and Wildlife Service.

M-BI-2b: Impacts to San Diego Fairy Shrimp would be mitigated to a level below significant by the creation of habitat and the preservation of the J-22 vernal pool complex as specified in the Fairy Shrimp Translocation and Five Year Monitoring Mitigation Plan.

M-BI-3: The following mitigation measures would mitigate Project impacts to Riverside fairy shrimp (BI-3) to below a level of significance:

M-BI-3a: Creation of wetlands suitable for both San Diego and Riverside species of fairy shrimp would fully mitigate impacts to these species to below a level of significance. The restoration effort would incorporate measures to salvage these species from on-site ponds and relocate them into the created pools within the open space easement. The pools would be monitored for fairy shrimp at intervals specified in the RCP for a five-year period. Quarterly reports would be prepared by the applicant's consultant for the first year and annual reports thereafter. If the success criteria listed in the RCP are not met at the end of a given year, remedial action would be taken, pursuant to the direction and approval from the US Army Corps of Engineers and US Fish and Wildlife Service.

M-BI-3b: Impacts to Riverside fairy shrimp, which is assumed present, would be mitigated to a level below significance by the creation of habitat and the preservation of the J-22 vernal pool complex as specified in the Fairy Shrimp Translocation and Five Year Monitoring Mitigation Plan. As required by the 2003 USFWS Biological Opinion, wet season and dry season Riverside fairy shrimp surveys shall be conducted in 2016-2017. If a protocol survey (2 wet, or 1 dry and 1 wet survey) for Riverside fairy shrimp demonstrates that this species is not present in the agricultural pond, then the success criteria for Riverside fairy shrimp would be dismissed.

M-BI-4: The following mitigation measures would mitigate Project impacts to variegated dudleya to below a level of significance:

M-BI-4a: The applicant shall provide 1:1 offsite mitigation for impacted variegated dudleya plants. The potential impact area shall be surveyed for variegated dudleya plants during the blooming period (May to June). If variegated dudleya are found on-site and outside of the open space easement (Lot 20 of the proposed Tentative Map), the applicant shall purchase and preserve habitat supporting the same number of variegated dudleya plants to be impacted, located at a County approved location as indicated below.

M-BI-4b: *Option 1:* If purchasing mitigation credit the mitigation bank shall be approved by the California Department of Fish and Wildlife. The mitigation should be located within the County MSCP. If mitigation is proposed outside of the County MSCP, provide documentation that a current and

thorough search was done and that mitigation land is not available within the subarea. The evidence of purchase shall include the following information to be provided by the mitigation bank:

1. Confirmation that the habitat credits purchase support at least the same number of variegated dudleya plants found in the impact area. Surveys of the impact site and mitigation site should be conducted within the same blooming season.
2. A copy of the purchase contract referencing the project name and numbers for which the habitat credits were purchased.
3. If not stated explicitly in the purchase contract, a separate letter must be provided identifying the entity responsible for the long-term management and monitoring of the preserved land.
4. To ensure the land would be protected in perpetuity, evidence must be provided that a dedicated conservation easement or similar land constraint has been placed over the mitigation land.
5. An accounting of the status of the mitigation bank. This shall include the total amount of credits available at the bank, the amount required by this project and the amount remaining after utilization by this project.

Option 2: If habitat credits cannot be purchased in a mitigation bank, then the applicant shall provide for the conservation of habitat supporting at least the same number of variegated dudleya plants found in the impact are to the satisfaction of the Department of Planning and Development Services (PDS) as indicated below:

1. The type of habitat and the location of the proposed mitigation must be pre-approved by PDS, PCC before purchase or entering into any agreement for purchase.
2. The mitigation should be located within the South County MSCP. If mitigation is proposed outside the South County MSCP, provide documentation that a current and thorough search was done and that mitigation land is not available within our subarea.
3. If an offsite mitigation property is pursued that does not have an existing management plan, then a Resource Management Plan (RMP) shall be prepared and approved pursuant to the County of San Diego Biological Report Format and Content Requirements to the satisfaction of the Director of PDS. If the offsite mitigation is proposed to be owned and/or managed by Department of Parks and Recreation (DPR), the RMP shall also be approved by the Director of DPR.
4. An open space easement over the land shall be dedicated to the County of San Diego or like agency or the land shall be protected in perpetuity by other suitable mechanism to the satisfaction of the Director of PDS.
5. The final RMP cannot be approved until the following has been

completed to the satisfaction of the Director of PDS: The land shall be purchased, the easements shall be dedicated, a Resource Manager shall be selected, and the RMP funding mechanism shall be in place.

6. In lieu of providing a private habitat manager, the applicant may contract with a Federal, State or local government agency with the primary mission of resource management to take fee title or function as grantee under an easement and manage the mitigation land. Evidence of satisfaction must include a copy of the contract with the agency, and a written statement from the agency that (1) the land contains the specified acreage and the specified habitat, or like-functioning habitat, and (2) the land would be managed by the agency for conservation of natural resources in perpetuity.

M-BI-5: A pre-construction burrowing owl survey shall be conducted in the Project development area prior to clearing of the development area and a pre-construction burrowing owl survey to be conducted in the Open Space Easement (Lot 20 of the proposed Tentative Map) prior to disturbance within the Open Space Easement (Lot 20 of the proposed Tentative Map) (such as excavation of new vernal pool).

M-BI-6: Implementation of mitigation measures M-BI-7 and M-BI-8, below, would reduce impacts to turkey vulture (BI-6) to below a level of significance.

M-BI-7: Mitigation requirements for northern harrier (BI-7) would be partially met by the preservation of foraging habitat within the Open Space Easement (Lot 20 of the proposed Tentative Map). The enhancement of the habitat within the open space would further reduce impacts to this species. In addition, initial clearing of vegetation shall occur outside the nesting season (mid-April through July). If that is not possible, a raptor nesting survey shall be conducted. If an active nest is found, grading would cease in the immediate vicinity, and the monitoring biologist and County staff would determine and agree to an acceptable buffer between the nest location and grading activities. Table 3.5 in the 1996 MSCP Plan states that an acceptable buffer would be 900 feet. Once the nest becomes non-active, grading restrictions shall not longer apply. Mitigation in conformance with the BMO for both on- and offsite habitat preservation (as proposed above in the discussion of sage scrub and grassland habitat mitigation) would fully mitigate for the loss of foraging habitat for this species regionally.

M-BI-8: Mitigation requirements for the loss of foraging habitat and potential breeding habitat for white-tailed kite (BI-8) would be met by requiring a qualified biologist to monitor the construction area for suitable nesting habitat (e.g., trees) in the vicinity of construction during the breeding season. The RCP would require that a 'construction-free zone' be created around any identified nesting sites until fledging has occurred. The biologist would coordinate with County staff during the monitoring efforts to determine the size of any required construction zone. This would mitigate the impacts to a level below significant.

M-BI-9: Implementation of mitigation measures M-BI-7 and M-BI-8, above, would reduce impacts to loggerhead shrike (BI-9) to below a level of significance.

M-BI-10: Implementation of mitigation measure M-BI-12, below, would reduce impacts to black-tailed jackrabbit (BI-10) to below a level of significance.

M-BI-11: Implementation of mitigation measures M-BI-7 and M-BI-8, above, would reduce impacts to raptor foraging habitat (BI-11) to below a level of significance.

M-BI-12: The following mitigation measures fully mitigate indirect Project impacts to preserved land in the Biological Open Space (BI-12) to below a level of significance:

M-BI-12a: Human Activities. The adverse effects on vegetation due to the increase in human activity in the area can be minimized by: 1) creating buffer zones adjacent to the open space easements to minimize the effects from noise and lighting; 2) limiting pedestrian and equestrian trails to existing roads or non-sensitive habitats; and 3) discouraging entry into native habitats such as the riparian and vernal pool habitats by installing fencing and barrier plantings and/or signage. In addition, the RCP would require fencing around the entire open space preserve easement to discourage trespassing and illegal dumping.

M-BI-12b: Construction Activities. Indirect impacts to habitats may result from construction activities, such as construction of Lone Star Road. To avoid the potential impacts, the limits of the vernal pool habitats shall be surveyed and staked prior to construction. These limits shall be clearly shown on all construction drawings as 'no impact zones.' This area would have temporary fencing prior to construction to prevent vehicular or pedestrian access, equipment storage, storage of spoils materials, and refuse disposal.

M-BI-12c: Introduced Species. The use of non-native, invasive plant species would be prohibited in the proposed landscaping palettes (including container stock and hydroseed material) for the streetscapes and commercial/industrial. A qualified biologist or native plant horticulturist shall review and sign all landscaping plans to determine the appropriate species to be used in landscaping, prior to project approval. These measures would reduce the potential impacts to below significant.

M-BI-12d: Increased Runoff, Erosion, and Sedimentation. The proposed construction of Lone Star Road would result in the removal of vegetation on hillsides that could result in a temporary increase in runoff into the on-site vernal pools. Increased runoff can, in turn, result in erosion and sedimentation that could adversely affect wetland vegetation or other drainages. Erosion and sedimentation impacts can

also be mitigated by employing standard erosion control procedures, such as, sandbagging, diversion ditches, and stream bank stabilization. Prior to project approval, a construction erosion control plan would be reviewed and approved by the County. In addition, the project would be required to obtain a National Pollutant Discharge Elimination System (NPDES) Permit for construction activities from the Regional Water Quality Control Board, of which would require an approved Storm Water Pollution Prevention plan. That plan would require the permit applicant to implement measures to prevent contamination of the surrounding drainages during construction. These measures would mitigate the potential for significant impacts to a level below significant.

M-BI-12e: Toxic Materials. Spills of toxic materials could occur during both construction and operational phases of the Project. These spills could contaminate drainages and create a significant impact to habitat and water quality. In order to prevent these impacts, a 'no fueling' zone shall be designated within 25 feet of all drainages during the construction period. In addition, all equipment used near drainages during construction shall be routinely maintained and inspected for leaks. Major leaks shall be repaired immediately. Drip pans and tarps shall be placed under minor leaks. Used drip pans and tarps shall be properly disposed of at the end of each work day. Emergency provisions (e.g. straw bales) shall be placed at all drainage crossings, prior to the onset of construction to deal with unintentional spills. All of these measures would be included in approved Storm Water Pollution Prevention Plan (SWPPP) as a part of the RWQCB-required NPDES permit for construction activities. In addition, all commercial/industrial uses that plan to store materials within the proposed commercial/industrial complex would be required to obtain a NPDES permit for operational activities from RWQCB. That permit would also require a SWPPP for each facility to prevent contamination of nearby drainages. These measures would mitigate the potential for significant impacts to a level below significant.

M-BI-12f: Habitat Fragmentation. Lone Star Road could potentially result in habitat fragmentation between the vernal pool complex to the north of Lone Star Road and the one vernal pool to the south of Lone Star Road. The southern vernal pool would be managed as a part of the larger vernal pool complex within the Open Space Easement (Lot 20 of the proposed Tentative Map) to the north. Integrated management of the southern pool with the rest of the vernal pool complex would ensure the long term viability of this pool and associated plant populations. The required RCP includes a management program for the vernal pools and would mitigate the potential for impacts to below significant.

M-BI-12g: Provision should be made to inform the construction contractor(s) (prior to the construction process) about the biological constraints of this project. The contractor(s) would be responsible for impacts lo biological sensitivities beyond those identified in this report and that occur as a direct result of construction activities. All sensitive habitat areas or occurrences of sensitive species to be avoided shall be clearly marked on project maps provided to the contractor. These areas shall be designated as "no construction" or "limited construction" zones. These areas would be flagged by the project biologist prior to the onset of construction activities. In some cases, resources may need to be fenced or otherwise protected from direct or indirect impacts.

M-BI-12h: A contractor education meeting shall be conducted to ensure that contractors and all construction personnel are fully informed of the biological sensitivities associated with this project. This meeting should focus on: 1) the purpose for resource protection; 2) contractor identification of sensitive resource areas in the field (e.g., areas delineated on maps and by flags or fencing); and 3) sensitive construction practices (see nos. 4-9, on Pages 4.3-106 and 4.3-107 of the Specific Plan EIR), and protocol to resolve conflicts that may arise during the construction process. This meeting shall be conducted by a qualified biologist, and shall be a requirement for all construction personnel.

M-BI-12i: Heavy equipment and construction activities shall be restricted to the development area. Prohibited activities within drainages or other wetland areas (including vernal pools) include staging areas, equipment access, and disposal or temporary placement of excess fill.

M-BI-12j: Staging areas are prohibited within sensitive habitat areas or any habitat included in open space. Staging areas shall be delineated on the grading plans and reviewed by a qualified biologist. Likewise, vehicle access shall be prohibited in all open space areas.

M-BI-12k: Fueling of equipment shall not occur adjacent to drainages. …[F]ueling zones should be designated on construction maps and shall be situated a minimum distance of 7.6 meters (25 feet) from all drainages the open space limits or near storm drains that may drain into Johnson Canyon.

M-BI-12l: Construction in or adjacent to sensitive areas should be appropriately scheduled to minimize potential impacts to biological resources. All work in or near wetlands or other "waters of the U.S." shall take place during periods of minimum flow (i.e., summer through the first significant rain of fall) to avoid excessive sedimentation and erosion.

M-BI-12m: The open space limits must be staked and flagged prior to clearing or grubbing. The limits of the open space must be fenced with a chain link fence at least five feet tall prior to clearing or grubbing. The fence location must be approved by County staff or monitoring biologist prior to receipt of grading permit and would be a permanent protection measure.

M-BI-12n: A Resource Conservation Plan detailing wetland enhancement, preservation, and maintenance, coastal sage scrub habitat preservation, sensitive species salvaging, and transplanting as well as success standards and report requirements must be completed prior to the initiation of construction.

M-BI-12o: Temporary construction fencing shall be installed.

M-BI-12p: Installation of 3-strand wire fence shall be extended around the entire western, northern, and eastern edges of the northern Open Space Easement (lot 20 of the proposed Tentative Map) due to the ongoing problem of trespassing recreational off-road vehicles (this type of fence would not prevent entry and use by wildlife).

M-BI-13: Significant impacts to 195.99 acres of non-native grassland (BI-13) would be mitigated at a ratio of 0.5:1, as previously approved in the 2000 SEIR. The required 98.00 acres of non-native grassland mitigation would be provided through preservation of 46.76 acres of non-native grassland and 1.96 acres of native grassland within the Open Space Easement (Lot 20 of the proposed Tentative Map), and purchase of 49.28 acres in an approved offsite mitigation bank. On-site non-native grassland mitigation acreage would be within both the northern Open Space Easement (Lot 20 of the proposed Tentative Map) and the smaller vernal pool Open Space Easement (Lot 20 of the proposed Tentative Map). The northern Open Space Easement (Lot 20 of the proposed Tentative Map) would preserve 46.39 acres of non-native grassland and 1.96 acre of native grassland (totaling 48.35 acre of grassland). The southern vernal pool Open Space Easement (Lot 20 of the proposed Tentative Map) would preserve of 0.37 acre of non-native grassland on-site within the southern vernal pool Open Space Easement (Lot 20 of the proposed Tentative Map).

Furthermore, the applicant has satisfied the requirement for purchase of 49.28 acres in an approved off-site mitigation bank. The applicant contributed $243,450 toward the preservation of land in Hollenbeck Canyon, a preserve area in the MSCP subarea, which provided habitat value equal to 5.4 acres of native grassland and 48.6 acres of non-native grassland.

M-BI-14: Significant impacts to 0.11 acre of disturbed wetland (BI-14) would be mitigated at a ratio of 2:1. Mitigation, as previously approved, would consist of 1:1 creation and 1:1 enhancement, in the form of creating 0.11 acre of new

wetland habitat in the northern Open Space Easement (Lot 20 of the proposed Tentative Map)(as required by the Fairy Shrimp Translocation and Five Year Monitoring Mitigation Plan), and enhancing 0.11 acre of wetland habitat in the Open Space Easement (Lot 20 of the proposed Tentative Map). The enhancement element consists of enhancing all of the vernal pools in the Open Space Easement (Lot 20 of the proposed Tentative Map) as required by the Long Term Management, Maintenance, and Monitoring Plan and will actually provide 0.21 acre of enhancement. As documented in the Project's December 2000 MSCP Findings (County of San Diego 2000), another 0.1[1] acre of wetland creation would be required to bring up the mitigation ratio to 2:1. The additional 0.11 acre of wetland mitigation should be undertaken in the Johnson Canyon drainage. As an alternative, the additional 0.11 acre of wetland creation within the mima mound vernal pool area shall be replaced with enhancement/restoration of the 0.39-acre area of non-native riparian habitat. The change from creation to enhancement/restoration would be compensated by an increase in the ratio from 1:1 to slightly over 3:1. A riparian habitat enhancement/restoration plan shall be developed and approved by the County and Wildlife Agencies.

M-BI-15: Mitigation for potential Project impacts to Federally protected wetlands (BI-15) shall consist of wetland creation and enhancement/ restoration as proposed for wetland habitat impacts in M-BI-12, above.

2.2.6 Conclusion

With incorporation of mitigation measures M-BI-1 through M-BI-15, all impacts to biological resources (**Impacts BI-1** through **BI-15**) would be reduced to below a level of significance.

TABLE 2.2-1. *VEGETATION/LAND COVER CATEGORIES AND ACREAGES*

Category (County Habitat Code)	Acres On-site
Wetlands	
Disturbed Wetland (11200)	0.11
Non-Native Riparian (65000)	0.39
San Diego Mesa Claypan Vernal Pool (44322)	0.21
Uplands	
Developed Land (12000)	2.97
Disturbed Land (11300)	7.26
Native Grassland (42100)	1.96
Non-Native Grassland (42200)	240.24
Totals	**253.14**

TABLE 2.2-2. *SURVEYS CONDUCTED ON THE OTAY 250 PROJECT SITE*

Date	Time	Temp (°F)	Sky	Wind (MPH)	Survey Type	Personnel
GENERAL SURVEYS						
04/24/1998	Begin: 0900 End: 1200	Begin: 70° End: 75°	Partly cloudy	Slight breeze	General, Burrowing Owl	Elyssa Robertson, Holly Boessow
07/10/2001	Begin: 0900 End: 1000				Offsite Impact Survey, Vernal Pool Status Check	Catherine MacGregor
02/24/2015	Begin: 0955 End: 1730	Begin: 60° End: 62°	Clear	Begin: 6-9 End: 6-11	General, Early Plant Survey	Lee BenVau
06/23/2015	Begin: 0700 End: 1000	Begin: 67° End: 79°	Clear	Begin: 1-3 End: 0-5	General, Summer Plant Survey	Lee BenVau
FOCUSED SPECIAL-STATUS PLANT SURVEYS						
06/12/1998	Begin: 1200 End: 1600				Summer-blooming Species Survey	Holly Boessow, Elyssa Robertson, Robin Church
08/20/1998	Begin: 0800 End: 1200				Late Summer-blooming Species Survey	Holly Boessow, Elyssa Robertson, Robin Church
05/03/2001	Begin: 0920 End: 1200				Spring Rare Plant and Dudleya Survey	Catherine MacGregor
05/10/2001	Begin: 0800 End: 1430				Spring Rare Plant and Dudleya Survey	Catherine MacGregor
05/11/2001	Begin: 1530 End: 1730				Spring Rare Plant and Dudleya Survey	Catherine MacGregor
05/25/2001	Begin: 1300 End: 1530				Spring Rare Plant and Dudleya Survey	Catherine MacGregor
06/13/2001	Begin: 0850 End: 1245				Summer Rare Plant and Dudleya Survey	Catherine MacGregor

Date	Time	Temp (°F)	Sky	Wind (MPH)	Survey Type	Personnel
06/14/2001	Begin: 1050 End: 1510				Summer Rare Plant and Dudleya Survey	Catherine MacGregor
06/15/2001	Begin: 0915 End: 1015				Summer Rare Plant and Dudleya Survey	Catherine MacGregor
04/02/2004	Begin: 1115 End: 1145				Spring Rare Plant Check-up	Catherine MacGregor
07/07/2005	Begin: 0910 End: ~0945				Summer Rare Plant Check-up	Catherine MacGregor
05/30/2006	Begin: 0945 End: 1015				Spring Rare Plant Check-up	Catherine MacGregor
02/24/2015	Begin: 0955 End: 1730				Early Rare Plant Survey	Catherine MacGregor, Lee BenVau
04/23/2015	Begin: 1000 End: 1235				Spring Rare Plant and Dudleya Survey	Catherine MacGregor
06/03/2015	Begin: 0945 End: 1135				Summer Rare Plant and Dudleya Survey	Catherine MacGregor
2016	Checked	During	Other	Surveys	Spring Rare Plant	Catherine MacGregor
BURROWING OWL SURVEYS						
02/24/2015	Begin: 0955 End: 1730	Begin: 60° End: 62°	Clear	Begin: 6-9 End: 6-11	BUOW Winter Season Check	Catherine MacGregor
04/23/2015	Begin: 1000 End: 1235	Begin: 63° End: 63°	Overcast	Begin: 2-5 End: 4-8	BUOW	Catherine MacGregor
06/03/2015	Begin: 0945 End: 1135	Begin: 74° End: 74°	Hazy	Begin: 2-3 End: 3-9	BUOW	Catherine MacGregor
06/23/2015	Begin: 0700 End: 1000	Begin: 67° End: 79°	Clear	Begin: 1-3 End: 0-5	BUOW	Catherine MacGregor,
02/04/2016	Begin: 0945 End: 1415	Begin: 61° End: 66°	Sunny, hazy	Begin: 0-1 End: 0-2	BUOW Habitat Assessment	Catherine MacGregor
04/01/2016	Begin: 0705 End: 1000	Begin: 53° End: 63°	Partly cloudy to sunny, hazy	Begin: 1-2 End: 0-2	BUOW 1a	Catherine MacGregor, Lee BenVau
04/05/2016	Begin: 0700 End: 1010	Begin: 57° End: 64°	Hazy with light clouds	Begin: 0 End: 1-2	BUOW 1b	Catherine MacGregor, Lee BenVau

Date	Time	Temp (°F)	Sky	Wind (MPH)	Survey Type	Personnel
04/28/2016	Begin: 1735 End: 1955	Begin: 66° End: 57°	Sunny with clouds, to partly cloudy	Begin: 5-8 End: 2-5	BUOW 2a	Catherine MacGregor, Lee BenVau
04/29/2016	Begin: 1730 End: 1955	Begin: 64° End: 57°	Light clouds to partly cloudy	Begin: 3.5-6 End: 2-5	BUOW 2b	Catherine MacGregor, Lee BenVau
05/03/2016	Begin: 1800 End: 1910	Begin: 71° End: 64°	Clear with light clouds	Begin: 5-10 End: 1-3	BUOW 2c	Catherine MacGregor
05-26-2016	Begin: 0600 End: 1005	Begin: 57° End: 67°	Overcast	Begin: 0-3 End: 2-6	BUOW 3b	Catherine MacGregor, Lee BenVau
05/27/2016	Begin: 0600 End: 0950	Begin: 60.5° End: 64°	Overcast	Begin: 3-5 End: 2.5-7	BUOW 3b	Catherine MacGregor, Lee BenVau
06/21/2016	Begin: 0615 End: 1015	Begin: 69° End: 77°	Partly cloudy to overcast	Begin: 0 End: 3-7	BUOW 4a	Catherine MacGregor, Lee BenVau
06/22/2016	Begin: 0625 End: 1035	Begin: 68° End: 84°	Sunny with light clouds	Begin: 0-2 End: 0-3	BUOW 4b	Catherine MacGregor, Lee BenVau
QUINO CHECKERSPOT BUTTERFLY SURVEYS						
03/03/1999	Begin: 1130 End: 1315	Begin: 64.6° End: ±70°	Clear	Begin: 4.4-10.3 End: 3-8	Habitat Assessment / Adult Survey	Royce B. Riggan, Denise Dixon, Danielle Flynn
03/2/1999	Begin: 1230 End: 1400	Begin: 70.4° End: ±70°	Clear	Begin: 2.7-7.9 End: 3-7	Habitat Assessment / Adult Survey	Royce B. Riggan, Elyssa Robertson
03/19/1999	Begin: 1400 End: 1630	Begin: 74.6° End: <70°	Clear / 2%	Begin: 5.1-10.4 End: 4-8	Habitat Assessment / Adult Survey	Royce B. Riggan
03/28/1999	Begin: 1230 End: 1400	Begin: 74.6° End: ±78°	Clear	Begin: 3.2-9.7 End: 3-8	Habitat Assessment / Adult Survey	Royce B. Riggan
04/04/1999	Begin: 1345 End: 1515	Begin: 69.9° End: 66.1°	Clear	Begin: 1.7-4.7 End: 3-7	Habitat Assessment / Adult Survey	Royce B. Riggan
04/10/1999	Begin: 1230 End: 1345	Begin: 71.5° End: ±75°	Clear	Begin: 3.5-7.8 End: 3-7	Habitat Assessment / Adult Survey	Royce B. Riggan

Date	Time	Temp (°F)	Sky	Wind (MPH)	Survey Type	Personnel
04/17/1999	Begin: 1330 End: 1500	Begin: 87.2° End: ±86°	Clear	Begin: 4.8-10.4 End: 4-8	Habitat Assessment / Adult Survey	Royce B. Riggan
03/14/2001	Begin: 0845 End: 1315	Begin: warm End: 70.7°	Clear	Begin: 0 End:1.6-3.9	Adult Survey	Royce B. Riggan
03/27/2001	Begin: 1245 End: 1515	Begin: 77.8° End: 70.5°	[Sunny]	Begin:2.2-4.6 End:4.2-8.7	Adult Survey	Royce B. Riggan
04/16/2001	Begin: 1300 End: 1545	Begin: 76.8° End: 77.2°	[Sunny]	Begin:3.7-9.0 End:3.2-8.7	Adult Survey	Royce B. Riggan
04/21/2001	Begin: 1130 End: 1430	Begin: 78.9° End: 80.3°	[Sunny]	Begin:0.0-5.7 End:2.3-8.6	Adult Survey	Royce B. Riggan
04/26/2001	Begin: 1445 End: 1700	Begin: 83.6° End: 69.7°	[Sunny]	Begin:1.5-6.3 End:0.3-3.8	Adult Survey	Royce B. Riggan
02/04/2016	Begin: 0930 End: 1340	Begin: 61.3° End: 73.8°	Clear	Begin: End:	Habitat assessment, initial host plant mapping	Gretchen Cummings
03/01/2016	Begin: 0900 End: 1015	Begin: 67.5° End: 73.1°	30% cloud cover	Begin: End:	Completion of host plant mapping	Gretchen Cummings
03/01/2016	Begin: 1015 End: 1400	Begin: 73.1 End: 73.8	30% cloud cover	Begin: End:	QCB Survey 1	Gretchen Cummings
03/08/2016	Begin: 1000 End: 1330	Begin: 60.1° End: 65.1°	Clear	Begin: End:	QCB Survey 2	Gretchen Cummings
03/18/2016	Begin: 1355 End: 1555	Begin: 71.9° End: 73.4°	Clear	Begin: End:	QCB Survey 3	Gretchen Cummings
03/24/2016	Begin: 1330 End: 1530	Begin: 79.7° End: 79.5°	Clear	Begin: End:	QCB Survey 4	Gretchen Cummings
03/04/2015	Begin: 1430 End: 1630	Begin: 73.5° End: 74.2°	20% cloud cover	Begin: End:	QCB Survey 5	Gretchen Cummings
FAIRY SHRIMP SURVEYS						
08/20/1998					Dry Season Sampling	Charles Black
02/08/1999					Wet Season Sampling	Charles Black
Spring 2016	Attempted	After	Rain	Events	Wet Season Sampling	Greg Mason

TABLE 2.2-3. *DIRECT VEGETATION/HABITAT IMPACTS*

Habitat	Existing (acres)	On-site Impacts (acres)	Offsite Impacts (acres)	Total Impacts (acres)	Remaining in Open Space Easement (lot 20 of the proposed TENTATIVE MAP)
Disturbed Wetland	0.11	0.11	-	0.11	-
Non-Native Riparian	0.39	-	-	-	0.39
San Diego Mesa Claypan Vernal Pool	0.21	-	-	-	0.21
Native Grassland	1.96	-	-	-	1.96
Non-native Grassland	240.24	193.37	2.62	195.99	46.87
Developed Land	2.97	2.97	-	2.97	-
Disturbed Habitat	7.26	4.94	0.07	5.01	2.32
Totals	**253.14**	**201.39**	**2.69**	**204.08**	**51.75**

TABLE 2.2-4. *PROJECTS INCLUDED IN CUMULATIVE IMPACT ANALYSIS*

Map Reference	Project Name	Project Number(s)	Non-native grassland	
			Impacts	Mitigation
1 (Proposed Project)	Otay 250 SPA	TENTATIVE MAP 5607	195.99	98.00
County Projects				
2	Saeed TENTATIVE MAP/Airway Business Center	TENTATIVE MAP 5304	38.5	19.3
3	Roll County LLC/ Enrico Fermi Industrial Park	TENTATIVE MAP 5394	NA	NA
4	Otay Hills	P04-004, RP04-001, ER04-19-004	40.4	26.9
5	Burke Minor Subdivision	TPM 20701RPL1, ZAP 99-029, STP 05-018	40.0	20.0
6	East Otay Mesa Auto Storage/ Aaron Construction Auto Auction Park	MUP 00-012, Minor Deviation 00-012-02	NA	NA
7	Family Motocross Park	MUP 00-024, SPA 04-006	NA	NA
8	Otay Mesa Auto Transfer/Rowland	MUP 03-001	NA	NA
9	Bradley/Robertson Copart Salvage Auto Auctions	MUP 88-020, STP 00-070	NA	NA
10	National Enterprises Storage and Recycling Facility	MUP 98-001 RPL1	103.61	24.29
11	Calpine PG&E	TPM 20570	NA	NA
12	Otay Business Park	TENTATIVE MAP 5505	176.1	NA
13	Otay Crossings Commerce Park	TENTATIVE MAP 5405	273.3	NA
14	San Diego Correctional Facility/ Corrections Corporation of America	SPA 06-005, MUP 06-074, P06-074	36.7	NA
15	Otay Mesa Travel Plaza	TPM 20414, MUP 98-024 and Mod-01	NA	NA
16	Pilot Travel Center	TPM 20894, STP 05-021	12.9	6.5
17	East Otay Temporary Fire Facility	STP 00-070	NA	NA
18	International Industrial Park, Johnson Canyon	TENTATIVE MAP 5549	Part of 118.4	35.9
19	OMC Properties	TPM 21140	NA	NA
20	Pio Pico Energy Center Project	11-AFC-1C	NA	NA
21	California Crossings	P06-102, TPM 21046	23.4	15.4
22	COPART County Sales Yard Time Extension	P 88-020W1	NA	NA

23	FEDEX Site Plan	S08-018	NA	NA
24	Insurance Auto Auctions	P00-012TE	NA	NA
25	Sunroad Interim Uses - Sunroad Center I Harvest Ranch Nursery	P 09-009, P 09-005	NA	NA
26	Travel Plaza	P 98-024W1, TPM 20424	NA	NA
27	Vulcan	S 07-038	NA	NA
28	Piper Otay Park	TENTATIVE MAP 5527	NA	NA
29	Hawano	10-0123176	79.6(?)	NA
31	Rabago	TENTATIVE MAP 3100 5568	Part of 71.1	NA
32	Otay Mesa Generating (Calpine)	TPM 20570	NA	NA
33	Otay Business Park	TENTATIVE MAP 5505	179.9	179.9
34	Otay Ranch Village 12 (Otay Ranch Preserve and Resort	GPA04-003, SP04-002, REZ04-009, TENTATIVE MAP5316A & B, ER LOG 04-19-005	NA	Part of 1,089 acres of preserved open space
35	Simpson Farms	PDS2005-3100-YM5460, TENTATIVE MAP5200RPL	NA	NA
36	SR-11 Phase II and East Otay Mesa port of Entry	PM0.0/2.7 EA 056300	171.9	NA
City Projects				
A	Sunroad/Interstate Industrial Center	TPM 98-0759	NA	NA
B	Sunroad Otay Park	TENTATIVE MAP 91-0394	NA	NA
C	La Media Truck Park II	77518	NA	NA
D	Robinhood Ridge Phase I	96580	9.7	19.4
E	Semitrailer Storage Facility	Planned Development Permit 12083	NA	NA
F	Airway 18 Truck Terminal/ Airway Auto Park Storage	2246	NA	NA
G	California Terraces Planning Areas 13 &14 Phase I	4987	NA	NA
H	Dennery Ranch Village 2/3	5091	NA	NA
I	Hidden Trails	6738	--	--
J	Southview	2204	NA	NA
K	Candlelight Villas	50591/40329	--	--
L	Handler Otay Mesa Phase I	92122	31.8	15.9
M	Otay Corporate Center North	NA	NA	NA
N	Otay Corporate Center South	98825	NA	NA
O	Las Californias Center	4281	NA	NA
P	Opus Phases I and II	6626	NA	NA

Q	Just Rite	5751	NA	NA
R	World Petrol III	32284/97452	NA	NA
S	Pardee Commercial	NA	NA	NA
T	Martinez Ranch Business Park	100994/45445	NA	NA
U	Siempre Viva Business Park	102899	NA	NA
V	Southwestern Community College	NA	NA	NA
W	Brown Field Tech Park	208889	Part of 33.1	NA
X	Ingalls Property	NA	NA	NA
Y	Lonestar Ridge	50728	112.7	56.4

*Second acreage reflects change in site conditions (conversion of CSS to NNG)
NA: Not available

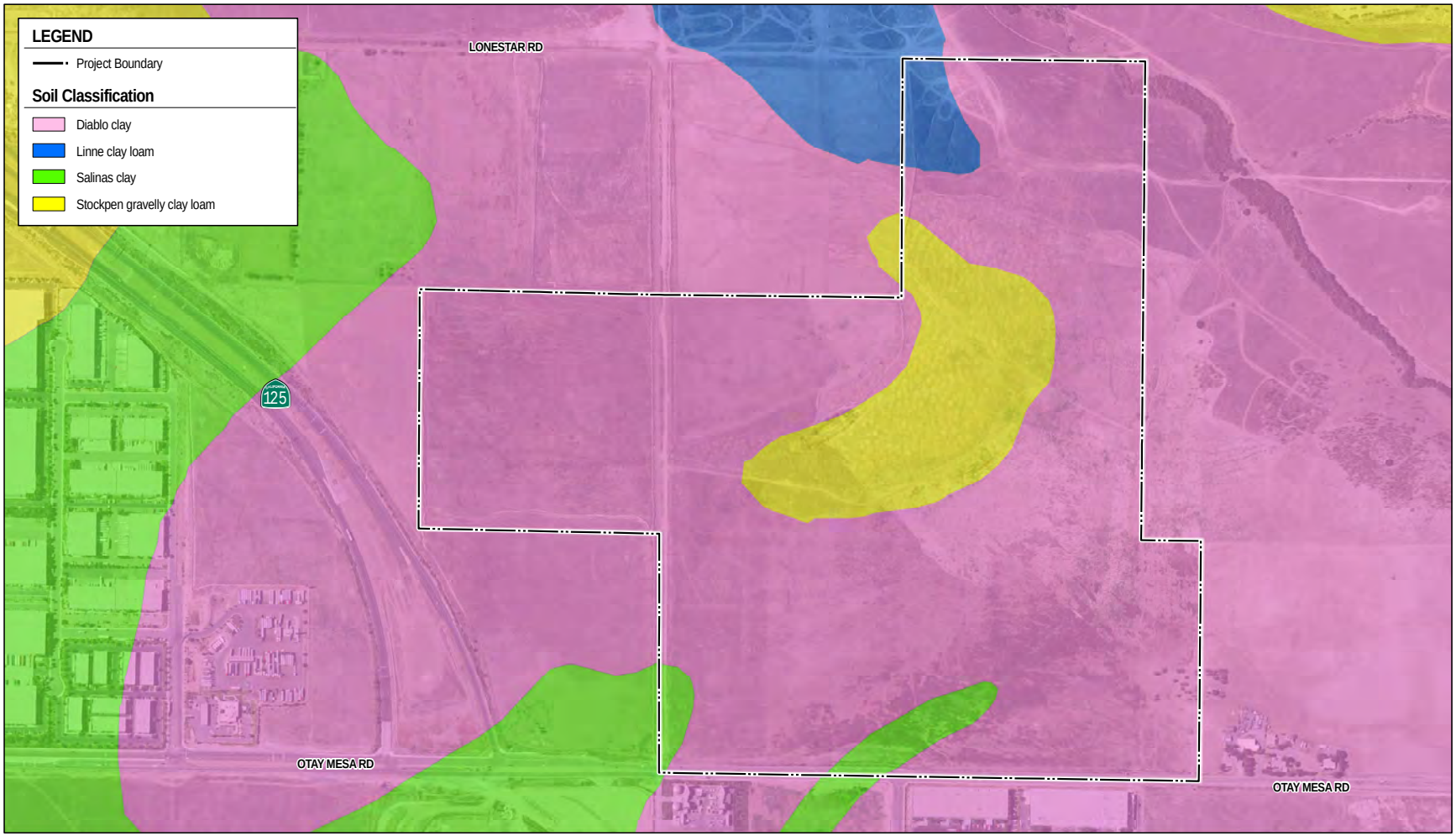


FIGURE 2.2-1. *ON-SITE AND ADJACENT SOIL CLASSIFICATIONS*

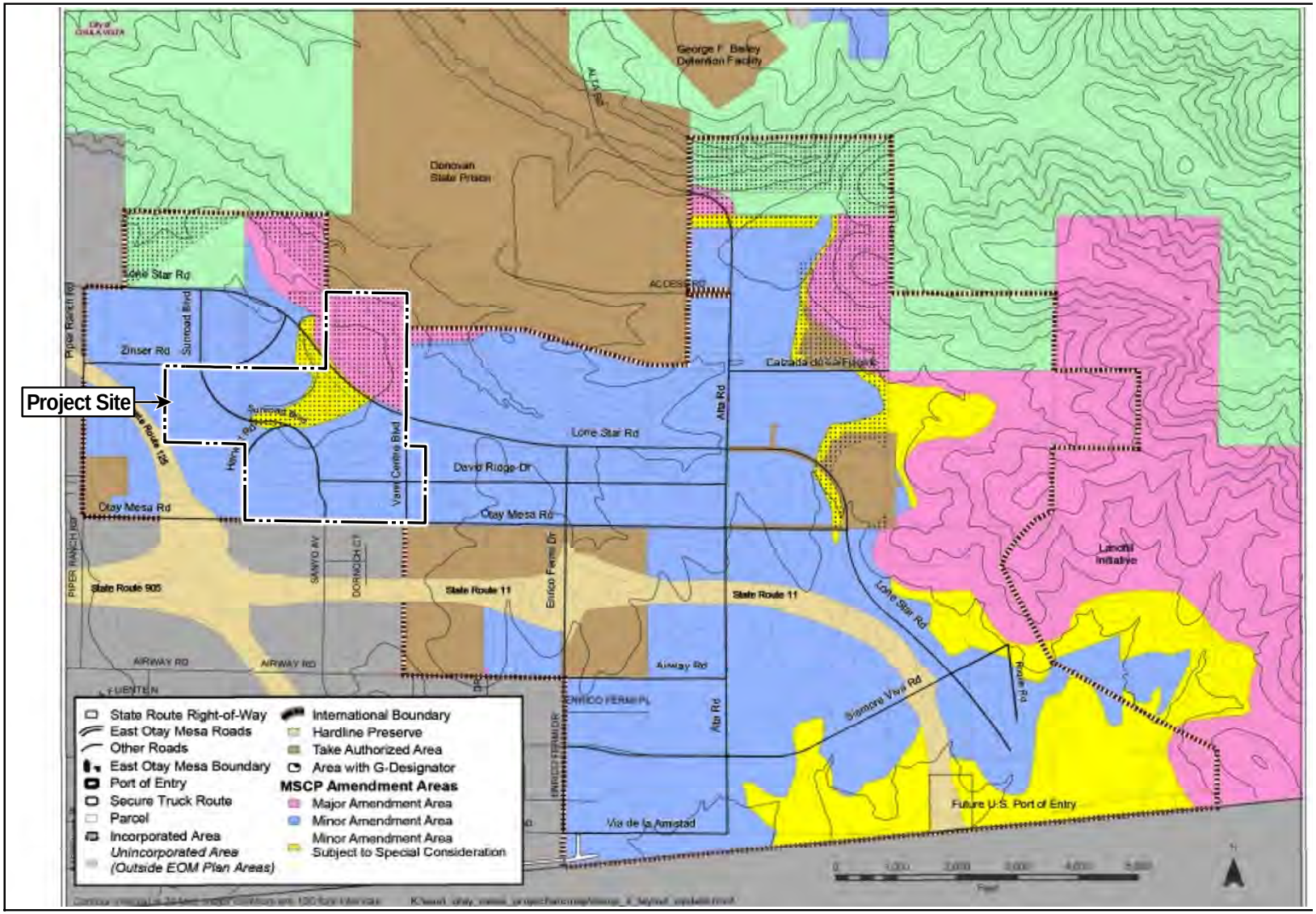


FIGURE 2.2-2. ***PROJECT BOUNDARY AND SURROUNDING MSCP AMENDMENT AREAS***

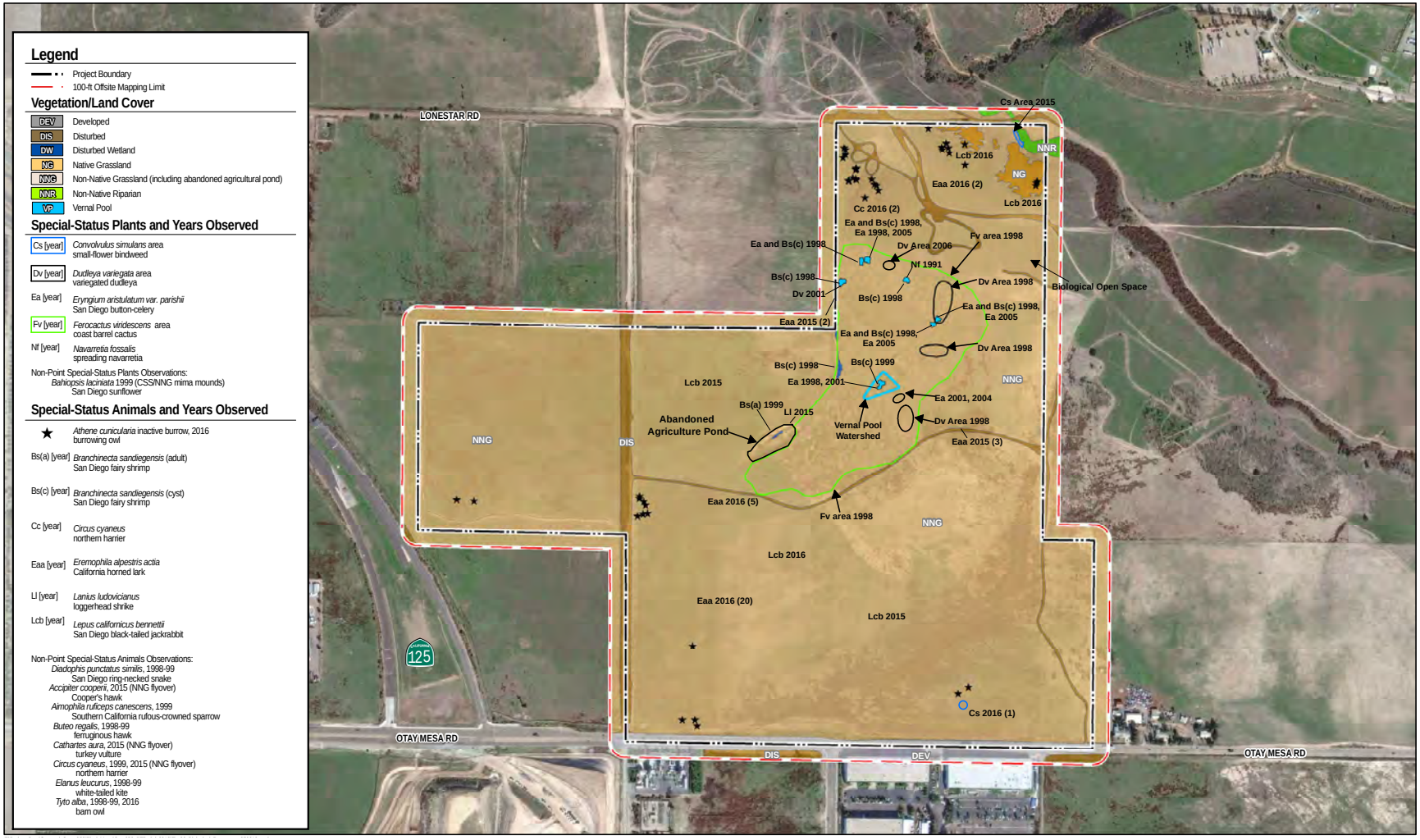
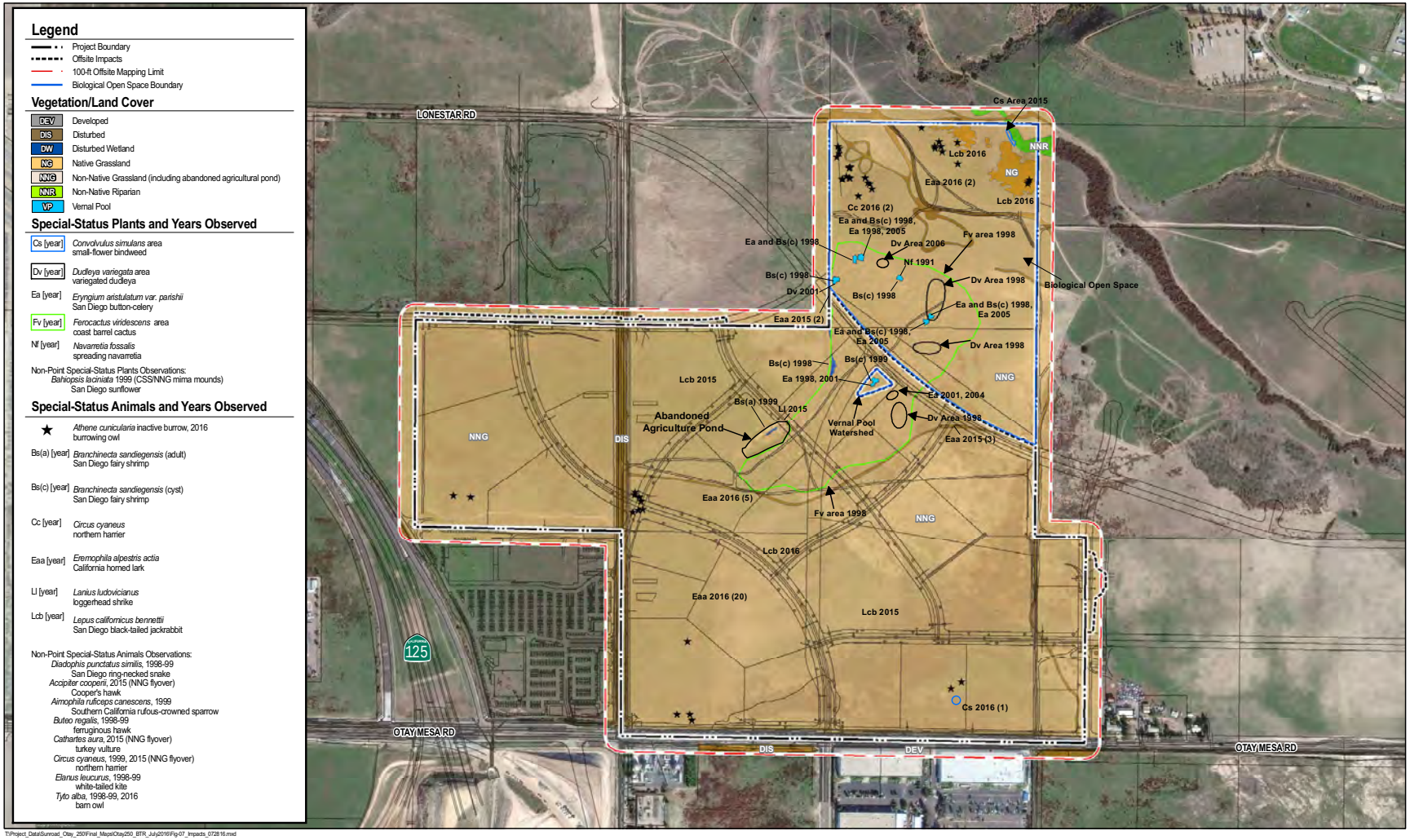
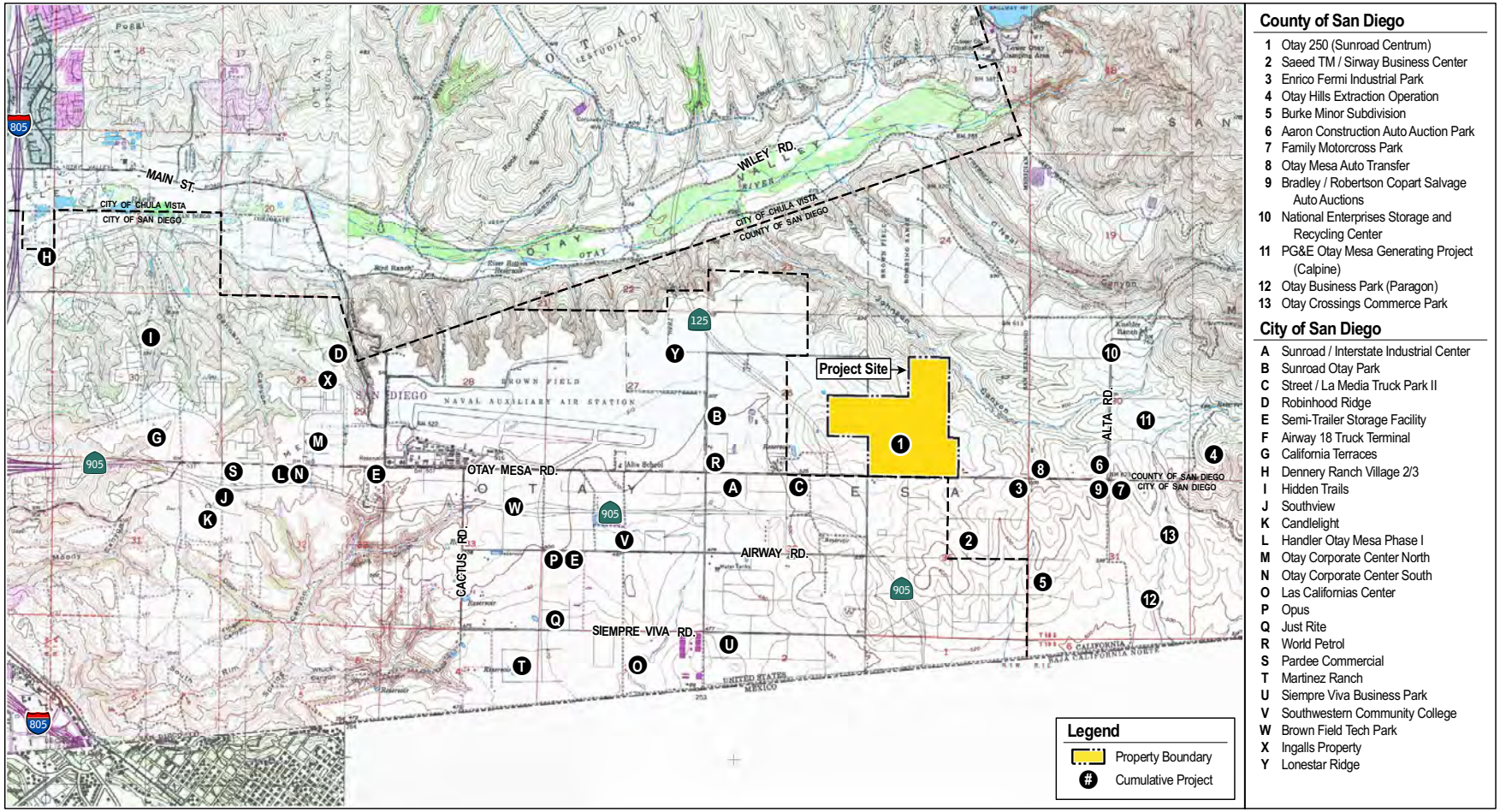


FIGURE 2.2-3. *BIOLOGICAL RESOURCES*



T:\Project_Data\Sunroad_Otay_250\Final_Maps\Otay250_BTR_July2016\Fig-07_Impacts_072816.mxd

FIGURE 2.2-4. *PROJECT IMPACTS*



County of San Diego

1 Otay 250 (Sunroad Centrum)
2 Saeed TM / Sirway Business Center
3 Enrico Fermi Industrial Park
4 Otay Hills Extraction Operation
5 Burke Minor Subdivision
6 Aaron Construction Auto Auction Park
7 Family Motorcross Park
8 Otay Mesa Auto Transfer
9 Bradley / Robertson Copart Salvage Auto Auctions
10 National Enterprises Storage and Recycling Center
11 PG&E Otay Mesa Generating Project (Calpine)
12 Otay Business Park (Paragon)
13 Otay Crossings Commerce Park

City of San Diego

A Sunroad / Interstate Industrial Center
B Sunroad Otay Park
C Street / La Media Truck Park II
D Robinhood Ridge
E Semi-Trailer Storage Facility
F Airway 18 Truck Terminal
G California Terraces
H Dennery Ranch Village 2/3
I Hidden Trails
J Southview
K Candlelight
L Handler Otay Mesa Phase I
M Otay Corporate Center North
N Otay Corporate Center South
O Las Californias Center
P Opus
Q Just Rite
R World Petrol
S Pardee Commercial
T Martinez Ranch
U Siempre Viva Business Park
V Southwestern Community College
W Brown Field Tech Park
X Ingalls Property
Y Lonestar Ridge

FIGURE 2.2-5. *CUMULATIVE PROJECTS*