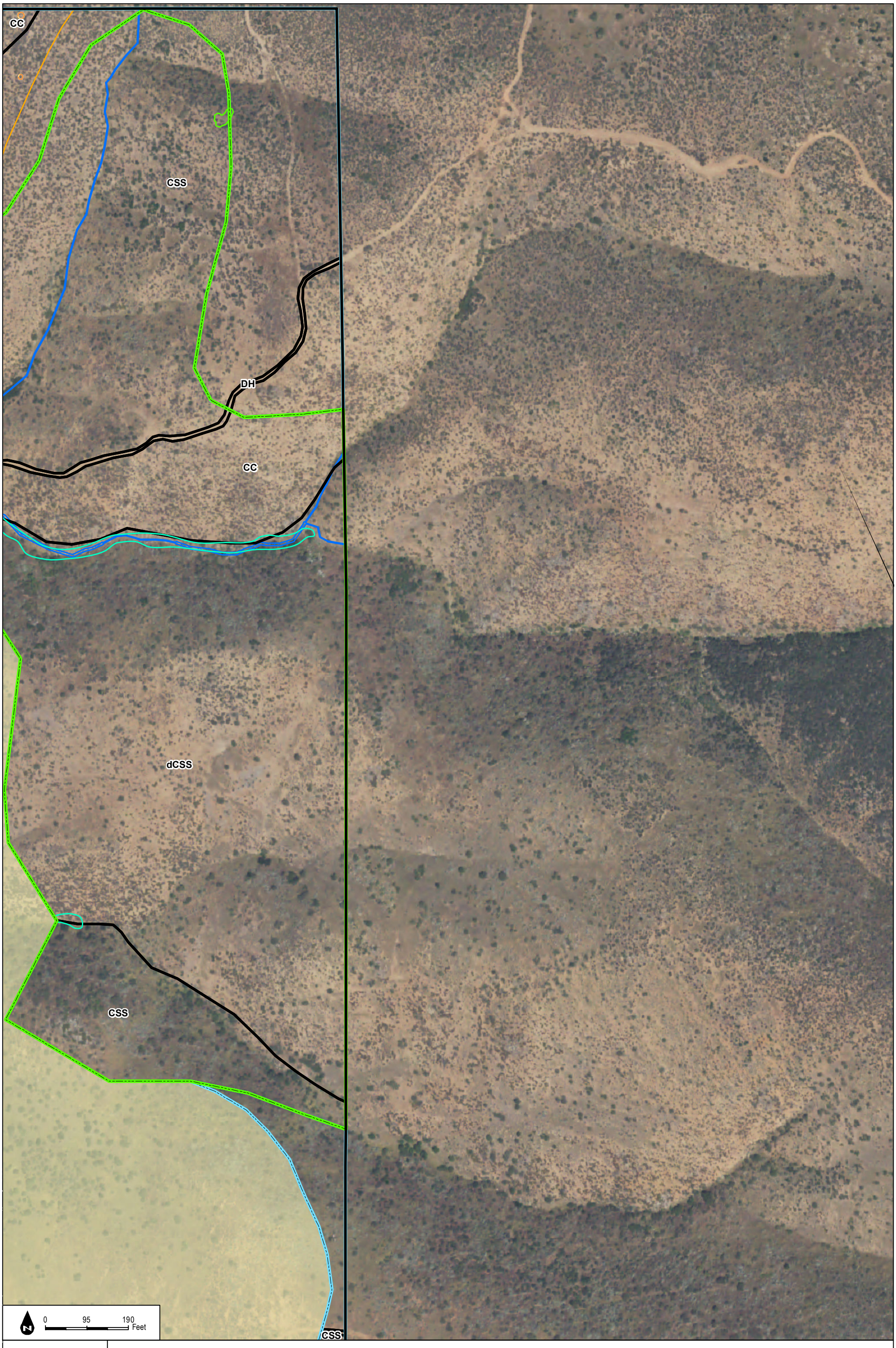

SOURCE: NAIP 2016; Hunsaker 2017

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FIGURE 2-1M
Biological Resources

Otay Ranch Village 14 and Planning Areas 16/19 - Preserve Status Report

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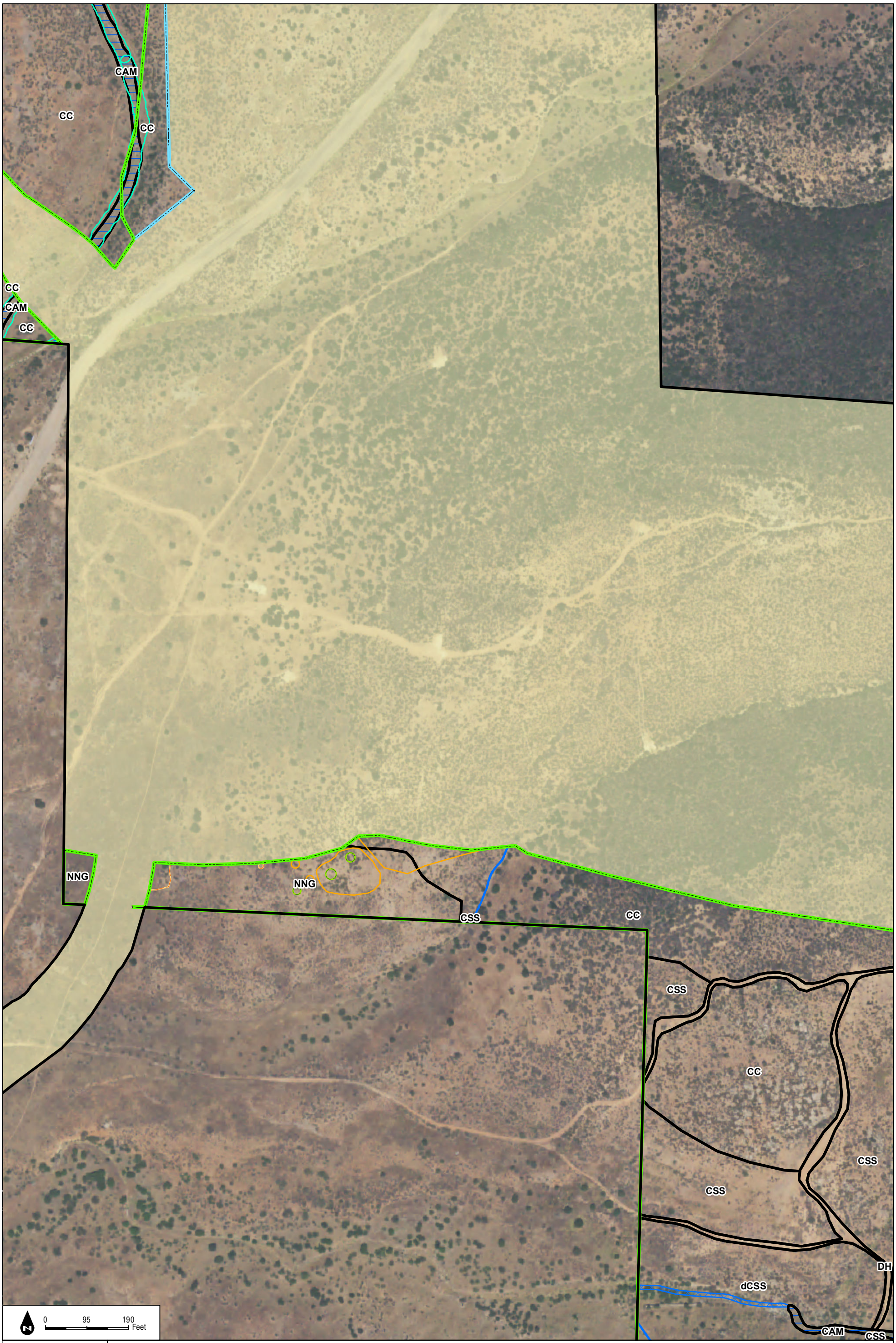

SOURCE: NAIP 2016; Hunsaker 2017

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FIGURE 2-1N
Biological Resources

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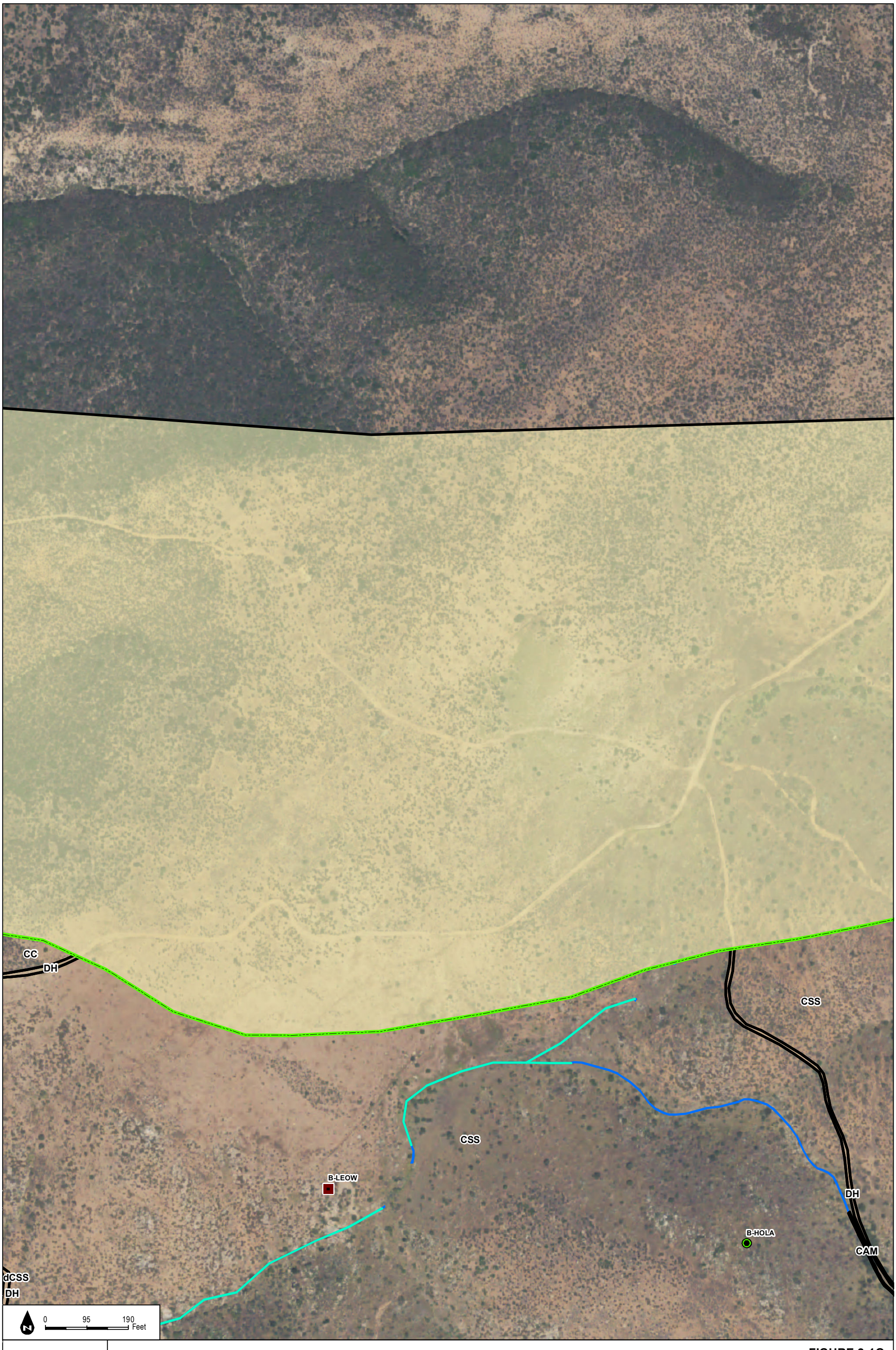

SOURCE: NAIP 2016; Hunsaker 2017

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FIGURE 2-1O
Biological Resources

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SOURCE: NAIP 2016; Hunsaker 2017

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FIGURE 2-1P
Biological Resources

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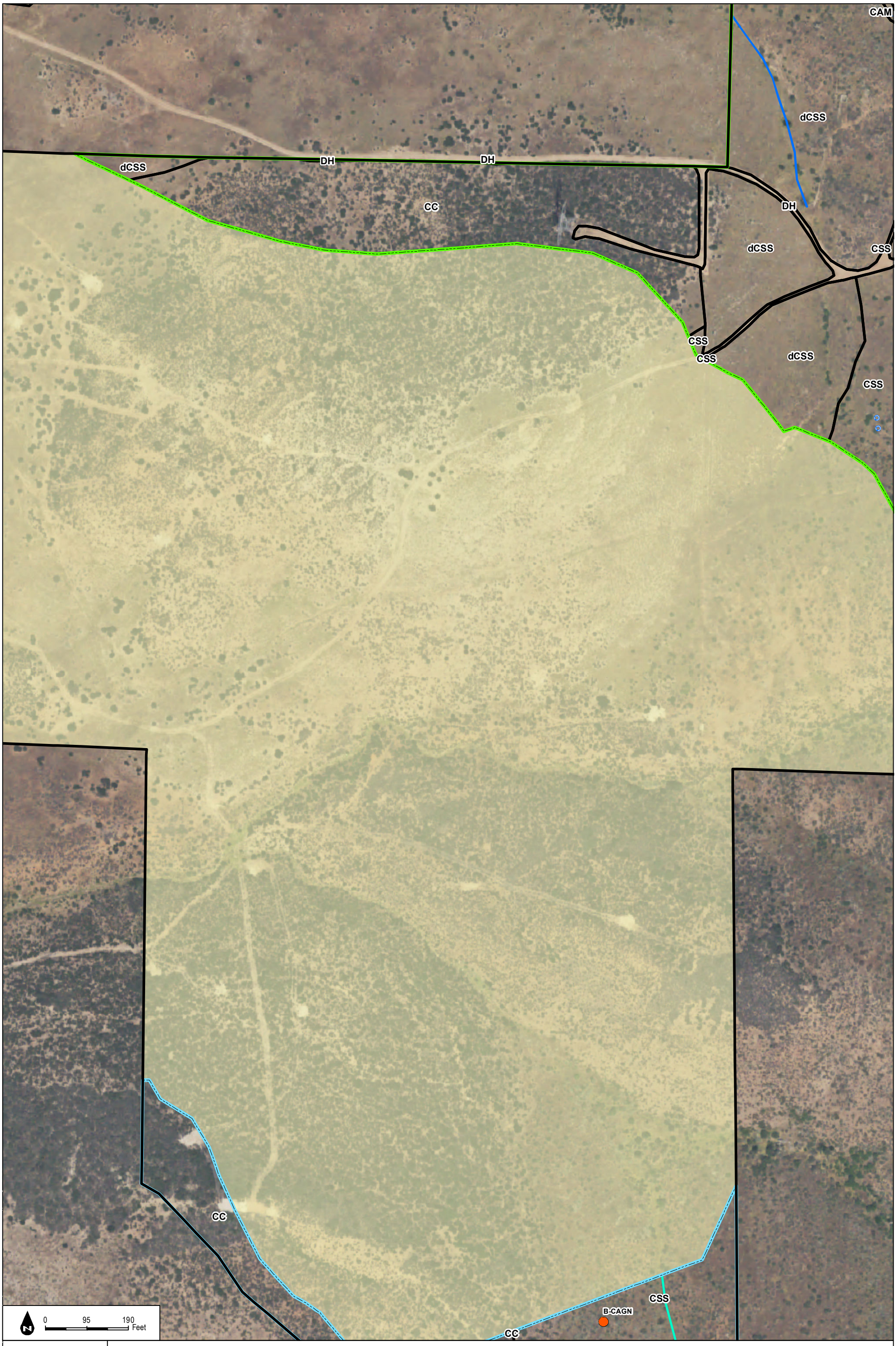

SOURCE: NAIP 2016; Hunsaker 2017

FIGURE 2-1Q
Biological Resources

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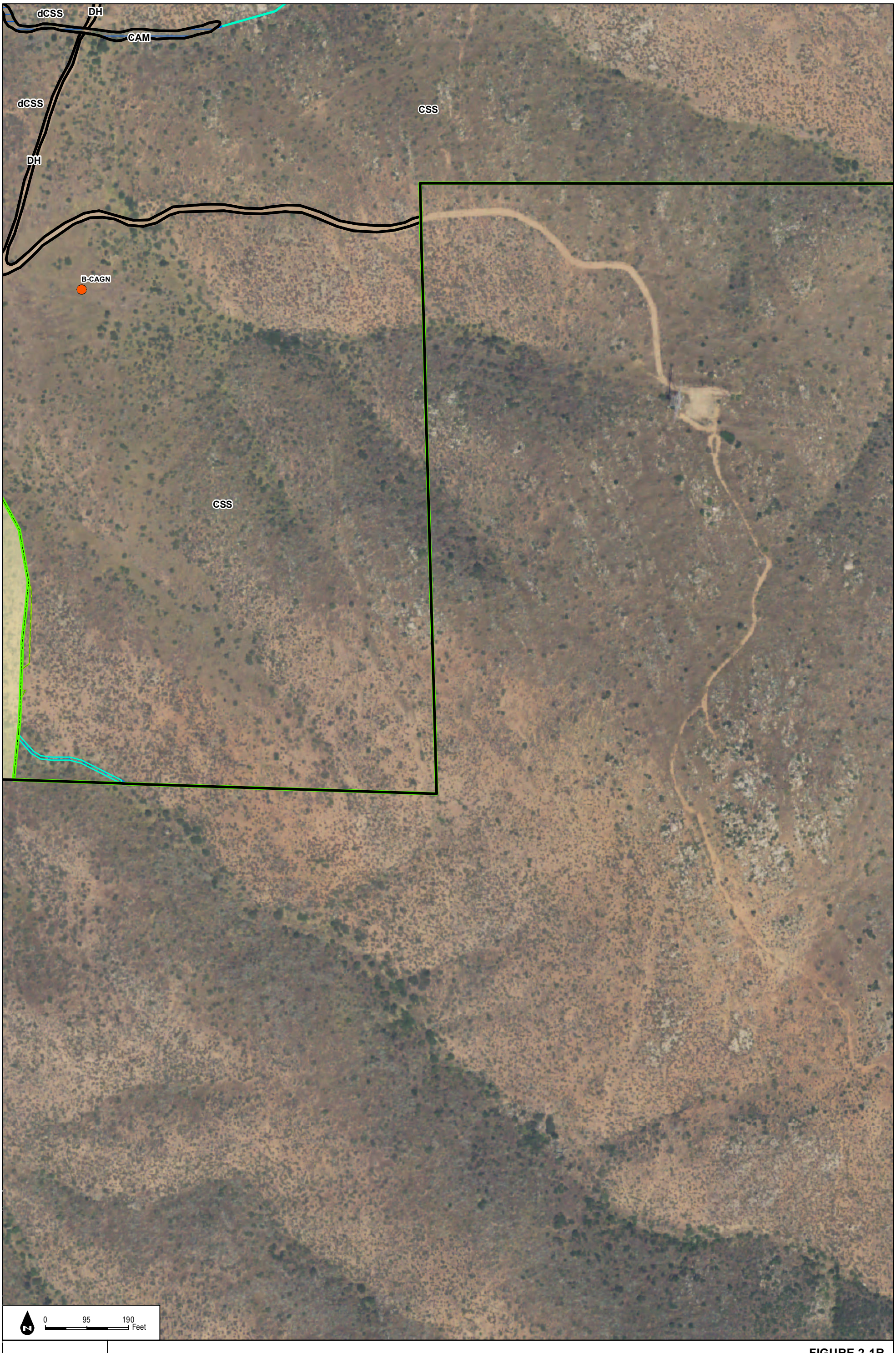

SOURCE: NAIP 2016; Hunsaker 2017

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FIGURE 2-1R
Biological Resources

Otay Ranch Village 14 and Planning Areas 16/19 - Preserve Status Report

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SOURCE: NAIP 2016; Hunsaker 2017

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FIGURE 2-1S
Biological Resources

Otay Ranch Village 14 and Planning Areas 16/19 - Preserve Status Report

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SOURCE: NAIP 2016; Hunsaker 2017

FIGURE 2-1T
Biological Resources

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Otay Ranch Village 14 and Planning Areas 16/19 - Preserve Status Report

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SOURCE: NAIP 2016; Hunsaker 2017

FIGURE 2-1U
Biological Resources

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Areas mapped as Diegan coastal sage scrub are dominated by coastal sagebrush, San Diego County viguiera (*Viguiera laciniata*), laurel sumac, sage (*Salvia* spp.), and Eastern Mojave buckwheat. Areas where native species were co-dominant with non-native grasses were mapped as disturbed Diegan coastal sage scrub. Diegan coastal sage scrub occurs primarily within the MSCP Preserve in Village 14 (Figures 2-1 and 2-1A through 2-1U) and is the most dominate vegetation community within the Otay Ranch RMP Preserve, Conserved Open Space, and non-graded LDA.

Non-Native Grasslands (42200)

Non-native grasslands consist of dense to sparse cover of annual grasses with flowering culms between 0.5 to 3 feet in height (Oberbauer et al. 2008). Non-native grassland has a rank of G4S4 by CDFW (CDFG 2010), meaning it is apparently secure globally and in the state. Within the Project Area, oats (*Avena* spp.), bromes (*Bromus* spp.), stork's bill (*Erodium* spp.), and mustard (*Brassica* spp.) are the more dominant species in this community. Non-native grassland generally occurs in the flatter portions of the valley Otay Ranch RMP Preserve (Figures 2-1 and 2-1A through 2-1U). The majority of the non-native grassland is within the Planning Areas 16/19 Otay Ranch RMP Preserve.

Cismontane Alkali Marsh (52310)

Cismontane alkali marsh is a wetland community dominated by low, perennial, herbaceous plants adapted to places where standing water or saturated soils are present for a considerable portion of the year. High evaporation and low input of freshwater render these marshes somewhat alkaline, especially during the summer. Plant species composition within this community tends to consist of halophytes such as San Diego marsh-elder (*Iva hayesiana*), southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*), and certain sedges over the typical cattail–bulrush mix of freshwater marsh. The cismontane alkali marsh alliance is ranked by CDFW (CDFG 2010) as a G1S1 alliance. This ranking indicates that globally and within California the alliance is critically imperiled (CDFG 2010; NatureServe 2014).

Cismontane alkali marsh was mapped intermittently in many of the drainages in the Project Area. The intermittent nature of its occurrence presumably is due to changes in topography, which cause rapid draining in some areas and seasonal inundation in others. Areas supporting cismontane alkali marsh are evidenced by the presence of San Diego marsh-elder, and occasionally southwestern spiny rush. Saltgrass (*Distichlis spicata*) was sometimes present along the edges of the cismontane alkali marsh. Areas where native species were co-dominant with non-native grasses were mapped as disturbed cismontane alkali marsh. These communities are mapped along various drainages occurring primarily in the northern and southern portions of the

Planning Areas 16/19 Otay Ranch RMP Preserve. A small portion of this community occurs within the central portion of the Otay Ranch RMP Preserve within Village 14 (Figures 2-1 and 2-1A through 2-1U).

Mulefat Scrub (63310)

Mulefat scrub is a depauperate, tall, herbaceous riparian scrub strongly dominated by mulefat (*Baccharis salicifolia*). This early seral community is maintained by frequent flooding. Site factors include intermittent stream channels with fairly coarse substrate and moderate depth to the water table (Oberbauer et al. 2008). This community type is widely scattered along intermittent streams and near larger rivers. The *Baccharis salicifolia* (mulefat thickets) alliance has a rank of G5S4 (CDFG 2010; NatureServe 2014), meaning it is globally secure and apparently secure in the state. Mulefat scrub is considered special status by CDFW.

Areas mapped as mulefat scrub are dominated by mulefat and are typically found along drainages that receive intermittent water throughout the year. There are small patches of mulefat scrub mapped along the northern and southern portions of the Planning Areas 16/19 and Village 14 Otay Ranch RMP Preserve (Figures 2-1 and 2-1A through 2-1U).

Southern Coast Live Oak Riparian Forest (61310)

Southern coast live oak riparian forest is a dense riparian forest dominated by coast live oak (*Quercus agrifolia*), often with an herbaceous understory. This community occurs along the bottom or outer slopes of larger streams (Oberbauer et al. 2008). Areas mapped as oak riparian forest are dominated by coast live oak. The *Quercus agrifolia* (coast live oak woodland) alliance has a rank of G5S4 by CDFW (CDFG 2010), meaning it is globally secure and apparently secure in the state.

One area of southern coast live oak riparian forest is mapped along the eastern edge of the Otay Ranch RMP Preserve within Village 14 in a drainage that flows in an east/west direction to the Proctor Valley drainage (Figures 2-1 and 2-1A through 2-1U). This is the only instance of this vegetation community.

Southern Willow Scrub (63320)

Southern willow scrub is a dense, broad-leafed, winter-deciduous riparian thicket dominated by several willow species (*Salix* spp.), with scattered emergent Fremont cottonwood (*Populus fremontii*) and California sycamore (*Platanus racemosa*). This community was formerly extensive along the major rivers of coastal Southern California, but now much reduced (Oberbauer et al. 2008). The *Salix lasiolepis* (arroyo willow thickets) alliance has a rank of G3S4

by CDFW (CDFG 2010; NatureServe 2014), meaning it is vulnerable to extirpation or extinction globally and secure in the state.

Areas mapped as southern willow scrub are dominated by arroyo willow (*Salix lasiolepis*). Two small polygons of southern willow scrub are mapped in the northern portion of the Otay Ranch RMP Preserve within Planning Areas 16/19 (Figures 2-1 and 2-1A through 2-1U).

Open Water (64100)

According to Oberbauer et al. (2008), the open water designation is primarily used to describe areas of open ocean water. One area mapped as open water is more accurately described by the Oberbauer et al. description for non-vegetated floodplain (see Non-Vegetated Floodplain or Channel (64200)). Open water does not have a global or state rank.

Previous aerial photographs from 1994 through 2016 show one area within the eastern most parcel in Planning Areas 16/19 within the non-graded LDA as inundated with water at various times; therefore, this location was mapped as open water (Google Earth 2017) (Figures 2-1 and 2-1A through 2-1U). During the 2014 surveys, this location did not contain water but instead was vegetated with non-native grassland and some shrubs indicative of coastal sage scrub. During 2017 focused surveys, this area was again inundated with water and therefore, the open water designation is retained.

Non-Vegetated Floodplain or Channel (64200)

Non-vegetated floodplain or channel is not recognized by Holland (1986) but is recognized by Oberbauer et al. (2008). According to Oberbauer et al. (2008), non-vegetated floodplain or channel is the sandy, gravelly, or rocky fringe of waterways or flood channels that is unvegetated on a relatively permanent basis. Vegetation may be present but is usually less than 10% total cover and grows on the outer edge of the channel. Non-vegetated channels occur throughout Otay Ranch RMP Preserve within both Village 14 and Planning Areas 16/19 but have been mapped as overlays within vegetation communities. These resources are discussed more in Section 2.3, Jurisdictional Aquatic Resources. Non-vegetated floodplain or channel does not have a global or state rank.

Eucalyptus Woodland (79100)

Eucalyptus woodland is not recognized by Holland (1986) but is recognized by Oberbauer et al. (2008). This "naturalized" vegetation community is fairly widespread in Southern California and is considered a woodland habitat. It typically consists of monotypic stands of introduced Australian eucalyptus trees (*Eucalyptus* spp.). The understory is either depauperate or absent

owing to high leaf litter. Although eucalyptus woodlands are of limited value to most native plants and animals, they frequently provide nesting and perching sites for several raptor species. The *Eucalyptus* (*globulus*, *camaldulensis*) (eucalyptus groves) semi-natural stands does not have a global or state rank (CDFG 2010; NatureServe 2014). There are two small separate areas mapped as eucalyptus woodland within the northern portion of the Otay Ranch RMP Preserve in Planning Areas 16/19 (Figures 2-1 and 2-1A through 2-1U).

Urban/Developed (12000)

Urban/developed refers to areas that have been constructed upon or disturbed so severely that native vegetation is no longer supported. Developed land includes areas with permanent or semi-permanent structures, pavement or hardscape, landscaped areas, and areas with a large amount of debris or other materials (Oberbauer et al. 2008). Areas mapped as urban/developed within the Otay Ranch RMP Preserve in Planning Areas 16/19 includes Proctor Valley Road North (Figures 2-1 and 2-1A through 2-1U).

Disturbed Habitat (11300)

Disturbed habitats are areas that have been physically disturbed and no longer recognizable as native or naturalized vegetation association (Oberbauer et al. 2008). These areas may continue to retail soil substrate. If vegetation is present, it is almost entirely composed of non-native vegetation, such as ornamentals or ruderal exotic species. Examples of these areas may include graded landscapes or areas, graded firebreaks, graded construction pads, construction staging areas, off-road vehicle trails, areas repeatedly cleared for fuel management, or repeatedly used areas that prevent revegetation (e.g., parking lots, trails that have persisted for years). Within Otay Ranch Preserve in Village 14 and Planning Areas 16/19, dirt roads, prominent dirt trails, and off-highway-vehicle areas are mapped as disturbed habitat (Figures 2-1 and 2-1A through 2-1U). Disturbed habitat within Conserved Open Space includes dirt roads and trails.

2.3 Jurisdictional Aquatic Resources

The results of the jurisdictional delineation conducted by Dudek in 2014, 2015, and 2016 show that there are jurisdictional aquatic features in the Otay Ranch RMP Preserve, Conserved Open Space, and non-graded LDA. Jurisdictional aquatic resources, including both wetlands/riparian areas and non-wetland waters/streambeds, mapped in the Otay Ranch RMP Preserve, Conserved Open Space, and non-graded LDA are shown in Figures 2-1 and 2-1A through 2-1U. Table 2 provides a summary, in acreages, of these jurisdictional aquatic resources. Within the Otay Ranch RMP Preserve, Conserved Open Space, and non-graded LDA, U.S. Army Corps of Engineers, Regional Water Quality Control Board, and CDFW jurisdictions follow the same

boundaries. Jurisdictional resources within the Otay Ranch RMP Preserve totals 9.16 acres and jurisdictional resources within Conserved Open Space total 0.22 acres. There are 0.40 acres of jurisdictional resources within the non-graded LDA.

Table 2
U.S. Army Corps of Engineers/ Regional Water Quality Control Board/CDFW-Jurisdictional Aquatic Resources within the Otay Ranch RMP Preserve, Conserved Open Space, and Non-Graded LDA (Acres)

Habitat Types/Vegetation Communities	Code[a]	Otay Ranch RMP Preserve		Conserved Open Space		Non-Graded LDA
		Village 14	*Planning Areas 16/19*	*Village 14 Development*	*LDA*	
Wetlands/Riparian Habitat						
Cismontane alkali marsh	52310	1.04	5.87	0.08	—	—
Mulefat scrub	63310	0.20	0.51	—	—	—
Southern coast live oak riparian forest	61310	0.71	—	—	—	—
Southern willow scrub	63320	—	0.09	—	—	—
	Subtotal	*1.95*	*6.48*	*0.08*	—	—
Non-Wetland Waters/Streambed						
Unvegetated channel	64200	0.48	0.73	0.14	0.08	0.12
Open water	64100	—	—	—	—	0.28
	Subtotal	*0.48*	*0.73*	*0.14*	*0.08*	—
	Total	**9.64**		**0.22**		**0.40**
	Grand Total	**10.26**				

[a] Oberbauer et al. 2008.

The Project Area is located within the Otay watershed, in the Otay River Reservoir (HUC 180703041003) and Jamul Creek (1807030412) hydrological units. The Proposed Project is located entirely within the Otay River Reservoir hydrological unit. All of the drainages within the Project Area flow toward the Proctor Valley Parcel from the higher elevations east and west of the Project Area. In general, the drainages from the higher elevations are relatively steep and narrow and do not hold water most of the year. A few areas along the flatter topography exhibit less rapid flow and have thus developed more extensive hydrophytic vegetation and hydric soils. These areas occur along portions of the stream channels and are typically represented by cismontane alkali marsh vegetation. The drainages generally connect to Proctor Valley drainage, which runs parallel to Proctor Valley Road, and flows in a north/south direction, eventually draining into Upper Otay Lake and then Lower Otay Lake.

2.4 Impacts within the Otay Ranch RMP Preserve

As described in Section 1.3, Project Terminology and Definitions, development within the Proposed Project would result in impacts to Otay Ranch RMP Preserve. Impacts within Otay Ranch RMP Preserve in Village 14 include 5.9 acres of impacts from permanent road improvements and 3.5 acres of fuel modification. The Proposed Project's road improvements would also result in an additional 6.7 acres of temporary impacts to the Otay Ranch RMP Preserve. The Otay Ranch RMP Preserve within Planning Areas 16/19 includes 1.1 acres of permanent impacts stemming from improvements to Proctor Valley Road and 1.3 acres of impacts for fuel modification along the road. An additional 3.4 acres of MSCP Preserve would be temporarily impacted for road improvements. Impacted Otay Ranch RMP Preserve totals 21.9 acres, 10.1 acres of which would be restored to native habitat. While these impacts are allowable uses within the Preserve, they may reduce the amount of suitable habitat for plant and wildlife species. As such, the impacts to the Otay Ranch RMP Preserve have been included in the Development Footprint for the Proposed Project for purposes of analyzing impacts on biological resources. However, those acreages are also included within this report since they are a part of the Otay Ranch RMP Preserve. Table 3 provides the impacts associated with road development within the Otay Ranch RMP Preserve.

Table 3
Impacts to Vegetation Communities and Land Cover Types within Otay Ranch Preserve

Habitat Types/Vegetation Communities	Code[a]	Village 14 MSCP Preserve[b]			Planning Areas 16/19 MSCP Preserve[b]		
		Perm FMZ	*Perm Road*	*Temp Road*	*Perm FMZ*	*Perm. Road*	*Temp Road*
Sensitive Upland Communities							
Granitic chamise chaparral	37210	1.5	4.2	1.3	—	—	—
Diegan coastal sage scrub	32500	0.5	0.3	1.8	0.9	0.5	2.3
Diegan coastal sage scrub (disturbed)	32500	1.5	1.0	3.3	—	—	<0.1
Non-native grassland	42200	<0.1	0.2	0.1	0.2	0.1	1.0
Subtotal of Sensitive Upland Communities		*3.5*	*5.7*	*6.6*	*1.1*	*0.5*	*3.2*
Jurisdictional Aquatic Resources							
Cismontane alkali marsh (including disturbed)	52310	<0.1	0.1	<0.1	<0.1	0.1	<0.1
Mulefat scrub	63310	—	—	—	<0.1	<0.1	0.1
Southern willow scrub		—	—	—	<0.1	<0.1	<0.1
Unvegetated channel[c]	64200	—	—	—	—	—	—
Subtotal of Jurisdictional Aquatic Resources		*<0.1*	*0.1*	*<0.1*	*0.1*	*0.1*	*0.1*
Non-Sensitive Communities and Land Covers							
Urban/developed	12000	—	—	—	<0.1	0.5	<0.1

Table 3
Impacts to Vegetation Communities and Land Cover Types within Otay Ranch Preserve

Habitat Types/Vegetation Communities	Code[a]	Village 14 MSCP Preserve[b]			Planning Areas 16/19 MSCP Preserve[b]		
		Perm FMZ	*Perm Road*	*Temp Road*	*Perm FMZ*	*Perm. Road*	*Temp Road*
Disturbed habitat	11300	<0.1	<0.1	0.1	<0.1	<0.1	0.1
Subtotal of Non-Sensitive Communities and Land Covers		*<0.1*	*<0.1*	*0.1*	*0.1*	*0.5*	*0.1*
Total[c]		**3.5**	**5.9**	**6.7**	**1.3**	**1.1**	**3.4**

[a] Oberbauer et al. 2008.
[b] May not total due to rounding.
[c] In areas where unvegetated stream channel is an overlay within a vegetation communities, that acreage is not included in this table. See Section 2.3 for the total acreage of unvegetated stream channel within the MSCP Preserve.

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3 SPECIAL-STATUS BIOLOGICAL RESOURCES

3.1 Sensitive Plant Species

This report uses the term "special-status plant species" to include endangered, rare, or threatened plant species, as defined in California Environmental Quality Act (CEQA) Guidelines Section 15380(b) (14 CCR 15000 et seq.), as well as endangered or threatened plant species recognized in the context of the California Endangered Species Act and the federal Endangered Species Act (CDFW 2016a), plant species with a California Rare Plant Rank (CRPR) 1 through 4, (CDFW 2016b; CNPS 2016), and plant species considered "sensitive" by the County of San Diego (Table 2 in County of San Diego 2010).

In considering rarity, the California Native Plant Society (CNPS) Inventory of rare and endangered vascular plants of California was the primary reference (CNPS 2016). Use of the CNPS Inventory is helpful because it clearly defines levels of endangerment and rarity for all of the species addressed in the Inventory. The Inventory divides its subject taxa into four ranks: CRPR 1 (which is further divided into 1A and 1B), 2 (which is further divided into 2A and 2B), 3, and 4. Plants with a CRPR of 1A are presumed extirpated or extinct because they have not been seen or collected in the wild in California for many years. Plants with a CRPR of 1B are rare throughout their range with the majority of them endemic to California. Most of the plants that are ranked 1B have declined significantly over the last century. Plants with a CRPR of 2A are presumed extirpated because they have not been observed or documented in California for many years. Except for being common beyond the boundaries of California, plants with a CRPR of 2B would have been ranked 1B. Plants with a CRPR of 3 have not had sufficient information collected to assign them to one of the other ranks or to reject them. Nearly all of the plants constituting CRPR 3 are taxonomically problematic. All of the plants constituting CRPR 1A, 1B, 2A, 2B, and 3 meet the definitions of the California Endangered Species Act of the California Fish and Game Code, and are eligible for state listing. Plants with a CRPR of 4 are of limited distribution or infrequent throughout a broader area in California, and their status should be monitored regularly. Should the degree of endangerment or rarity of a CRPR 4 plant change, they would be transferred to a more appropriate rank.

Some of the plants constituting CRPR 4 meet the definitions of the California Endangered Species Act of the California Fish and Game Code, and few, if any, are eligible for state listing; this rank is considered to be a watch list. Nevertheless, many of them are significant locally, and it is strongly recommended that CRPR 4 plants be evaluated for impact significance during preparation of environmental documents relating to CEQA, or those considered to be functionally equivalent to CEQA, based on CEQA Guidelines Section 15125(c) and/or 15380. This may be particularly appropriate for:

- The type locality of a CRPR 4 plant
- Populations at the periphery of a species' range
- Areas where the taxon is especially uncommon
- Areas where the taxon has sustained heavy losses
- Populations exhibiting unusual morphology or occurring on unusual substrates

In addition to CRPR 1–4 species, plant species listed on County Lists A through D (County of San Diego 2010) also were included in the consideration of sensitive plant species for this analysis. Plants categorized as County List A species are plants that are rare, threatened, or endangered in California and elsewhere. Plants categorized as County List B are rare, threatened, or endangered in California, but more common elsewhere (County of San Diego 2010). Plants categorized as County List C species are plants that may be rare, but more information is needed to determine their true rarity status. Plants categorized as County List D are of limited distribution and are uncommon, but not presently rare or endangered (County of San Diego 2010).

3.1.1 Special-Status Plant Species Observed

Focused plant surveys were conducted in the entire Project Area to determine the presence or absence of special-status plant species that are considered endangered, rare, or threatened under CEQA Guidelines Section 15380 (14 CCR 15000 et seq.). Sensitive plant species directly observed within the Otay Ranch RMP Preserve include the following MSCP Covered, and County List A, species: Otay manzanita (*Arctostaphylos otayensis*), San Diego goldenstar (*Bloomeria clevelandii*), Dunn's mariposa-lily (*Calochortus dunnii*; Narrow Endemic), San Miguel savory (*Clinopodium [=Satureja] chandleri*), and Gander's pitcher sage (*Lepechinia gander*; Narrow Endemic).One County List B species, San Diego barrel cactus (*Ferocactus viridescens*) was also observed. In addition, there is critical habitat for spreading navarretia (*Navarretia fossalis*) within the Otay Ranch RMP Preserve.

Special-status species not covered by the MSCP observed within the Otay Ranch RMP Preserve include delicate clarkia (*Clarkia delicata*; County List A), Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*; County List A), San Diego marsh-elder (County List B), Munz's sage (*Salvia munzii*; County List B), San Diego sagewort (*Artemisia palmeri*; County List D), southwestern spiny rush (County List D), golden-rayed pentachaeta (*Pentachaeta aurea* ssp. *aurea*; County List D), ashy spike-moss (*Selaginella cinerascens*; County List D), San Diego County viguiera (County List D), and San Diego County needle grass (*Stipa [=Achnatherum] diegoensis;* County List D).

Two MSCP Covered Species were observed within the Conserved Open Space and/or non-graded LDA: San Diego goldenstar and Dunn's mariposa-lily. Additional special-status species observed within Conserved Open Space and/or non-graded LDA include San Diego marsh-elder, Munz's sage, San Diego sagewort, and ashy spike-moss. See Table 4 for a summary of special-status plant species populations within the Otay Ranch RMP Preserve, Conserved Open Space, and non-graded LDA. The location of the populations, within either the Otay Ranch RMP Preserve, Conserved Open Space and/or non-graded LDA, for each observed species is also described below and shown on Figures 2-1 and 2-1A through 2-1U.

Table 4
Summary of Special-Status Plant Species within the Otay Ranch RMP Preserve, Conserved Open Space, and Non-Graded LDA

Species	Regulatory Status: Federal/State/MSCP Coverage/ CRPR	Otay Ranch RMP Preserve	Conserved Open Space	Non-Graded LDA	Total
County List A					
Arctostaphylos otayensis Otay manzanita	None/None/Covered/1B.2	627	—	—	627
Bloomeria clevelandii San Diego goldenstar	None/None/Covered/1B.1	2,901	688	588	4,177
Calochortus dunnii Dunn's mariposa-lily	None/SR/Covered, Narrow Endemic/1B.2	452	1	—	453
Clarkia delicata delicate clarkia	None/None/Not Covered/1B.2	1	—	—	1
Clinopodium chandleri San Miguel savory	None/None/Covered/1B.2	1	—	—	1
Lepechinia ganderi Gander's pitcher sage	None/None/Covered, Narrow Endemic/1B.3	168	—	—	168
Lepidium virginicum var. *robinsonii* Robinson's pepper-grass	None/None/Not Covered/4.3	6	—	—	6
Navarretia fossalis Spreading navarretia	FT/None/Covered/ 1.B	17.0 acres	—	—	17.0 acres
County List B					
Ferocactus viridescens San Diego barrel cactus	None/None/Covered/2B.1	2	—	—	2
Iva hayesiana San Diego marsh-elder	None/None/Not Covered/2B.2	1,255	184	180	1,619
Salvia munzii Munz's sage	None/None/Not Covered/2B.2	4,052	1,288	1,124	6,464
County List D					
Artemisia palmeri San Diego sagewort	None/None/Not Covered/4.2	4	—	8	12

Table 4
Summary of Special-Status Plant Species within the Otay Ranch RMP Preserve, Conserved Open Space, and Non-Graded LDA

Species	Regulatory Status: Federal/State/MSCP Coverage/ CRPR	Otay Ranch RMP Preserve	Conserved Open Space	Non-Graded LDA	Total
Juncus acutus ssp. *leopoldii* Southwestern spiny rush	None/None/Not Covered/4.2	480	12	—	492
Pentachaeta aurea ssp. *aurea* Golden-rayed pentachaeta	None/None/Not Covered/4.2	10	—	6,248	6,258
Selaginella cinerascens Ashy spike-moss [a]	None/None/Not Covered/4.1	1.31 acres	0.42 acres	1.22 acres	2.94 acres
Viguiera laciniata San Diego County viguiera	None/None/Not Covered/4.2	7,825	434	3.610	11,869
San Diego County needle grass *Stipa [=Achnatherum] diegoensis*	None/None/Not Covered/4.2	27	—	80	107

CRPR: California Rare Plant Rank; MSCP: Chula Vista Subarea Plan Multiple Species Conservation Plan; County List A and B and D; FT = federally threatened; SE = state endangered; SR = state rare.

[a] Populations of ashy spike-moss are in acres occupied rather than number of individuals due to the difficulty in counting distinct individuals for species with such growth habits.

Otay Manzanita (*Arctostaphylos otayensis*), List A, MSCP Covered Species

Otay manzanita is a CRPR 1B.1, MSCP Covered, and County List A species. This evergreen shrub typically blooms from December to June, and occurs in maritime chaparral at elevations less than 1,200 feet amsl. Several populations totaling approximately 627 Otay manzanita shrubs was observed within the Otay Ranch RMP Preserve in Planning Area 16 (Figures 2-1 and 2-1A through 2-1U).

San Diego Goldenstar (*Bloomeria clevelandii*), List A, MSCP Covered Species

San Diego goldenstar is a CRPR 1B.1, MSCP Covered, and County List A species. This species occurs on clay soils in chaparral, coastal scrub, and valley and foothill grasslands as well as in vernal pools. This perennial herb typically blooms from April to May and occurs at elevations ranging from 164 to 1,526 feet amsl. San Diego goldenstar was recorded at several locations, totaling approximately 4,177 individuals. Approximately 2,901 plants are located within the Otay Ranch RMP Preserve, including 2,065 individuals in Village 14 and 836 individuals in Planning Area 16, 688 plants are within the Conserved Open Space, and 588 plants are within the non-graded LDA (Figures 2-1 and 2-1A through 2-1U).

Dunn's Mariposa-Lily (*Calochortus dunnii*), List A, MSCP Covered Species, Narrow Endemic

Dunn's mariposa-lily is state listed as rare, and is also a CRPR 1B.2, MSCP Covered, Narrow Endemic, and County List A species. This species occurs within a variety of vegetation communities, such as coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grasslands. This annual herb typically blooms from March to May, but can bloom into June, and occurs at an elevation range less than 1,000 feet amsl. Several occurrences of Dunn's mariposa-lily, totaling about 453 individuals, were observed within the Project Area. This species was mapped almost entirely within the Planning Area 16 Otay Ranch RMP Preserve (443 individuals), nine individuals were mapped within the Village 14 Otay Ranch RMP Preserve, and one individual was mapped in a portion of Conserved Open Space in Village 14 (Figures 2-1 and 2-1A through 4-1U).

Delicate Clarkia (*Clarkia delicata*), List A

Delicate clarkia is an annual herb listed as a CRPR 1B.2 and County List A species. This plant is often found within chaparral and cismontane woodland vegetation communities at elevations ranging from 770 to 3,300 feet amsl. Delicate clarkia blooms from April to June. One individual was observed within the Planning Area 16 Otay Ranch RMP Preserve (Figures 2-1 and 2-1A through 2-1U).

San Miguel Savory (*Clinopodium chandleri*), List A, MSCP Covered Species

San Miguel savory is a perennial shrub listed as CRPR 1B.2, MSCP Covered, and County List A species. This shrub is often found in chaparral, cismontane woodland, coastal scrub, riparian woodland, and valley and foothill grassland. San Miguel savory typically blooms between March and July and occurs at elevations ranging from 394 to 3,527 feet amsl. One occurrence was observed within the Planning Area 16 Otay Ranch RMP Preserve (Figures 2-1 and 2-1A through 2-1U).

Gander's Pitcher Sage (*Lepechinia ganderi*), List A, MSCP Covered Species, Narrow Endemic

Gander's pitcher sage is a CRPR 1B.3, MSCP Covered, and County List A species. Gander's pitcher sage is a perennial shrub that occurs within a variety of vegetation communities including closed-cone coniferous forest, chaparral, coastal scrub, and valley and foothill grasslands. This species is found at elevations ranging from 1,001 to 3,297 feet amsl and blooms between June and July. A total of 168 individuals were observed within the Planning Areas 16 Otay Ranch RMP Preserve (Figures 2-1 and 2-1A through 2-1U).

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

Robinson's pepper-grass is a CRPR 4.3 (CNPS 2016) and County List A species (County of San Diego 2010). This annual herb blooms from January to July. It occurs in chaparral and coastal scrub at elevations below 2,900 feet (CNPS 2016). Six individuals were observed in one concentrated area within the Otay Ranch RMP Preserve in Village 14.

Spreading Navarretia (*Navarretia fossalis*), Federally Threatened, List A, MSCP Covered Species

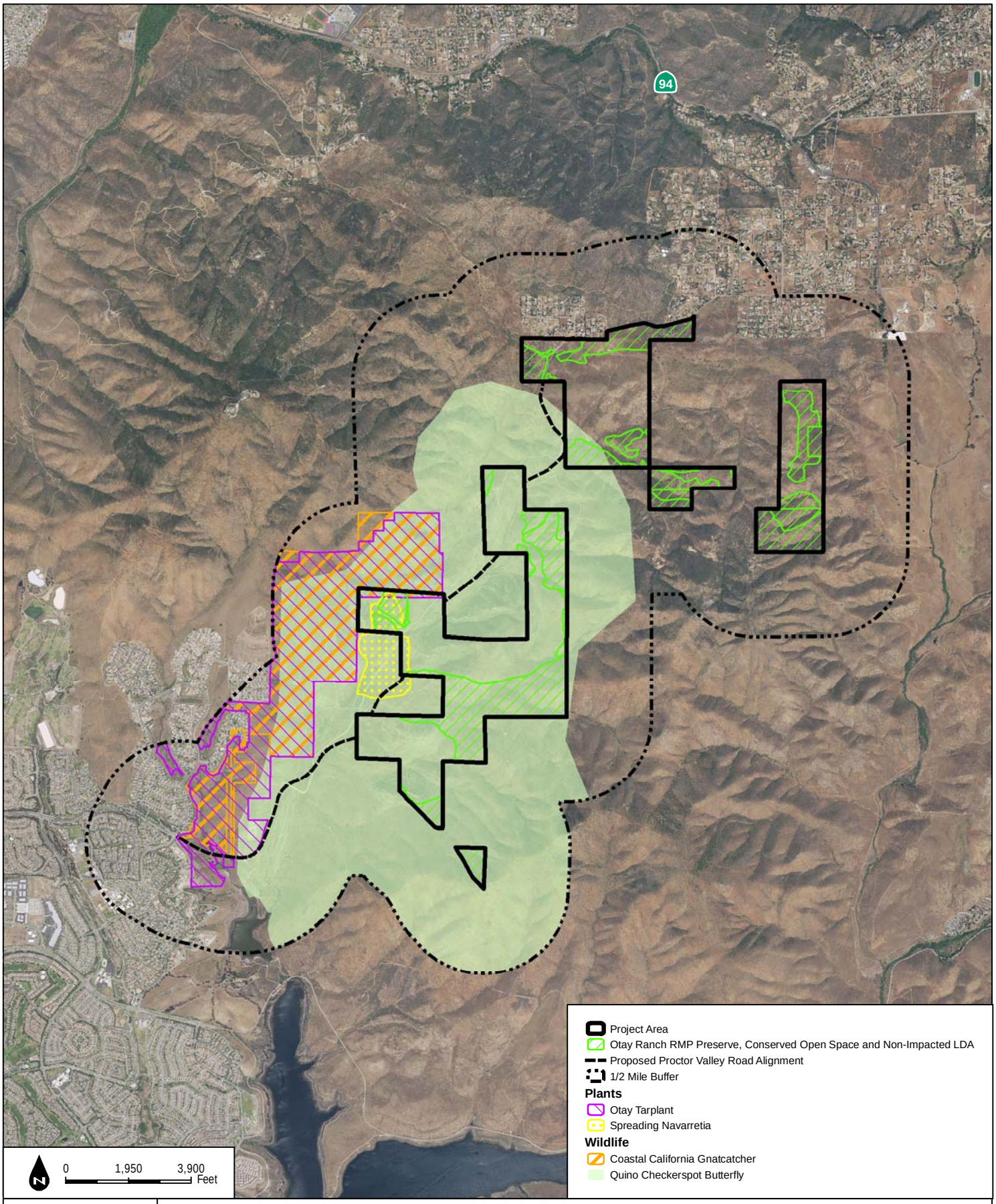
Spreading navarretia is federally listed as a threatened, state endangered, CRPR 1B.1, MSCP Covered, and County List A species. This annual herb is often found in ditches and other artificial depressions, which often occur in degraded vernal pool habitat. Its typical bloom period is between April and June and it occurs on elevations ranging from sea level to 4,250 feet amsl. There is no spreading navarretia found within the Otay Ranch RMP Preserve, Conserved Open Space or non-graded LDA; however, 17 acres of critical habitat is designated by the U.S. Fish and Wildlife Service (USFWS) for this species in the southwest portion of the Otay Ranch RMP Preserve within Village 14 (Figure 2-2, Critical Habitat).

San Diego Barrel Cactus (*Ferocactus viridescens*), List B, MSCP Covered Species

San Diego barrel cactus is a CRPR 2B.1, MSCP Covered, and County List B species. This succulent is located at elevations less than 1,500 feet within chaparral, coastal scrub, valley and foothill grasslands and sometimes vernal pools. This species blooms from May to July. Two San Diego barrel cacti were observed within the Otay Ranch RMP Preserve in Village 14 (Figures 2-1 and 2-1A through 2-1U).

San Diego Marsh-Elder (*Iva hayesiana*), List B

San Diego marsh-elder is a CRPR 2B.2 and County List B species. It occurs within marshes and swamps as well as playas at elevations ranging from 30 to 1,650 feet amsl. This perennial herb blooms from April to November. Population estimates for this species' occurrence within the Otay Ranch RMP Preserve, Conserved Open Space, and non-graded LDA are approximately 1,619 individuals. This species was observed commonly throughout Village 14 and Planning Area 16 in the Otay Ranch RMP Preserve, Conserved Open Space, and non-graded LDA within areas mapped as cismontane alkali marsh or other riparian vegetation, and in ephemeral channels (Figures 2-1 and 2-1A through 2-1U).



SOURCE: NAIP 2016; Hunsaker 2017; USFWS 2016

FIGURE 2-2

Critical Habitat

DUDEK

Otay Ranch Village 14 and Planning Areas 16/19 - Preserve Status Report

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

Munz's sage is a CRPR 2B.2 and County List B species. This perennial evergreen shrub typically blooms from February to April. It occurs in chaparral and coastal scrub habitat types, at elevations of 394–3,494 feet amsl (CNPS 2016). Munz's sage is a common species in some of the coastal sage scrub and chamise chaparral communities within the Project Area. Although not all *Salvia* individuals could be identified to species due to the timing of the rare plant surveys, approximately 6,464 individuals were confirmed as Munz's sage. The majority of Munz's sage, totaling 4,052individuals, occurs throughout the Otay Ranch RMP Preserve in Planning Area 16 (3,265 individuals) and Village 14 (787 individuals), with other populations in Conserved Open Space, and non-graded LDA (Figures 2-1 and 2-1A through 2-1U).

San Diego Sagewort (*Artemisia palmeri*), List D

San Diego sagewort, a CRPR 4.2 and County List D species, occurs in a variety of vegetation communities including chaparral, coastal scrub, riparian forest, scrub and woodland, at elevations ranging from 50 to 3,000 feet amsl. This deciduous shrub blooms from May to September. One occurrence of this species, totaling four individuals, was observed within the Otay Ranch RMP Preserve in Planning Area 16, and there are eight individuals within the non-graded LDA.

Southwestern Spiny Rush (*Juncus acutus* ssp. *leopoldii*), List D

Southwestern spiny rush is a CRPR 4.2 and County List D species found within mesic coastal dunes, meadows and alkali seeps, and coastal saltwater marshes and swamps. The typical blooming period for this rhizomatous herb is between May and June, and it occurs at elevations less than 3,000 feet amsl. Approximately 480 individuals of southwestern spiny rush were observed within the Otay Ranch RMP Preserve in Planning Areas 16, and 12 individuals within the Conserved Open Space in Planning Area 16 generally within cismontane alkali marsh, other riparian vegetation, and ephemeral channels.

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

Golden-rayed pentachaeta is a CRPR 4.2 and County List D species found at elevations of 260 to 6,070 feet amsl within a variety of vegetation communities, including chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, and riparian woodland, as well as valley and foothill grassland. This annual herb typically blooms between March and July. Approximately 6,248 individuals were recorded within the non-graded LDA and 10 individuals occurring the Otay Ranch RMP Preserve in Village 14.

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

Ashy spike-moss is a CRPR 4.1 and County List D species. This perennial rhizomatous herb occurs in chaparral and coastal scrub at elevations of 66 to 2,100 feet amsl. Ashy spike-moss was observed within throughout portions of the Project Area but due to its low ranking, only locations (not population numbers) for this species were recorded. The extent of occurrences were mapped; however, due to the difficulty of discerning individuals, populations were not counted. Occurrences of ashy spike-moss in Village 14 total 0.15 acres within the Otay Ranch RMP Preserve and 0.05 acres of the Conserved Open Space. A total of 2.73 acres were mapped within Planning Area 16, including in the Otay Ranch RMP Preserve (1.15 acres), Conserved Open Space (0.36 acres), and non-graded LDA (1.22 acres).

San Diego County Viguiera (*Bahiopsis laciniata*), List D

San Diego County viguiera is a CRPR 4.2 and County List D species. This shrub is found at elevations ranging from 200 to 2,460 feet amsl in chaparral and coastal scrub. This species typically blooms from February to June. San Diego County viguiera occurs as a common shrub in some of the coastal sage scrub within the Project Area as well as throughout other vegetation communities. Due to its low ranking and common observations within the Project Area, only locations and approximate populations within the Village 14 Development Area were recorded. A total of approximately 11,869 individuals were recorded mostly within the Planning Area 16 Otay Ranch RMP Preserve (7,225 individuals) with additional populations recorded in Conserved Open Space (434 individuals) and non-graded LDA (3,610 individuals). Approximately 600 individuals were recorded in the Village 14 Otay Ranch RMP Preserve.

San Diego County Needle Grass (*Stipa [=Achnatherum] diegoensis*), List D

San Diego County needle grass is a CRPR 4.2 and County List D species. This perennial grass occurs in chaparral and coastal sage scrub at elevations less than 7,480 feet amsl. This species typically blooms from February to June. San Diego County needle grass was observed during 2017 focused plant surveys within chaparral and coastal sage scrub communities. Locations were mapped within the Planning Area 16 Otay Ranch RMP Preserve (27 individuals) and non-graded LDA (80 individuals).

3.1.2 Special-Status Plant Species With a Moderate Potential to Occur

Plant species with a moderate potential to occur within the Otay Ranch RMP Preserve, Conserved Open Space, and non-graded LDA include small-flowered microseris (*Microseris douglasii* ssp. *platycarpha*), little mousetail (*Myosurus minimus* ssp. *apus*), and chaparral ragwort (*Senecio aphanactis*) (Table 5). The potential-to-occur determination is based on

elevation, habitat, and soils present within the Project Area and Dudek's knowledge of biological resources in the area and regional distribution of each species. Species that have moderate or high potential to occur within the Otay Ranch RMP Preserve, Conserved Open Space, and non-graded LDA are described in more detail in Table 5.

Table 5
Special-Status Plant Species That Have Moderate Potential to Occur within the Otay Ranch RMP Preserve, Conserved Open Space, and/or Non-Graded LDA

Species	Status (Federal/ State/CRPR / MSCP South County / County)	Primary Habitat Associations/Life Form / Blooming Period/ Elevation Range	Potential to Occur
Small-flowered microseris (*Microseris douglasii* ssp. *platycarpha*)	None/None/4.2/ None/List D	Cismontane woodland, coastal scrub, valley and foothill grassland, vernal pools; clay/annual herb/March–May/50–3,500 feet amsl	This has been recorded in the vicinity (CNPS 2016; SDNHM 2016). There is suitable habitat within the Preserve areas; however, this inconspicuous annual species was not detected during the focused plant surveys.
Little mousetail (*Myosurus minimus* ssp. *apus*)	None/None/3.1/ Covered/List C	Vernal pools, valley and foothill grassland; alkaline/annual herb/March–June/60–2,100 feet amsl	This species is recorded adjacent to Proctor Valley Road near the Project Area (CDFW 2017) and there is suitable habitat within Preserve areas; however, it was not detected during focused plant surveys. Therefore, it is considered to have a moderate potential to occur on site.
Chaparral ragwort (*Senecio aphanactis*)	None/None/2B.2/ None/List B	Chaparral, cismontane woodland, coastal scrub/sometimes alkaline/annual herb/ January–April/50–2,625 feet amsl	This species is recorded within the vicinity (CNPS 2016; CDFW 2016b), including the Jamul Mountains quadrangle. There is suitable habitat within the Preserve areas. This early-blooming annual species may not have been detected during focused surveys given the timing of its bloom period.

3.1.3 Anticipated Conservation Levels for Special-Status Plant Species

The RMP provides a summary of the distribution of special-status plant species within Otay Ranch. Policy 2.7 of the RMP outlines standards of preservation of various plant species while Table 5 of the RMP provides a summary value of how well the RMP Preserve protects each species afforded coverage by the RMP. The value of preservation is expressed in percentages, which the RMP states is a "subjective assessment of the overall quality and quantity of the on-site population(s) of each species that is incorporated into the Preserve. It is primarily a measure of the percentage of the area of the Otay Ranch distribution of each species included in the Preserve" (City of Chula Vista and County of San Diego 1993b). A total of 85 plant and animal

species are "covered" by the MSCP Plan. With approval of each Subarea Plan and corresponding implementing agreement, each participating local jurisdiction received permits and/or management authorized to directly impact or "take" MSCP Covered Species. The Covered Species include species listed as endangered or threatened by the federal or state Endangered Species Acts, as well as unlisted species. Table 3-4a in the MSCP Plan provides a list of the MSCP Covered plant species. Table 3-5 in the MSCP Plan includes specific conditions required for take authorizations as well as the conservation level anticipated for each Covered Species. Table 6 provides the RMP and MSCP Plan anticipated conservation levels for each special-status plant species observed within the Otay Ranch RMP Preserve and the Proposed Project's contribution to the preservation of the species.

Table 6
Otay Ranch RMP and MSCP Anticipated Conservation Levels for Special-Status Plant Species

Species Scientific Name/ Common Name	Regulatory Status: Federal/ State/ MSCP Coverage CRPR	Otay Ranch RMP	MSCP Table 3-5	Project Preservation
County List A				
Arctostaphylos otayensis Otay manzanita	None None Covered 1B.2	The RMP Ranch-wide standard included in the Preserve a minimum of 75% of known occurrences.	The MSCP provides coverage for this species because it places 100% of the major populations into the Preserve.	The Proposed Project would conserve 100% of the populations within the Otay Ranch RMP Preserve.
Bloomeria clevelandii San Diego goldenstar	None None 1B.1 Covered	The RMP Ranch-wide standard included in the Preserve a minimum of 54% of known points of occurrence. The RMP anticipated 54% of known Otay Ranch populations of this species to be retained in the Preserve.	The MSCP provides coverage for this species because the plan would place into the Preserve 8 of 11 major populations (72%), 125 of 144 occurrences (86%), and 38% of the grassland vegetation community.	The Proposed Project would preserve 84% of the existing population observed within the Project Area, which would contribute to the overall preservation of this species.
Calochortus dunnii Dunn's mariposa-lily	None SR 1B.2 Covered	The RMP Ranch-wide standard included in the Preserve a minimum of 100% of known occurrences.	The MSCP provides coverage for this species because it places 100% of the major populations into the Preserve.	The Proposed Project would preserve 100% of the existing population within the Otay Ranch RMP Preserve and would also preserve one individual in Conserved Open Space.
Clarkia delicata delicate clarkia	None None	The RMP Ranch-wide standard included in the	This species is not a Covered Species.	The Proposed Project would preserve 100%

Table 6
Otay Ranch RMP and MSCP Anticipated Conservation Levels for Special-Status Plant Species

Species Scientific Name/ Common Name	Regulatory Status: Federal/ State/ MSCP Coverage CRPR	Otay Ranch RMP	MSCP Table 3-5	Project Preservation
	Not Covered 1B.2	Preserve a minimum of 75% of Otay Ranch populations of this species. Table 5 of the RMP indicates 75% of the Otay Ranch populations of this species retained in the Preserve.		of the existing population observed within the Otay Ranch RMP Preserve.
Clinopodium chandleri San Miguel savory	None None Covered 1B.2	The RMP Ranch-wide standard included in the Preserve a minimum of 50% of known occurrences.	The MSCP provides coverage for this species because it places 100% of the major populations into the Preserve.	The Proposed Project would preserve 100% of the existing population observed within the Otay Ranch RMP Preserve.
Dudleya variegata Variegated dudleya	None None Covered, Narrow Endemic 1B.2	The RMP Ranch-wide standard included in the Preserve a minimum of 75% of Otay Ranch populations of variegated dudleya (See Policy 2.7 of the RMP).	This MSCP provides coverage for this species because it places into the Preserve 56% of major populations and 75% of known localities. This species is on the MSCP's list of narrow endemics and therefore participating jurisdictions must specify in their Subarea Plans additional conservation measures for the species.	This species was not observed within the Otay Ranch RMP Preserve but was observed within Development Footprint. To compensate for project related impacts to this narrow endemic species, the existing populations of this species within the Development Footprint would be translocated to the Otay Ranch RMP Preserve and additional individuals would be planted to achieve a 3:1 Otay Ranch RMP Preserve mitigation to impact ratio (105:35 individuals).
Lepechinia ganderi Gander's pitcher sage	None None Covered, Narrow Endemic 1B.3	The RMP Ranch-wide standard included in the Preserve a minimum of 75% of known occurrences.	The MSCP provides coverage for this species because it places 100% of the major populations into the Preserve.	The Proposed Project would preserve 100% of the existing population observed within the Otay Ranch RMP Preserve.

Table 6
Otay Ranch RMP and MSCP Anticipated Conservation Levels for Special-Status Plant Species

Species Scientific Name/ Common Name	Regulatory Status: Federal/ State/ MSCP Coverage CRPR	Otay Ranch RMP	MSCP Table 3-5	Project Preservation
Lepidium virginicum var. *robinsonii* Robinson's pepper-grass	None None Not Covered 4.3	N/A	This species is not a Covered Species.	The Proposed Project would conserve 3% of the populations observed within the Project Area.
Navarretia fossalis Spreading navarretia	FT None Covered 1.B	The RMP Ranch-wide standard included in the Preserve a minimum of 100% of known occurrences.	The MSCP provides coverage for this species because the plan would place into the Preserve 17.0 acres of 32.5 acres of USFWS designated critical habitat for this species (52%).	This species was not observed within the Project Area. Critical habitat for this species would be included within the Otay Ranch RMP Preserve (16 acres).
County List B				
Ferocactus viridescens San Diego barrel cactus	None None Covered 2.1	The RMP Ranch-wide standard included in the Preserve a minimum of 75% of Otay Ranch populations of this species. Table 5 of the RMP indicates 75% of the Otay Ranch populations of this species would be retained in the Preserve.	The MSCP provides coverage for this species because it places 81% of major populations into the Preserve.	The Proposed Project would conserve 5% of the populations observed within the Project Area (all populations within the Preserve are preserved). To compensate for project related impacts, the existing populations of this species within the Development Footprint would be translocated to the Otay Ranch RMP Preserve and additional individuals would be planted to achieve a 2:1 mitigation to impact ratio (96:48 individuals).
Iva hayesiana San Diego marsh-elder	None None Not Covered 2B.2	The RMP Ranch-wide standard included in the Preserve a minimum of 75% of Otay Ranch populations of this species. Table 5 of the RMP indicates 75% of	This species is not a Covered Species.	The Proposed Project would conserve 29% of the populations observed within the Project Area, which would contribute to the

Table 6
Otay Ranch RMP and MSCP Anticipated Conservation Levels for Special-Status Plant Species

Species Scientific Name/ Common Name	Regulatory Status: Federal/ State/ MSCP Coverage CRPR	Otay Ranch RMP	MSCP Table 3-5	Project Preservation
		the Otay Ranch populations of this species retained in the Preserve.		Ranch-wide preservation of the species. Additional mitigation would be provided at a 1:1 ratio for 1,024 individuals. It is expected that these individuals would be mitigated within temporarily impacted areas of the Otay Ranch RMP Preserve.
Salvia munzii Munz's sage	None None Not Covered 2B.2	The RMP Ranch-wide standard included in the Preserve a minimum of 46% of Otay Ranch populations of this species. Table 5 of the RMP indicates 46% of the Otay Ranch populations of this species retained in the Preserve.	This species is not a Covered Species.	The Proposed Project would conserve 36% of the populations observed within the Project Area, which would contribute to the Ranch-wide preservation of the species.
County List D				
Artemisia palmeri San Diego sagewort	None None Not Covered 4.2	The RMP Ranch-wide standard included in the Preserve a minimum of 75% of Otay Ranch populations of this species. Table 5 of the RMP indicates 90-100% of the Otay Ranch populations of this species retained in the Preserve.	This species is not a Covered Species.	The Proposed Project would conserve 75% of the populations observed within the Project Area.
Juncus acutus ssp. *leopoldii* Southwestern spiny rush	None None Not Covered List 4.2	The RMP Ranch-wide standard included in the Preserve a minimum of 50% of Otay Ranch populations of this species. Table 5 of the RMP indicates 70%–80% of the Otay Ranch populations of this species retained in the Preserve.	This species is not a Covered Species.	The Proposed Project would conserve 87% of the populations observed within the Project Area.

Table 6
Otay Ranch RMP and MSCP Anticipated Conservation Levels for Special-Status Plant Species

Species Scientific Name/ Common Name	Regulatory Status: Federal/ State/ MSCP Coverage CRPR	Otay Ranch RMP	MSCP Table 3-5	Project Preservation
Pentachaeta aurea ssp. *aurea* Golden-rayed pentachaeta	None None Not Covered List 4.2	This species is not included in the Otay Ranch RMP.	This species is not a Covered Species.	The Proposed Project would conserve 50% of the populations observed within the Project Area.
Selaginella cinerascens Ashy spike-moss	None None Not Covered List 4.1	The RMP Ranch-wide standard included in the Preserve a minimum of 50% of Otay Ranch populations of this species. Table 5 of the RMP indicates 70%–80% of the Otay Ranch populations of this species retained in the Preserve.	This species is not a Covered Species.	The Proposed Project would conserve 45% of the populations observed within the Project Area.
Viguiera laciniata San Diego County viguiera	None None Not Covered List 4.2	The RMP Ranch-wide standard included in the Preserve a minimum of 75% of Otay Ranch populations of this species. Table 5 of the RMP indicates 75% of the Otay Ranch populations of this species retained in the Preserve.	This species is not a Covered Species.	The Proposed Project would conserve 64% of the populations observed within the Project Area, which would contribute to the Ranch-wide preservation of the species.
Stipa [=Achnatherum] diegoensis San Diego County needle grass	None None Not Covered 4.2	The RMP Ranch-wide standard included in the Preserve a minimum of 75% of known occurrences.	This species is not a Covered Species.	The Proposed Project would conserve 64% of the populations observed within the Project Area.

3.2 Special-Status Wildlife Species

The County of San Diego divides special-status wildlife species into County Group 1 and County Group 2 based on the species' rarity and known threats (County of San Diego 2010). County Group 1 species include those that have a high level of sensitivity, are listed as threatened or endangered, or have a natural history requirement that increases their sensitivity. County Group 2 species include those that are becoming less common, although not so rare that extinction is imminent without immediate action. The CDFW assigns Species of Special Concern (SSC)

statuses to species whose population levels are declining, have limited ranges, and/or are vulnerable to extinction due to continuing threats (CDFW 2017). In addition, Fully Protected (FP) species are protected by the CDFW and Watch List (WL) species are candidates for higher sensitive statuses. USFWS provides the Bird of Conservation Concern (BCC) status to migratory and non-migratory bird species that adhere to the 1988 amendment to the Fish and Wildlife Conservation Act that mandates the USFWS to "identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act (ESA) of 1973" (USFWS 2008).

3.2.1 Special-Status Wildlife Species Observed

Special-status wildlife species directly observed within the Otay Ranch RMP Preserve include the following MSCP Covered, and/or County Group 1 species: Cooper's hawk (*Accipiter cooperii*), Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), grasshopper sparrow (*Ammodramus savannarum*), golden eagle (*Aquila chrysaetos*), red-shouldered hawk (*Buteo lineatus*), northern harrier (*Circus cyaneus*), loggerhead shrike (*Lanius ludovicianus*), coastal California gnatcatcher, San Diego fairy shrimp (*Branchinecta sandiegonensis*), mule deer (*Odocoileus hemionus*), American badger (*Taxidea taxus*; burrow only), Blainville's horned lizard (*Phrynosoma blainvillii*), long-eared owl (*Asio otus*), and white-tailed kite (*Elanus leucurus*). MSCP Covered, and/or County Group 1 species, coastal California gnatcatcher, was also observed within the Conserved Open Space and non-graded LDA.

Additional special-status wildlife species observed within the Otay Ranch RMP Preserve include western spadefoot (*Spea hammondii*), California horned lark (*Eremophila alpestris actia*), barn-owl (*Tyto alba*), yellow warbler (*Setophaga petechia*), monarch (*Danaus plexippus*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), San Diegan tiger whiptail (*Aspidoscelis tigris stejnegeri*), and rosy boa (*Lichanura trivirgata*). Species also observed within the Conserved Open Space and non-graded LDA include: San Diego black-tailed jackrabbit and San Diegan tiger whiptail. The location of the populations, within either the Otay Ranch RMP Preserve, Conserved Open Space and/or non-graded LDA, for each observed species is described below and shown on Figures 2-1 and 2-1A through 2-1U.

Amphibians and Reptiles

San Diegan Tiger Whiptail* (Aspidoscelis tigris stejnegeri), *SSC/County Group 2

The San Diegan tiger whiptail is a SSC and County Group 2 species. It is found in coastal Southern California, mostly west of the Peninsular Ranges and south of the Transverse Ranges, north into Ventura County, and south into Baja California, Mexico (Lowe et al. 1970; Stebbins 2003).

The tiger whiptail (*A. tigris*) is found in a variety of habitats, primarily in areas where plants are sparse and there are open areas for running. According to Stebbins (2003), the species ranges from deserts to montane pine forests where it prefers warmer and drier areas. The species is also found in woodland and streamside growth, and it avoids dense grassland and thick shrub growth.

San Diegan tiger whiptail was observed during surveys in the east/central portion of the Project Area, within the Development Footprint, adjacent to Conserved Open Space (Figures 2-1 and 2-1A through 2-1U). There is suitable habitat, including open scrub and chaparral, and termite food sources observed in the Otay Ranch RMP Preserve and therefore there is a high potential for this species to occur in the Otay Ranch RMP Preserve.

Red Diamondback Rattlesnake* (Crotalus ruber), *SSC/County Group 2

The red diamondback rattlesnake is a SSC and County Group 2[1] species. It is found in a variety of habitats from the coast to the deserts, from San Bernardino County into Baja California, Mexico (below 5,000 feet amsl). It commonly occurs in rocky areas within coastal sage scrub, chaparral, juniper woodlands, and desert habitats, but can also be found in areas devoid of rocks (Lemm 2006).

Red diamondback rattlesnake was observed once within Otay Ranch RMP Preserve in Planning Area 16, outside of the Project Area during focused burrowing owl surveys. There is suitable habitat in the Otay Ranch RMP Preserve within the vegetation communities with rocky outcroppings (Figures 2-1 and 2-1A through 2-1U).

Blainville's Horned Lizard* (Phrynosoma blainvillii), *SSC/MSCP Covered Species/ County Group 2

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

[1] The County of San Diego's biology guidelines refer to this species as northern red diamond rattlesnake (*Crotalus ruber ruber*); species names in this report follow the naming conventions described in Section 3.2.2.

December. Up to 90% of the diet of the Blainville's horned lizard consists of native harvester ants (*Pogonomyrmex* spp.).

Blainville's horned lizard was observed several times during surveys and there is suitable habitat throughout open areas in coastal sage scrub and chaparral communities (Figures 2-1 and 2-1A through 2-1U). Two occurrences were identified within the adjacent Preserve, and it is likely that this species would occur within or utilize the Otay Ranch RMP Preserve and other available open space. In addition, the presence of harvester ants observed within the Project Area would provide a food source for this species.[2]

Western Spadefoot* (Spea hammondii), *SSC/County Group 2

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

The western spadefoot is almost completely terrestrial, entering temporary pools and drainages only to breed. This species aestivates in upland habitats near potential breeding sites in burrows approximately 1 meter (3 feet) in depth (Stebbins 1972). This species prefers open areas with sandy or gravelly soils in a variety of habitats, including mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, river floodplains, alluvial fans, playas, and alkali flats (Stebbins 2003; Holland and Goodman 1998). However, the species is most common in grasslands with vernal pools or mixed grassland/coastal sage scrub areas (Holland and Goodman 1998).

Western spadefoot tadpoles were found in a vernal pool in the Otay Ranch RMP area during fairy shrimp surveys and because of this observation, focused surveys for this species were conducted in 2017 (Figures 2-1 and 2-1A through 2-1U). The vernal pool (identified as B2) also contains San Diego fairy shrimp and is located within the Village 14 Otay Ranch RMP Preserve, outside of the Project Area. In addition, there are two locations within the Otay Ranch RMP Preserve in Planning Area 16 (A27 and D6) as well as four locations within Conserved Open Space in Planning Area 19 (A22, A23, D23, and D5).

[2] Harvester ants are a primary source of food for Blainville's horned lizards (Nafis 2014).

Birds

Coastal California Gnatcatcher (**Polioptila californica californica**)**,** ***Federally Threatened/SSC/MSCP Covered Species/County Group 1***

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

Coastal California gnatcatcher typically occurs in or near coastal scrub vegetation that is composed of relatively low-growing, dry-season deciduous and succulent plants. Characteristic plants of this community include coastal sagebrush, various species of sage, Eastern Mojave buckwheat, lemonade sumac (*Rhus integrifolia*), California brittlebush (*Encelia californica*), and cactus (e.g., *Opuntia* spp.). Coastal California gnatcatchers also occur in chaparral, grassland, and riparian vegetation communities where the coastal scrub community is close by (Bontrager 1991). The use of these vegetation communities appears to be most frequent during late summer, autumn, and winter, with smaller numbers of birds using such areas during the nesting season. The coastal California gnatcatcher tends to occur most frequently in the coastal sagebrush-dominated stands on mesas, gently sloping areas, and along the lower slopes of the Coast Ranges (Atwood 1990). The coastal California gnatcatcher occurs in high frequencies and densities in coastal scrub communities with an open or broken canopy, whereas it is absent from coastal scrub dominated by tall shrubs and occurs in low frequencies and densities in low coastal scrub with a closed canopy (Weaver 1998).

Coastal California gnatcatchers glean insects and spiders from foliage of shrubs, primarily Eastern Mojave buckwheat and coastal sagebrush (Atwood 1993). Their diet is primarily composed of spiders, but is also composed of wasps, bees, and ants (Burger et al. 1999). Coastal

California gnatcatcher habitat use has been positively associated with insect abundance and diversity (Redak et al. 1996, as cited in Diffendorfer et al. 2002).

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

Focused surveys for coastal California gnatcatcher resulted in the detection of three pairs for a total of six gnatcatchers observed within the southern portion of the Village 14 Otay Ranch RMP Preserve (Figures 2-1 and 2-1A through 2-1U). All pairs were observed in coastal sage scrub communities. USFWS-designated critical habitat for coastal California gnatcatcher overlaps a very small portion Otay Ranch RMP Preserve in Village 14 northwest of Proctor Valley Road (Figure 2-2).

Golden Eagle (**Aquila chrysaetos**)***, BCC/WL; FP/MSCP Covered Species/County Group 1***

Golden eagle is a BCC, WL, FP, MSCP Covered, and County Group 1 species. In addition, the golden eagle is protected under the federal Bald and Golden Eagle Protection Act. As a state-fully protected species, take may only occur pursuant to scientific research or in connection with an authorized NCCP, such as the County's MSCP. The golden eagle is a yearlong, diurnally active species that is a permanent resident and migrant throughout California. Golden eagles are more common in northeast California and the Coast Ranges than in Southern California and the deserts. In Southern California, the species tends to occupy mountain, foothill, and desert habitats. Foraging habitat for this species includes open habitats with scrub, grasslands, desert communities, and agricultural areas. This species nests on cliffs within canyons and escarpments and in large trees (generally occurring in open habitats) and occurs primarily in rugged, topographically complex landscapes (Garrett and Dunn 1981; Johnsgard 1990). Most nests are located on cliffs or trees near forest edges, in trees within woodland savannas, or in small stands near open habitats (Kochert et al. 2002). Nest locations tend to be more closely associated with topographic heterogeneity than with a particular vegetation type (Call 1978).

Nest building can occur almost any time during the year. This species nests on cliffs, rock outcrops, large trees, and artificial structures such as electrical transmission towers, generally near open habitats used for foraging (Garrett and Dunn 1981; Scott 1985; Johnsgard 1990; Kochert et al. 2002). Golden eagles commonly build, maintain, and variably use multiple alternative nest sites in their breeding territories, routinely refurbishing and reusing individual nests over many years. Generally, the nests are large platforms composed of sticks, twigs, and greenery that are often 3 meters (10 feet) across and 1 meter (3 feet) high (Zeiner et al. 1990a).

Pairs may build more than one nest and tend multiple nests prior to laying eggs (Kochert et al. 2002). Each pair can have up to a dozen nests, especially in cliff nesting habitat where nests persist for longer than they do in trees, but generally only two to three nests are used in rotation from one year to the next. Some pairs use the same nest each year, whereas others use different alternative nests more regularly. Succeeding generations of eagles may even use the same nest (Terres 1980, as cited in CPUC and BLM 2011).

In California, golden eagles breed from January through August, with peak breeding activity occurring from February through July. Breeding typically begins in January with courtship and nest building, and egg laying typically occurs in February and March (Brown 1976; WRI 2010, as cited in CPUC and BLM 2011). Golden eagles typically lay one to three eggs, which they incubate for 43 to 45 days (Beebe 1974). The hatching and feeding of nestlings takes place from March through June. After their young fledge, the adult eagles may continue to feed the young birds for several months (WRI 2010, as cited in CPUC and BLM 2011). In the prey-rich oak woodland and savannah habitats of the California Coast Ranges, established golden eagle breeding pairs typically nest in most years (Hunt et al. 1999; Hunt and Hunt 2006); however, the long breeding cycle may contribute to some pairs breeding only every other year even when food is abundant (WRI 2010, as cited in CPUC and BLM 2011). In other situations, where overall ecosystem productivity is lower or more variable from year to year, pairs need to range farther in search of food and may not nest every year because of the energetic demands of securing dispersed prey (Kochert et al. 2002).

Lagomorphs (rabbits and hares) and ground squirrels are of primary importance in the diet of most golden eagles, including in San Diego County, but their diet may include a wide variety of other mammals, reptiles, and birds, and frequently includes carrion, especially during winter (Olendorff 1976; Johnsgard 1990; Kochert et al. 2002).

This species has been observed flying throughout the Otay Ranch RMP Preserve and is likely to use all areas of open habitat within the Otay Ranch RMP Preserve for foraging. The Otay Ranch RMP Preserve within Village 14 or Planning Areas 16/19 is not known to support golden eagle nesting sites. The nests within the closest known territory, the Rancho San Diego territory (or San Miguel Mountain territory), were destroyed during 2000 and 2007 (USFWS 2014; WRI 2010). Two artificial nesting platforms were constructed in the same region and have not been successful at supporting golden eagles (USFWS 2014). Both the natural nests and the artificial nesting platforms are located outside of the Project Area including the open space, which would remain after development. More recently, eagle specialists from H.T. Harvey surveyed the Project Area and surrounding area in the 2016 and 2017 breeding seasons, including the locations of the former San Miguel Mountain nest site and the artificial nest platforms installed by USFWS and the Bureau of Land Management (BLM) (H.T. Harvey 2017). Through those

surveys, H.T. Harvey did not locate any nests, nor did H.T. Harvey observe any eagles displaying courtship or pre-nesting behavior within the San Miguel, Jamul or Proctor Valley areas (H.T. Harvey 2017). Golden eagles observed in the area or tracked by USGS were considered transient adult and subadult that occur seasonally or periodically in these areas (H.T. Harvey 2017).

White-Tailed Kite (**Elanus leucurus**)***, FP/County Group 1***

White-tailed kite is a FP and County Group 1 species. White-tailed kite occurs mainly in lowlands of southern and northwestern cismontane California in savannah, open woodland, marshes, cultivated fields, and partially cleared lands (Zeiner et al. 1990a). White-tailed kites hunt in the morning and late afternoon for voles and mice, usually near farmlands. The kite is non-migratory but can be nomadic and dispersive in its movements and often occurs in communal roosts (Unitt 2004). Nests are made of piled sticks and twigs and placed near the tops of oak, willow, or other trees near marshes and foraging areas (Zeiner et al. 1990a).

White-tailed kite was observed once in November 2014 toward the east/central portion of the Village 14 Otay Ranch RMP Preserve (Figures 2-1 and 2-1A through 4-1U). There is suitable foraging habitat within the Otay Ranch RMP Preserve, (45 acres); and due to the Otay Ranch RMP Preserve's proximity to Sweetwater Reservoir, and Lower and Upper Otay Reservoirs where there is more suitable riparian woodland for nesting, this species likely forages in the Otay Ranch RMP Preserve occasionally. Foraging habitat consists of cismontane alkali marsh, eucalyptus woodland, mulefat scrub, oak riparian forest, and non-native grassland. Due to the lack of dense riparian or oak woodland within the Otay Ranch RMP Preserve, as well as lack of observations during the nesting season, this species is unlikely to nest within the Otay Ranch RMP Preserve.

Cooper's Hawk (**Accipiter cooperii**)***, WL/MSCP Covered Species/County Group 1***

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

A Cooper's hawk was observed flying overhead during biological surveys, but since much of the Project Area is likely used by this species, the observations were not mapped. There is some suitable nesting habitat in the southern willow scrub and eucalyptus within the Planning Areas

16/19 Otay Ranch RMP Preserve (Figures 2-1 and 2-1A through 2-1U). The Otay Ranch RMP Preserve supports nesting opportunities within habitats with trees.

Southern California Rufous-Crowned Sparrow (**Aimophila ruficeps canescens**)**,** ***WL/MSCP Covered Species/County Group 1***

Southern California rufous-crowned sparrow is a WL, MSCP Covered, and County Group 1 species. The current distribution of the Southern California rufous-crowned sparrow is restricted to a narrow belt of semiarid coastal sage scrub and sparse chaparral from Santa Barbara south to the northwestern corner of Baja California (Bent 1968; Collins 1999; Grinnell 1926; Grinnell and Miller 1944; Todd 1922; Unitt 1984; Zeiner et al. 1990a). The subspecies has also been found on San Martin Island. The Southern California rufous-crowned sparrow is considered a resident throughout its range. No true migratory movements have been recorded, though limited movements to lower elevations in some areas have been reported during especially severe winters (Collins 1999).

Southern California rufous-crowned sparrows were observed on several occasions within the northern portion of the Planning Area 19 Otay Ranch RMP Preserve in coastal sage scrub habitats during surveys (Figures 2-1 and 2-1A through 2-1U).

Grasshopper Sparrow (**Ammodramus savannarum**)**,** ***SSC/County Group 1***

Grasshopper sparrow is a SSC and County Group 1 species. In California, grasshopper sparrows breed (and primarily winter) on slopes and mesas containing grasslands of varying compositions (Garrett and Dunn 1981; Grinnell and Miller 1944). The species frequents dense, dry or well-drained grassland, especially native grassland with a mix of grasses and forbs for foraging and nesting. Grasshopper sparrows require fairly continuous native grassland areas with occasional taller grasses, forbs, or shrubs for song perches (Garrett and Dunn 1981). Grasshopper sparrows tend to avoid grassland areas with extensive shrub cover, and the presence of native grasses is less important than the absence of trees (County of Riverside 2008; Smith 1963).

Grasshopper sparrow was observed during surveys but the observations were not mapped. Given the habitat within the Otay Ranch RMP Preserve, Conserved Open Space, and non-graded LDA, it is likely that this species uses these areas.

Long-Eared Owl (**Asio otus**)**,** ***SSC/County Group 1***

Long-eared owl is a SSC and County Group 1 species. It is an uncommon yearlong resident throughout most of the state, with the exception of the Central Valley and Southern California desert regions, where is it generally a winter visitor (Zeiner et al. 1990a). Along the coastline of

Southern California, the long-eared owl may be a resident breeder (Bloom 1994; Marks et al. 1994) or a rare winter visitor (Garrett and Dunn 1981).

Long-eared owl primarily uses riparian habitat for roosting and nesting, but can also use live oak thickets and other dense stands of trees (Zeiner et al. 1990a). It appears to be more associated with forest edge habitat than with open habitat or forest habitat (Holt 1997). The species usually does not hunt in the woodlands where it nests, but in open areas such as fields, rangelands, and clearings. At higher elevations, the species is found in conifer stands that are usually adjacent to more open grasslands and shrublands (Marks et al. 1994). In California, long-eared owls also nest in dense or brushy vegetation amid open habitat (Bloom 1994). Long-eared owls have also been known to nest in caves, cracks in rock canyons, and in artificial wicker basket nests (Garner and Milne 1998; Marks et al. 1994).

Long-eared owl was observed once in November 2014 toward the southern portion of the Village 14 Otay Ranch RMP Preserve (Figures 2-1 and 2-1A through 2-1U). There are some breeding records in surrounding areas to the north (Unitt 2004). Due to the lack of dense riparian woodland or oak woodland within the open space areas, this species has low potential to nest.

Red-Shouldered Hawk* (Buteo lineatus), *County Group 1

Red-shouldered hawk is not considered special status by any state or federal agencies; however, it is a County Group 1 species. Red-shouldered hawks inhabit a broad range of North American forests, but favor mature, mixed deciduous–coniferous woodlands, especially bottomland hardwood, riparian areas, flooded deciduous swamps, oak woodlands, eucalyptus groves, and suburban areas with nearby woodlots (Dykstra et al. 2008). This species nests in riparian habitats near permanent water and forages along edges of wet meadows, swamps, and emergent wetlands (Zeiner et al. 1990a).

Red-shouldered hawk was detected within the Otay Ranch RMP Preserve but the observations were not mapped. Within the Otay Ranch RMP Preserve, there are no permanent water sources; however, ephemeral and intermittent sources are present. There is suitable foraging habitat throughout the Otay Ranch RMP Preserve. Nesting and foraging modeled habitat for this species includes chamise chaparral, disturbed chamise chaparral, disturbed habitat, eucalyptus woodland, oak riparian forest, and non-native grassland. The Otay Ranch RMP Preserve supports nesting opportunities within habitats with large trees.

Turkey Vulture* (Cathartes aura), *County Group 1

The turkey vulture is not considered special status by any state or federal agencies; however, it is considered a County Group 1 species. In California, it is common during the nesting season and

is a yearlong resident west of the Sierra Nevada, especially in coastal areas. Summer and yearlong ranges also include the southeastern United States; portions of Texas, Mexico, Central America, and South America; and some islands in the Caribbean (Kirk and Mossman 1998).

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

Turkey vulture was observed foraging throughout the Otay Ranch RMP Preserve during biological surveys, but the observations were not mapped. The Otay Ranch RMP Preserve does not support suitable cliffs and large trees for nesting, but there is suitable foraging habitat within the Otay Ranch RMP Preserve. Suitable foraging habitat includes most vegetation communities and undeveloped land cover.

Northern Harrier* (Circus cyaneus)*, SSC/MSCP Covered Species/County Group 1

Northern harrier is a SSC, MSCP Covered, and County Group 1 species. Northern harriers use a wide variety of open habitats in California including deserts, coastal sand dunes, pasturelands, croplands, dry plains, grasslands, estuaries, flood plains, and marshes (Macwhirter and Bildstein 2011). The species can also forage over coastal sage scrub or other open scrub communities. Nesting areas are associated with marshes, pastures, grasslands, prairies, croplands, desert shrub-steppe, and riparian woodland (Macwhirter and Bildstein 2011). Winter habitats similarly include a variety of open habitats dominated by herbaceous cover. Northern harrier populations are most concentrated in areas with low vegetation.

One northern harrier was observed foraging in the northern portion of the Planning Areas 16/19 Otay Ranch RMP Preserve (Figures 2-1 and 2-1A through 2-1U). Northern harriers are known to nest in Otay River, and there is suitable nesting habitat along Proctor Valley drainage; however, based on the low frequency of observations, this species is likely not currently nesting within the Otay Ranch RMP Preserve.

Loggerhead Shrike* (Lanius ludovicianus)*, BCC/SSC/County Group 1

Loggerhead shrike is a BCC, SSC, and County Group 1 species. It is found in lowlands and foothills throughout California, and it remains in the southern portion of the state year-round.

Preferred habitats for the loggerhead shrike are open areas that include scattered shrubs, trees, posts, fences, utility lines, or other structures that provide hunting perches with views of open ground, as well as nearby spiny vegetation or built structures (such as the top of chain-link fences or barbed wire) that provide means to skewer prey items. The species occurs most frequently in riparian areas along the woodland edge, grasslands with sufficient perch and butcher sites, scrublands, and open-canopied woodlands, although they can be quite common in agricultural and grazing areas; and they can sometimes be found in mowed roadsides, cemeteries, and golf courses, although they occur rarely in heavily urbanized areas (Zeiner et al. 1990a). Loggerhead shrikes build nests in stable shrubs or trees requiring dense foliage for well-concealed nests and likely nests in the Otay Ranch RMP Preserve.

Loggerhead shrike was observed within Village 14 on the eastern edge of the Otay Ranch RMP Preserve (Figures 2-1 and 2-1A through 2-1U).

Yellow Warbler* (Setophaga petechia)*, BCC/SSC/County Group 2

Yellow warbler inhabits riparian woodland in coastal and desert lowlands, montane chaparral, open ponderosa pine, and mixed conifer habitats (Zeiner et al. 1990a). This species breeds along the coast of California west of Sierra Nevada and along eastern California from Lake Tahoe south to Inyo County. The yellow warbler occurs in medium-density woodlands and forests with heavy brush understory and migrates to sparse to dense woodland and forest habitats.

Yellow warbler was observed foraging within Otay Ranch RMP Preserve in Planning Area 16. This species was observed during 2017 focused coastal California gnatcatcher surveys. The yellow warbler was not mapped because the bird was frequently moving and calling within sparse chaparral and was likely to be a migrant due to unsuitable nesting habitat.

Invertebrates

San Diego Fairy Shrimp* (Branchinecta sandiegonensis)*, Federally Endangered/County Group 1

San Diego fairy shrimp is a federally endangered and County Group 1 species.[3] In 2015 and 2016, focused surveys were conducted within the Study Area, which includes the Project Area and areas outside the Project Area along the existing segments of Proctor Valley Road. A total of

[3] The County's MSCP also identifies San Diego fairy shrimp as a Covered Species. However, a 2006 federal court decision invalidated the City of San Diego's MSCP coverage for fairy shrimp, and the County's MSCP includes similar coverage provisions for the species. For this reason, the County has taken the position that the MSCP, as written, does not provide take authorization coverage for San Diego fairy shrimp.

105 features were identified within the Study Area as potential suitable habitat for vernal pool branchiopods. Most of the features were located alongside or within existing dirt roads within the Study Area and are moderately disturbed in character. Many of the features detected show evidence of historical off-highway-vehicle disturbance (i.e., shaped like tire tracks). The features detected were road ruts (depressions that are typically formed by vehicular traffic within or immediately adjacent to roadways, generally lack aquatic vegetation, and are heavily disturbed by vehicular traffic), ephemeral basins (surface depressions that retain sufficient water level, support aquatic vegetation, and generally lack vehicle disturbance, or vernal pools (depressions that retain sufficient water level, support vernal pool indicator plant species, and support vernal pool branchiopods).

Of the 105 features surveyed, 15 supported either the non-special-status versatile fairy shrimp or the federally listed endangered San Diego fairy shrimp with an additional 11 containing immature fairy shrimp that were unidentifiable to species (i.e., *Branchinecta* sp.). During the focused fairy shrimp surveys conducted in 2014/2015 and 2015/2016, a total of 49 features (39 features in 2014/2015 and 10 features in 2015/2016) were identified as potential suitable habitat for vernal pool branchiopods within the Project Area. Within the Project Area, nine features were found to support fairy shrimp during the focused protocol surveys. Of these nine features, four features had San Diego fairy shrimp and were all characterized as road ruts (A22, A23, A27, and D4) (Figures 3-1A and 3-1B, Fairy Shrimp Survey Area and Results). Five of the features supported versatile fairy shrimp. Feature A27 is located within the Otay Ranch RMP Preserve and would remain in the Preserve following project development. The Development Footprint for the Proposed Project has been revised to avoid impacts to the other three features: A22, A23, and D4. These three features would remain within an area designated as Conserved Open Space.

Quino Checkerspot Butterfly (**Euphydryas editha quino**)*, Federally Endangered/County Group 1*

The Quino checkerspot butterfly is a FE and County Group 1 species. This species is found only in western Riverside County, southern San Diego County, and northern Baja California, Mexico (USFWS 2003). This species is found on sparsely vegetated hilltops, ridgelines, and occasionally on rocky outcrops in open chaparral and coastal sage scrub habitat (typically at less than 3,000 feet amsl). This species requires host plants within these vegetation communities for feeding and reproduction. The primary larval host plant is dotseed plantain; however, several other species have been documented as important larval host plants, including desert plantain, sometimes called woolly plantain (*Plantago patagonica*); thread-leaved bird's beak (*Cordylanthus rigidus*); white snapdragon (*Antirrhinum coulterianum*); owl's clover; and Chinese houses (*Collinsia* spp.) (USFWS 2003). USFWS-designated critical habitat for Quino checkerspot butterfly overlaps the majority of the Project Area. Although not observed within the Land Exchange Alternative, this

species is described in more detail herein because it has previously been recorded within the Proposed Project (CDFW 2016c; HELIX 2017; USFWS 2015).

HELIX biologists completed host plant mapping within the Otay Ranch RMP Preserve portion of the Project Area in 2016. A total of 2.3 acres of Quino checkerspot butterfly host plants were mapped within non-impacted portions of the Project Area (1.21 within Otay Ranch RMP Preserve and 1.08 within Conserved Open Space and 0.01 acre within non-graded LDA). Results are noted below:

- 60% of the host plant locations within the Otay Ranch RMP Preserve (55 points of the 92 locations) were mapped as low density (1–100 plants). Within non-graded LDA, 67% of the host plant locations were mapped as low density (2 points of the 3 locations). Within the Conserved Open Space, 65% of the host plant locations were mapped as low density (24 points of the 37 locations).
- 29% of the host plant locations within the Otay Ranch RMP Preserve (27 points and patches of the 92 locations) were mapped as medium density (100–1,000 plants). Within the non-graded LDA, 33% of the host plant locations were mapped as medium density (1 point of the 3 locations). Within the Conserved Open Space, 16% of the host plant locations were mapped as medium density (6 points of the 37 locations).
- 11% of the host plant locations within the Otay Ranch RMP Preserve (10 points and patches of the 92 locations) were mapped as high density (1,000–10,000 plants), as shown in Figure 3-1B. Within the Conserved Open Space, 19% of the host plant locations were mapped as high density (7 points and patches of the 37 locations). No high-density host plant locations were mapped within non-graded LDA.
- The high-density host plant locations (1,000–10,000 individuals) within the non-graded areas occurred within openings of coastal sage scrub and chaparral.

The majority of the host plant locations in the Otay Ranch RMP Preserve (84 of the 92 mapped locations; 91%) were small points ranging from a few square feet to 250 square feet. Of the 84 locations, the majority of those (78 of the 84 locations; 93%) were low density (1–100 plants) or medium density (100–1,000 plants), and most occurred within a matrix of chaparral and coastal sage scrub communities.

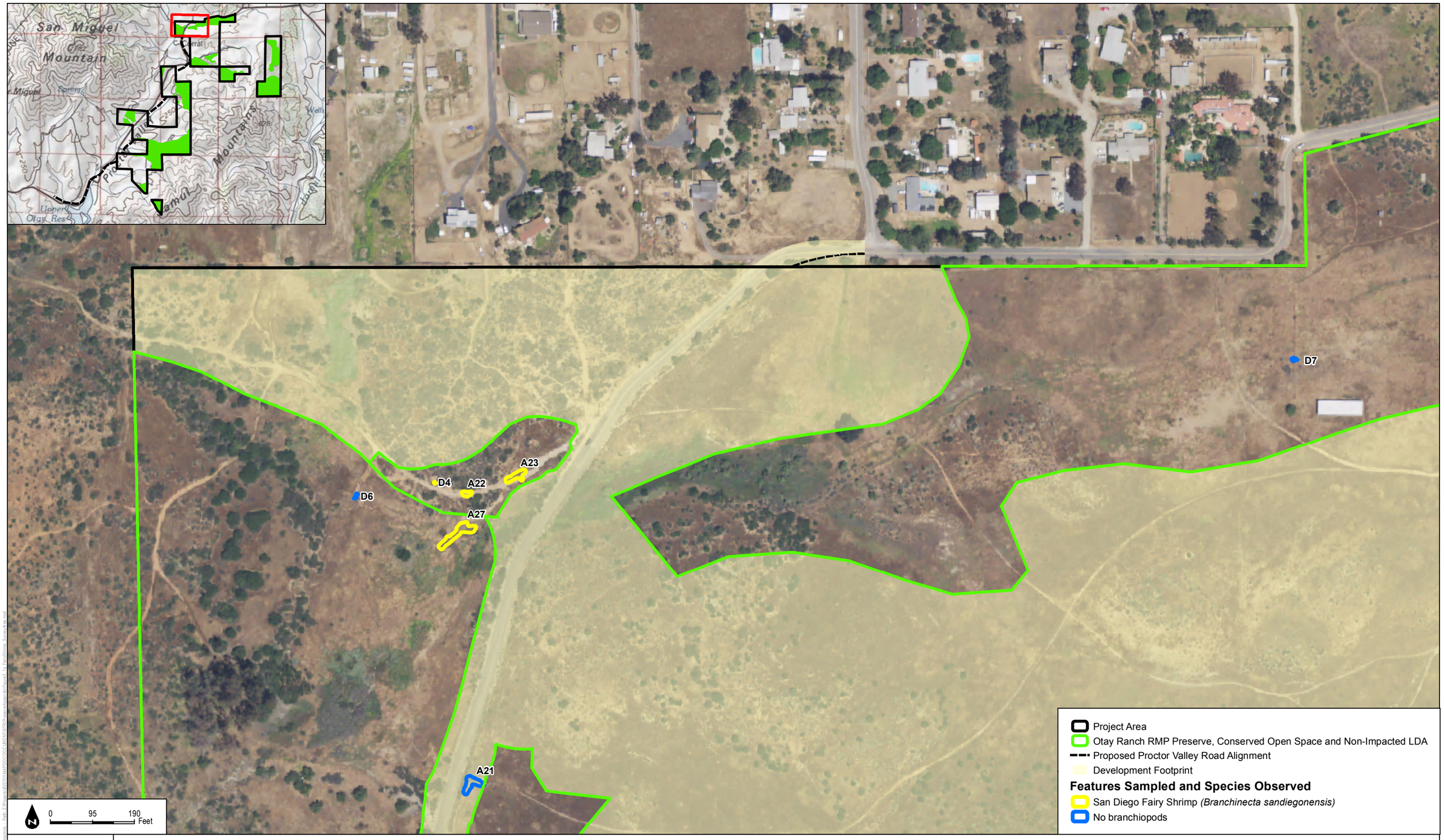
In addition to preservation of host plants, the Proposed Project would result in the preservation of 404.8 acres of potential habitat with the Otay Ranch RMP Preserve and 156.1 acres within Conserved Open Space.

Mammals

San Diego Black-Tailed Jackrabbit (**Lepus californicus bennettii**)*, SSC/County Group 2*

The San Diego black-tailed jackrabbit is a SSC and County Group 2 species. It is confined to coastal Southern California, with marginal eastern records being Mount Piños, Arroyo Seco, Pasadena, San Felipe Valley, and Jacumba (Hall 1981). It is found in many diverse habitats, but primarily in arid regions supporting short-grass habitats. Jackrabbits typically are not found in high grass or dense brush where it is difficult for them to move quickly, and the openness of open scrub habitat likely is preferred over dense chaparral. Jackrabbits are common in grasslands that are overgrazed by cattle, and they are well adapted to using low-intensity agricultural habitats (Hall 1981). As previously stated, jackrabbits are a primary prey source for golden eagles.

This species was observed on multiple occasions throughout the Otay Ranch RMP Preserve during biological surveys (Figures 2-1 and 2-1A through 2-1U). Due to the high mobility of this species, not all observations were mapped. This species can occur throughout nearly all of the upland vegetation communities within the Otay Ranch RMP Preserve.



DUDEK

SOURCE: Bing Maps 2017; Hunsaker 2016

FIGURE 3-1A

Fairy Shrimp Survey Area and Results

Otay Ranch Village 14 and Planning Areas 16/19 - Preserve Status Report

NOTE: Survey areas may include additional acreage outside of the Project Area

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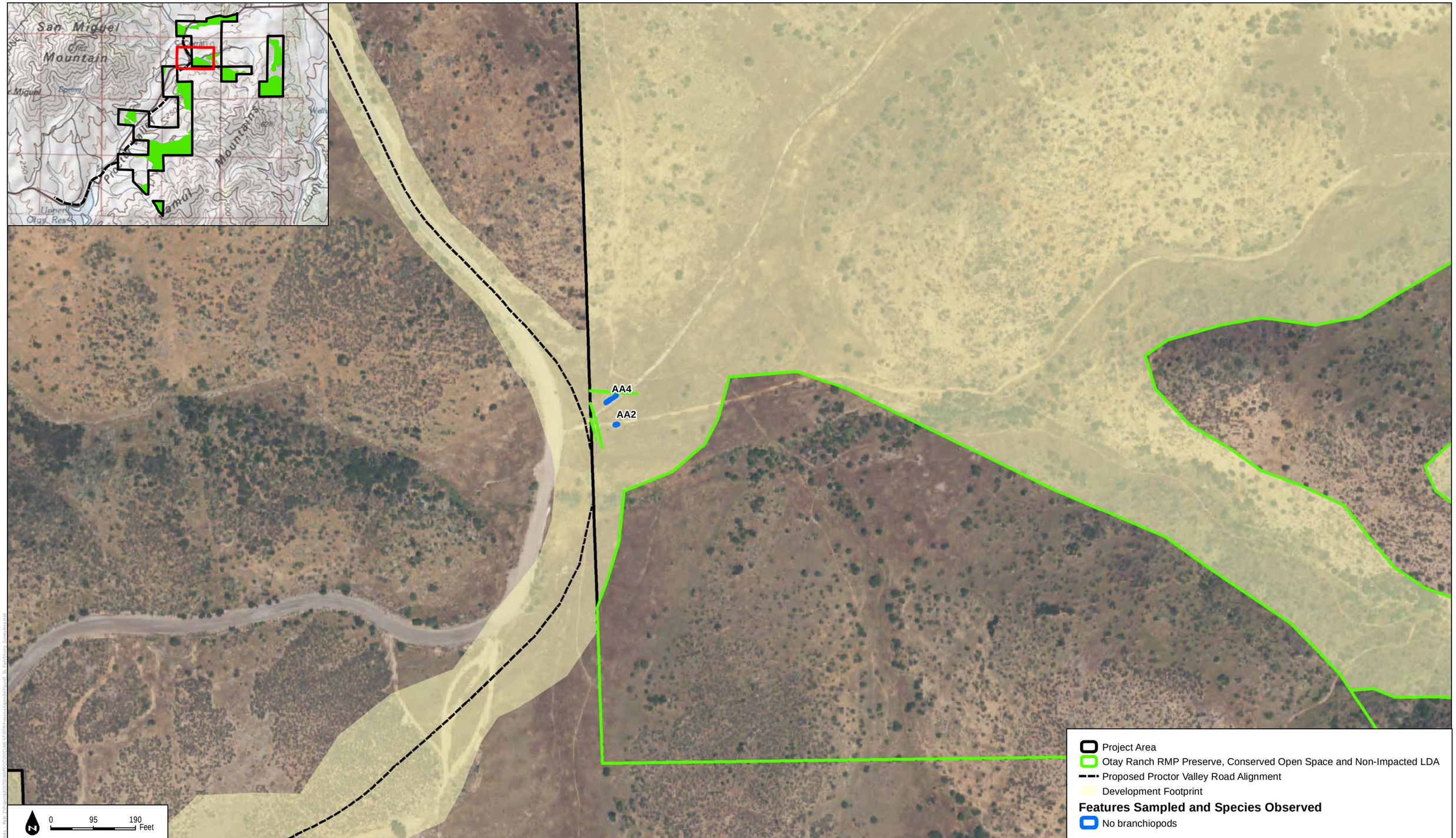

DUDEK

SOURCE: Bing Maps 2017; Hunsaker 2016

FIGURE 3-1B

Fairy Shrimp Survey Area and Results

Otay Ranch Village 14 and Planning Areas 16/19 - Preserve Status Report

NOTE: Survey areas may include additional acreage outside of the Project Area

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San Diego Desert Woodrat* (Neotoma lepida intermedia)*, SSC/County Group 2

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

Woodrat middens were observed, indicating this species occurs within the Otay Ranch RMP Preserve. Suitable habitat within the Otay Ranch RMP Preserve includes the upland vegetation communities.

American Badger* (Taxidea taxus)*, SSC/MSCP Covered/County Group 2

The American badger is a SSC, MSCP Covered, and County Group 2 species. In California they are found throughout the state except in coastal Northern California (Zeiner et al. 1990b). American badgers typically occur in open, sparsely vegetated habitats, but also use modified habitats such as agriculture. They are found in dry, open areas with friable soils, and can occur throughout the Study Area. Their distribution in a landscape coincides with the availability of prey, burrowing sites, and mates; with males' distribution ranging wider than females' during the breeding and summer months (Minta 1993). In general, badger activity within a home range tends to concentrate in areas with suitable soils for burrowing or with colonies of ground squirrels.

An American badger burrow was documented in the Planning Area 16 Otay Ranch RMP Preserve. The burrow showed distinct claw marks indicative of a badger burrow.

Reptiles

Rosy Boa* (Lichanura trivirgata)*, County Group 2

Rosy boa is not considered special status by any state or federal agencies; however, it is a County Group 2 species. The rosy boa in California ranges from Los Angeles, eastern Kern, and southern Inyo counties, and south through San Bernardino, Riverside, Orange, and Diego counties (Spiteri 1988; Stebbins 2003; Zeiner et al. 1990b). It occurs at elevations from sea level to 5,000 feet amsl in the Peninsular and Transverse mountain ranges. Within its range in Southern California, the rosy boa is absent only from the southeastern corner of California around the Salton Sea and the western and southern portions of Imperial County (Zeiner et al.

1990b). The rosy boa inhabits rocky shrubland and desert habitats, and is attracted to oases and streams, but does not require permanent water (Stebbins 2003).

Rosy boa was observed once during surveys within the Village 14 Otay Ranch RMP Preserve (Figures 2-1 and 2-1A through 2-1U), and there is suitable habitat in the vegetation communities with rocky areas intermixed with shrubs within the Otay Ranch RMP Preserve surrounding this species location. In addition, there are small rock outcrops in non-graded LDA portions of the Project Area in the most eastern portion of Planning Area 16 and within the adjacent Conserved Open Space.

Birds

California Horned Lark* (Eremophila alpestris actia), *WL/County Group 2

California horned lark is a WL and County Group 2 species. The California horned lark is a permanent resident found throughout much of the southern half of California. This species breeds and resides in the coastal region of California from Sonoma County southeast to the U.S./Mexico border, including most of the San Joaquin Valley, and eastward to the foothills of the Sierra Nevada (Beason 1995; Grinnell and Miller 1944). It is found from grasslands along the coast and deserts near sea level to alpine dwarf-shrub habitat above tree line. This species prefers open habitats, grassland, rangeland, shortgrass prairie, montane meadows, coastal plains, and fallow grain fields, and it nests on the ground in a hollow scrape.

This species was observed during biological surveys, with several individuals generally occurring at mapped locations (Figures 2-1 and 2-1A through 2-1U). However, due to the high mobility of this species not all observations were mapped. Mapped locations include observations in Village 14 Otay Ranch RMP Preserve and Planning Areas 16/19 Otay Ranch RMP Preserve. There is suitable foraging and nesting habitat within the Project Area.

Western Bluebird* (Sialia mexicana), *MSCP Covered/County Group 2

Western bluebird is a MSCP Covered and County Group 2 species. They are common resident birds in San Diego County, where they prefer montane coniferous and oak woodlands (Unitt 2004). It nests in old-growth red fir, mixed conifer, and lodgepole pine habitats near wet meadows used for foraging. Because this species is not considered special status by state or federal agencies, it is not tracked in the CNDDB.

Western bluebirds were observed during surveys, and one observation was mapped along Proctor Valley North at the edge of the Planning Area 19 Otay Ranch RMP Preserve. There is suitable nesting habitat within the eucalyptus trees and suitable foraging habitat Otay Ranch RMP Preserve includes many of the vegetation communities in the Otay Ranch RMP Preserve.

Barn Owl* (Tyto alba)*, County Group 2

The barn owl is a not considered special status by any state or federal agencies; however, it is a County Group 2 species. It is common throughout its range throughout most continents, and in the Americas, it occurs in much of continental United States, south through Central and South America to Tierra del Fuego (Marti et al. 2005). In San Diego County, it is an uncommon permanent resident and occurs in urban settings, roosting in buildings, palm leaves, and nest boxes.

Barn owls do not seem to use specific habitat affinities, provided there are ample sites for nesting opportunities and adequate ground for hunting small mammals (Taylor 1994). Habitat types that are commonly used include open habitats such as grassland, chaparral, riparian, and other wetland types, from sea level to 1,680 meters (5,512 feet) amsl (Zeiner et al. 1990a).

This species was observed during focused surveys for coastal California gnatcatcher in the northwest portion of the Otay Ranch RMP Preserve, east of Proctor Valley Road, but its location was not mapped. Although there is suitable habitat for foraging, there are limited trees or similar structures that would support nesting for this species. Suitable foraging habitat in the Otay Ranch RMP Preserve includes the majority of the vegetation communities.

Mammals

Mule Deer* (Odocoileus hemionus)*, MSCP Covered Species/County Group 2

The mule deer is a MSCP Covered and County Group 2 species. It is a common species with a widespread distribution throughout the western United States and Canada and south into mainland and Baja California, Mexico (Hall 1981). It occurs throughout most of California, except in deserts and intensively farmed areas without cover (Zeiner et al. 1990b). Throughout its range, mule deer uses coniferous and deciduous forests, riparian habitats, desert shrub, coastal scrub, chaparral, and grasslands with shrubs. It is often associated with successional vegetation, especially near agricultural lands (NatureServe 2014). It uses forested cover for protection from the elements and open areas for feeding (Wilson and Ruff 1999). Mule deer fawn in a variety of habitats that have available water and abundant forage, including moderately dense shrubs and forests, dense herbaceous stands, and higher-elevation riparian and mountain shrub vegetation.

Mule deer were observed during biological surveys, but the locations were not mapped due to the high mobility of this species. Mule deer were flushed from upland habitats several times during surveys and are likely to use most of the Otay Ranch RMP Preserve.

Invertebrates

Monarch (**Danaus plexippus**)*, County Group 2*

The monarch butterfly is not considered special status by any state or federal agencies; however, it is a County Group 2 species. It follows a pattern of seasonal migration. In the summer, this species is found in New England, the Great Lakes region, and the northern Rocky Mountains. These areas are occupied from May through late August to mid-September (Urquhart 1987). The New England and Great Lakes populations migrate southwest to wintering grounds in the Sierra Madre of Mexico. The Rocky Mountains population migrates southwest to wintering grounds along the California coast.

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

Monarch butterfly wintering sites are considered special status by CDFW (2016b). Wintering sites in California are associated with wind-protected groves of large trees (primarily eucalyptus or pine) with nectar and water sources nearby, generally near the coast. A few California sites (e.g., Pacific Grove and Natural Bridges) support concentrated numbers of overwintering adults, but adults often winter as scattered individuals or in small clusters (Emmel and Emmel 1973). Sexually mature monarch butterflies mate along their northern migratory route (while returning to their summer grounds) and deposit eggs on milkweed plants. Adults die shortly after mating and laying eggs, leaving the completion of the northern migration to their offspring.

This species was observed during Quino checkerspot butterfly surveys and Mexican whorled milkweed (*Asclepias fascicularis*), a potential host plant, was recorded within the Project Area. There are small patches of eucalyptus within the Project Area, but they are not expected to be large enough to support wintering colonies. The nearest wintering colony of monarch butterfly in San Diego County is near University of California, San Diego coastal site along Aluz Street, approximately 23 miles northwest of the Project Area (Pelton et al. 2016).

3.2.2 Special-Status Wildlife Species with a Moderate to High Potential to Occur

Two MSCP Covered Species have a high potential to occur within the Otay Ranch RMP Preserve: ferruginous hawk (*Buteo regalis*), and orangethroat whiptail (*Aspidoscelis hyperythra*). These species also have the potential to occur within the Conserved Open Space and non-graded LDA.

Other special-status wildlife species with a high potential to occur within the Otay Ranch RMP Preserve include Bell's sage sparrow (*Artemisiospiza belli belli*), burrowing owl (*Athene cunicularia*), Quino checkerspot (*Euphydryas editha quino*), pallid bat (*Antrozous pallidus*), western mastiff bat (*Eumops perotis californicus*), western red bat (*Lasiurus blossevillii*), Yuma myotis (*Myotis yumanensis*), San Diego desert woodrat (*Neotoma lepida intermedia*), big free-tailed bat (*Nyctinomops macrotis*), cougar (*Puma concolor*), red diamondback rattlesnake (*Crotalus ruber*), San Diego banded gecko (*Coleonyx variegatus abbotti*), and Coronado skink (*Plestiodon skiltonianus interparietalis*). Species that have moderate or high potential to occur within the Otay Ranch RMP Preserve, Conserved Open Space, and non-graded LDA are described in more detail in Table 7.

Table 7
Special-Status Wildlife Species That Have High or Moderate Potential to Occur within the Otay Ranch RMP Preserve, Conserved Open Space, and/or Non-Graded LDA

Species	Status (Federal / State / San Diego South County MSCP/ San Diego County)	Primary Habitat Associations	Status Within the Otay Ranch RMP Preserve, Conserved Open Space, and Non-Graded LDA, or Potential to Occur
Birds			
golden eagle (*Aquila chrysaetos* (nesting and wintering))	BCC/FP, WL/ Covered/ Group 1	Nests and winters in hilly, open/semi-open areas, including shrublands, grasslands, pastures, riparian areas, mountainous canyon land, open desert rimrock terrain; nests in large trees and on cliffs in open areas and forages in open habitats	Not observed within the Otay Ranch RMP Preserve or other non-graded areas within the Proposed Project. A pair of golden eagles was observed foraging within the Project Area in 2014 by USFWS staff; two additional observations of a foraging golden eagle were recorded in 2014 just outside of the Project Area by Dudek, and additional unpaired eagles have been identified in the Valley by USFWS personnel during 2015. There is no suitable nesting habitat within the Project Area for this species. The closest known historical nesting area, which has since collapsed and is not active, is on San Miguel Mountain, is over 3,000 feet to the north of the Project Area (H.T. Harvey 2017). The nearest known recently active golden eagle nest (as of 2011) is located in the Cedar Canyon area near Otay Mountain, just over 5 miles from the proposed development (USFWS 2012, as cited in H.T. Harvey 2017)

Table 7
Special-Status Wildlife Species That Have High or Moderate Potential to Occur within the Otay Ranch RMP Preserve, Conserved Open Space, and/or Non-Graded LDA

Species	Status (Federal / State / San Diego South County MSCP/ San Diego County)	Primary Habitat Associations	Status Within the Otay Ranch RMP Preserve, Conserved Open Space, and Non-Graded LDA, or Potential to Occur
Bell's sage sparrow (*Artemisiospiza belli belli*)	BCC/WL/ None/Group 1	Nests and forages in coastal scrub and dry chaparral; typically in large, unfragmented patches dominated by chamise; nests in more dense patches but uses more open habitat in winter	High potential to occur. There is suitable habitat throughout the Project Area and this species has been recorded in the Jamul Mountains quadrangle (CDFW 2016b).
burrowing owl (*Athene cunicularia* (burrow sites and some wintering sites))	BCC/SSC/ Covered/ Group 1	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	Burrowing owl has not been observed within the Preserve or other non-graded areas the Proposed Project, but there is high potential for it to occur. This species has been recorded in the Jamul Mountains quadrangle (CDFW 2016b). During recent plant surveys in July 2015, a potential burrowing owl sign (white wash, feathers, and pellets) was observed at one burrow in the central portion of the Project Area (outside of the Otay Ranch RMP Preserve or other non-graded areas within the Proposed Project). However, no actual owls were observed or have been observed within the Project Area.
ferruginous hawk (*Buteo regalis* (wintering))	BCC/WL/ Covered/ Group 1	Winters and forages in open, dry country, grasslands, open fields, agriculture	There is high potential for ferruginous hawk to forage within the Otay Ranch RMP Preserve or other non-graded areas within the Proposed Project during the winter season.
least bittern (*Ixobrychus exilis* (nesting))	BCC/SSC/ None/Group 2	Nests in freshwater and brackish marshes with dense, tall growths of aquatic and semi-aquatic vegetation	Moderate potential to occur. There is some freshwater marsh in the Planning Area 19 Otay Ranch RMP Preserve within the southern drainage near Proctor Valley Road that could support this species. This species has been recorded in the CNDDB 9-quadrangle search (CDFW 2016b).
yellow warbler (*Setophaga petechia* (nesting))	BCC/SSC/ None/Group 2	Nests and forages in riparian and oak woodlands, montane chaparral, open ponderosa pine and mixed conifer habitats	This species has been observed in 2017 foraging overhead within the Planning Area 16, but outside of the Otay Ranch RMP Preserve or other non-graded areas. This species has been recorded in the Jamul Mountains quadrangle (CDFW 2016b). There are very small patches of riparian scrub within the Otay Ranch RMP Preserve or other non-graded areas within the Proposed Project that has low potential to support this species.

Table 7
Special-Status Wildlife Species That Have High or Moderate Potential to Occur within the Otay Ranch RMP Preserve, Conserved Open Space, and/or Non-Graded LDA

Species	Status (Federal / State / San Diego South County MSCP/ San Diego County)	Primary Habitat Associations	Status Within the Otay Ranch RMP Preserve, Conserved Open Space, and Non-Graded LDA, or Potential to Occur
western bluebird (*Sialia mexicana*)	None/None/ Covered/ Group 2	Nests in old-growth red fir, mixed conifer, lodgepole pine habitats near wet meadows used for foraging	A pair of western bluebirds was observed within along Proctor Valley Road North and can occur in suitable habitat throughout the Project Area. This species has moderate potential to nest in eucalyptus trees within the Planning Area 19 Otay Ranch RMP Preserve.
Common barn-owl (*Tyto alba*)	None/None/ None/Group 2	Open habitats including grassland, chaparral, riparian, and other wetlands	This species was observed within the Project Area and has potential to forage throughout the Preserve or other non-graded areas within the Proposed Project and has moderate potential to nest in eucalyptus trees within the Planning Area 19 MSC Otay Ranch RMP Preserve.
Invertebrates			
Quino checkerspot (*Euphydryas editha quino*)	FE/None/ None/Group 1	Annual forblands, grassland, open coastal scrub and chaparral; often soils with cryptogamic crusts and fine-textured clat; host plants include *Plantago erecta* (dwarf plantain), *Antirrhinum coulterianum* (white snapdragon), and *Plantago patagonica* (woolly plantain) (Silverado Occurrence Complex)	High potential to occur. Focused surveys for Quino checkerspot butterfly were conducted in 2015 and 2016; the results were negative but stopped early due diminishing host plants and lack of recent regional Quino checkerspot butterfly sightings (HELIX 2016, 2017). Quino checkerspot butterfly has been recorded within the Project Area: there are two records prior to 1990 (CDFW 2016b); and one from 2001 and one from 2006 (USFWS 2015). Additionally, USFWS documented a total of eight individuals within the vicinity of the Project Area in 2017. These observations are considered to be incidental because they were made during a general reconnaissance of the area and not pursuant to a focused or protocol survey for the species. Two individuals were observed west of the central portion of the Village 14 Development Footprint, and four individuals were observed immediately off site west of Proctor Valley Road. One more individual was observed immediately east of Proctor Valley Road and one individual adjacent to the northeastern portion of the Development Footprint. There are additional records north and south of the Project Area. There is suitable habitat in the coastal sage scrub, openings in chaparral, and in some of the non-native grassland. Approximately 404.8 acres of suitable habitat and 0.72 acre of host plants would remain within the Otay Ranch RMP Preserve while 0.92 acre of host plants and 143.5 acre of suitable habitat would remain within Conserved Open Space and non-graded LDA.

Table 7
Special-Status Wildlife Species That Have High or Moderate Potential to Occur within the Otay Ranch RMP Preserve, Conserved Open Space, and/or Non-Graded LDA

Species	Status (Federal / State / San Diego South County MSCP/ San Diego County)	Primary Habitat Associations	Status Within the Otay Ranch RMP Preserve, Conserved Open Space, and Non-Graded LDA, or Potential to Occur
Hermes copper (*Lycaena hermes*)	FC/None/ None/Group 1	Mixed woodlands, chaparral and coastal scrub	Moderate potential to occur. There are approximately 8.6 acres mapped as suitable Hermes copper habitat within the Otay Ranch RMP Preserve (6.5 acres) or other non-graded areas the Proposed Project (1.6 acres in Conserved Open Space and 0.6 acres in Non-graded LDA). It should be noted that the 2015 and 2017 habitat assessments and focused surveys did not cover the entire Otay Ranch RMP Preserve (Figure 3-2, Hermes Copper Survey Area). There may be additional host plants located in the areas not surveyed. Results of the focused surveys in 2015 and 2017 were negative, but this species has been recorded in the Jamul Mountains quadrangle (CDFW 2016b).
wandering skipper (*Panoquina errans*)	None/None/ Covered/ Group 1	Salt marsh	Moderate potential to occur. There is some salt grass (*Distichlis spicata*) within the cismontane alkali marsh that occurs along drainages within the Otay Ranch RMP Preserve. This species has not been observed, however, has been recorded in the CNDDB nine-quadrangle search (CDFW 2016b).
alkali skipper (*Pseudocopaeodes eunus eunus*)	None/None/ None/Group 1	Grassy spots on alkali flats; playa/salt flats	Moderate potential to occur. There is some salt grass (*Distichlis spicata*) within the cismontane alkali marsh that occurs along drainages within the Otay Ranch RMP Preserve. This species has not been observed. Additionally, this species has not been recorded in the CNDDB nine-quadrangle search (CDFW 2016b).
Mammals			
pallid bat (*Antrozous pallidus*)	None/SSC/ None/Group 2	Grasslands, shrublands, woodlands, forests; most common in open dry habitats with rocky outcrops for roosting, but also roosts in built structures and trees	High potential to forage in suitable habitat within the Otay Ranch RMP Preserve or other non-graded areas within the Proposed Project. Low to moderate potential to roost in large boulders and trees within the Otay Ranch RMP Preserve or other non-graded areas within the Proposed Project. This species has been recorded in the CNDDB 9-quadrangle search (CDFW 2016b).
Dulzura pocket mouse (*Chaetodipus californicus femoralis*)	None/SSC/ None/Group 2	Open habitat, coastal scrub, chaparral, oak woodland, chamise chaparral, mixed conifer habitats; disturbance specialist; 0 to 3,000 feet amsl	Moderate potential to occur. There is suitable habitat for this species within the Otay Ranch RMP Preserve or other non-graded areas within the Proposed Project. This species has not been recorded in the Jamul Mountains quadrangle, but is documented in surrounding quadrangles (CDFW 2016b).

Table 7
Special-Status Wildlife Species That Have High or Moderate Potential to Occur within the Otay Ranch RMP Preserve, Conserved Open Space, and/or Non-Graded LDA

Species	Status (Federal / State / San Diego South County MSCP/ San Diego County)	Primary Habitat Associations	Status Within the Otay Ranch RMP Preserve, Conserved Open Space, and Non-Graded LDA, or Potential to Occur
northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*)	None/SSC/ None/Group 2	Coastal scrub, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon–juniper, and annual grassland	Moderate potential to occur. There is suitable habitat for this species within the Otay Ranch RMP Preserve or other non-graded areas within the Proposed Project. This species has not been recorded in the Jamul Mountains quadrangle, but is documented in surrounding quadrangles (CDFW 2016b).
western mastiff bat (*Eumops perotis californicus*)	None/SSC/ None/Group 2	Chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland; roosts in crevices in rocky canyons and cliffs where the canyon or cliff is vertical or nearly vertical, trees and tunnels	High potential to forage in suitable habitat within the Otay Ranch RMP Preserve or other non-graded areas within the Proposed Project. Low to moderate potential to roost in large boulders and trees within the Otay Ranch RMP Preserve or other non-graded areas within the Proposed Project. This species has been recorded in the Jamul Mountains quadrangle (CDFW 2016b).
western red bat (*Lasiurus blossevillii*)	None/SSC/ None/Group 2	Forest, woodland, riparian, mesquite bosque and orchards, including fig, apricot, peach, pear, almond, walnut, and orange; roosts in tree canopy	High potential to forage in suitable habitat within the Otay Ranch RMP Preserve or other non-graded areas within the Proposed Project. Low to moderate potential to roost in large boulders and trees within the Otay Ranch RMP Preserve or other non-graded areas within the Proposed Project. This species has been recorded in the Jamul Mountains quadrangle (CDFW 2016b).
California leaf-nosed bat (*Macrotus californicus*)	None/SSC/ None/Group 2	Riparian woodlands, desert wash, desert scrub; roosts in mines and caves, occasionally buildings	Moderate potential to forage in suitable habitat within the Preserve or other non-graded areas within the Proposed Project. There is no roosting habitat within the Preserve or other non-graded areas within the Proposed Project. This species has been recorded in the CNDDB 9-quadrangle search (CDFW 2016b). Mostly a desert species.
Yuma myotis (*Myotis yumanensis*)	None/None/ None/Group 2	Riparian, arid scrublands and deserts, and forests associated with water (streams, rivers, tinajas); roosts in bridges, buildings, rock crevices, caves, mines, and trees	High potential to forage in suitable habitat within the Preserve or other non-graded areas within the Proposed Project. Low to moderate potential to roost in rock crevices and trees within the Preserve or other non-graded areas within the Proposed Project. This species has been recorded in the Jamul Mountains quadrangle (CDFW 2016b).
San Diego desert woodrat (*Neotoma lepida intermedia*)	None/SSC/ None/Group 2	Coastal scrub, desert scrub, chaparral, cacti, rocky areas	Woodrat middens have been observed within the Project Area and this species likely occurs. This species has been recorded in the CNDDB 9-quadrangle search (CDFW 2016b).

Table 7
Special-Status Wildlife Species That Have High or Moderate Potential to Occur within the Otay Ranch RMP Preserve, Conserved Open Space, and/or Non-Graded LDA

Species	Status (Federal / State / San Diego South County MSCP/ San Diego County)	Primary Habitat Associations	Status Within the Otay Ranch RMP Preserve, Conserved Open Space, and Non-Graded LDA, or Potential to Occur
pocketed free-tailed bat (*Nyctinomops femorosaccus*)	None/SSC/ None/Group 2	Pinyon–juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, palm oases; roosts in high cliffs or rock outcrops with dropoffs, caverns, buildings	Moderate potential to forage in suitable habitat within the Preserve or other non-graded areas within the Proposed Project. Low to moderate potential to roost in boulders within the Preserve or other non-graded areas within the Proposed Project. This species has been recorded in the Jamul Mountains quadrangle (CDFW 2016b). A mostly desert species.
big free-tailed bat (*Nyctinomops macrotis*)	None/SSC/ None/Group 2	Rocky areas; roosts in caves, holes in trees, buildings, and crevices on cliffs and rocky outcrops; forages over water	High potential to forage in suitable habitat within the Preserve or other non-graded areas within the Proposed Project. Low to moderate potential to roost in large boulders and trees within the Preserve or other non-graded areas within the Proposed Project. This species has been recorded in the Jamul Mountains quadrangle (CDFW 2016b).
cougar (*Puma concolor*)	None/None/ Covered/ Group 2	Scrubs, chaparral, riparian, woodland, forest; rests in rocky area, and on cliffs and ledges that provide cover; most abundant in riparian area and brushy stages of most habitats throughout California, except deserts	Cougar sign was observed within the northwestern portion of the Project Area during coastal California gnatcatcher surveys. The Preserve or other non-graded areas within the Proposed Project is generally open and does not provide a lot of cover for this species.
Reptiles			
California legless lizard (*Anniella pulchra*)	None/SSC/ None/Group 2	Stabilized dunes, beaches, dry washes, chaparral, scrubs, pine, oak, and riparian woodlands; associated with sparse vegetation and sandy or loose, loamy soils	Moderate potential to occur. There is some potential for this species to occur where there are sandy soils. This species has been recorded in the CNDDB nine-quadrangle search (CDFW 2016b).
orangethroat whiptail (*Aspidoscelis hyperythra*)	None/WL/ Covered/ Group 2	Low-elevation coastal scrub, chaparral, and valley–foothill hardwood	High potential to occur. There is suitable habitat for this species in the coastal sage scrub and chaparral. This species has been recorded in the Jamul Mountains quadrangle (CDFW 2016b).

Table 7
Special-Status Wildlife Species That Have High or Moderate Potential to Occur within the Otay Ranch RMP Preserve, Conserved Open Space, and/or Non-Graded LDA

Species	Status (Federal / State / San Diego South County MSCP/ San Diego County)	Primary Habitat Associations	Status Within the Otay Ranch RMP Preserve, Conserved Open Space, and Non-Graded LDA, or Potential to Occur
San Diego banded gecko (*Coleonyx variegatus abbotti*)	None/SSC/ None/Group 1	Rocky areas within coastal scrub and chaparral	High potential to occur. The Preserve or other non-graded areas within the Proposed Project supports suitable habitat for this species and is within its range (Nafis 2016).
red diamondback rattlesnake (*Crotalus ruber*)	None/SSC/ None/Group 2	Coastal scrub, chaparral, oak and pine woodlands, rocky grasslands, cultivated areas, and desert flats	High potential to occur. This species was observed within the Project Area, however not within the Otay Ranch RMP Preserve or other non-graded areas within the Proposed Project.
San Diego ringneck snake (*Diadophis punctatus similis*)	None/None/ None/Group 2	Moist habitats including wet meadows, rocky hillsides, gardens, farmland grassland, chaparral, mixed conifer forest, and woodland habitats	Moderate potential to occur. There is suitable habitat for this species within the Otay Ranch RMP Preserve or other non-graded areas within the Proposed Project. This species has been recorded in the Jamul Mountains quadrangle (CDFW 2016b).
Coronado skink (*Plestiodon skiltonianus interparietalis*)	None/WL/ None/Group 2	Woodlands, grasslands, pine forests, chaparral; rocky areas near water	High potential to occur. This species has high potential to occur within some of the rocky chaparral and coastal sage scrub with drainages where there is seasonal water in the Otay Ranch RMP Preserve or other non-graded areas within the Proposed Project. This species has been recorded in the Jamul Mountains quadrangle (CDFW 2016b).
coast patch-nosed snake (*Salvadora hexalepis virgultea*)	None/SSC/ None/Group 2	Brushy or shrubby vegetation; requires small mammal burrows for refuge and overwintering sites	Moderate potential to occur. There is suitable habitat for this species within the Project Area. This species has not been recorded in the Jamul Mountains quadrangle, but is documented in surrounding quadrangles (CDFW 2016b).

3.2.3 Anticipated Conservation Levels for Special-Status Wildlife Species

Similar to special-status plant species, the RMP provides a summary of the distribution of certain special-status wildlife species within Otay Ranch, as well as the percentage of populations anticipated to be retained in the Preserve. Table 3-5 of the MSCP Plan provides a list of the MSCP Covered wildlife species along with the specific conditions required for take authorizations and the conservation levels anticipated for each Covered Species. Table 8 provides the RMP and MSCP Plan anticipated conservation levels for each special-status wildlife

species observed within the Otay Ranch RMP Preserve and the Proposed Project's contribution to the preservation of the species.

Table 8
Otay Ranch RMP and MSCP Anticipated Conservation Levels for Special-Status Wildlife Species

Species Common Name (Scientific Name)	Regulatory Status: Federal/State/ MSCP/ County Group	Otay Ranch RMP	MSCP Table 3-5	Project Preservation
Amphibians and Reptiles				
western spadefoot (*Spea hammondii*)	None SSC Not Covered Group 2	No preservation requirements	This species is not a Covered Species.	The Proposed Project would preserve two features within the Otay Ranch RMP Preserve and four features within Conserved Open Space.
San Diegan tiger whiptail (*Aspidoscelis tigris stejnegeri*)	None SSC Not Covered Group 2	No preservation requirements	This species is not a Covered Species.	The Proposed Project would preserve 41% of suitable habitat within the Project Area.
rosy boa (*Lichanura trivirgata*)	None None Not Covered Group 2	No preservation requirements	This species is not a Covered Species.	The Proposed Project would preserve 41% of suitable habitat within the Project Area.
Blainville's horned lizard (*Phrynosoma blainvillii*)	None SSC Covered Group 2	No preservation requirements	This species would be covered by the MSCP because 60% of its potential habitat and 63% of known point occurrences would be conserved.	The Proposed Project would preserve 41% of suitable habitat within the Project Area.
Birds				
Cooper's hawk (*Accipiter cooperii*) (nesting)	None WL Covered Group 1	Although this species is listed in Table 5 of the RMP, the Otay Ranch distribution and percentage retained in the Preserve are not provided for this species.	This species would be covered by the MSCP because 59% of potential foraging and 52% of potential nesting habitat and 92% of known occurrences would be conserved.	The Proposed Project would preserve 94% of suitable nesting habitat and 41% of suitable foraging habitat within the Project Area.

Table 8
Otay Ranch RMP and MSCP Anticipated Conservation Levels for Special-Status Wildlife Species

Species Common Name (Scientific Name)	Regulatory Status: Federal/State/ MSCP/ County Group	Otay Ranch RMP	MSCP Table 3-5	Project Preservation
Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*)	None WL Covered Group 1	The RMP states that because 70% of the coastal sage scrub on the Ranch would be included in the Preserve, this species would receive adequate protection. Table 5 of the RMP indicates 70-75% of the Otay Ranch populations of this species retained in the Preserve.	This species would be covered by the MSCP because 61% of potential habitat (including 71% of mapped localities) would be conserved.	The Proposed Project would preserve 41% of suitable habitat within the Project Area.
grasshopper sparrow (*Ammodramus savannarum*) (nesting)	None SSC Not Covered Group 1	No preservation requirements	This species is not a Covered Species.	The Proposed Project would preserve 27% of suitable habitat within the Project Area.
golden eagle (*Aquila chrysaetos*) (nesting and wintering)	BCC FP,WL Covered Group 1	Although this species is listed in Table 5 of the RMP, the Otay Ranch distribution and percentage retained in the Preserve are not provided for this species.	This species would be covered by the MSCP because 53% of potential foraging and nesting habitat would be conserved. Local populations are not critical to, and the plan would not adversely affect the species' long-term survival.	The Proposed Project would preserve 41% of suitable foraging habitat within the Project Area.
long-eared owl (*Asio otus*)	None SSC Not Covered Group 1	No preservation requirements	This species is not a Covered Species.	The Proposed Project would preserve 41% of suitable habitat within the Project Area.
red-shouldered hawk (*Buteo lineatus*)	None None Not Covered Group 1	No preservation requirements	This species is not a Covered Species.	The Proposed Project would preserve 94% of suitable nesting habitat and 41% of suitable foraging habitat within the Project Area.
northern harrier (*Circus cyaneus*) (nesting)	None None Not Covered	Although this species is listed in Table 5 of the RMP, the Otay Ranch	This species is not a Covered Species.	The Proposed Project would preserve 86% of suitable nesting habitat

Table 8
Otay Ranch RMP and MSCP Anticipated Conservation Levels for Special-Status Wildlife Species

Species Common Name (Scientific Name)	Regulatory Status: Federal/State/ MSCP/ County Group	Otay Ranch RMP	MSCP Table 3-5	Project Preservation
	Group 1	distribution and percentage retained in the Preserve are not provided for this species.		and 44% of suitable foraging habitat within the Project Area.
white-tailed kite (*Elanus leucurus*)	None FP Not Covered Group 1	No preservation requirements	This species is not a Covered Species.	The Proposed Project would preserve 33% of suitable habitat within the Project Area.
California horned lark (*Eremophila alpestris actia*)	None WL Not Covered Group 2	No preservation requirements	This species is not a Covered Species.	The Proposed Project would preserve 45% of suitable habitat within the Project Area.
loggerhead shrike (*Lanius ludovicianus*) (nesting)	BCC SSC Not Covered Group 1	No preservation requirements	This species is not a Covered Species.	The Proposed Project would preserve 43% of suitable habitat within the Project Area.
coastal California gnatcatcher (*Polioptila californica californica*)	FT SSC Covered Group 1	Table 5 of the RMP indicates 52% of the Otay Ranch populations of this species retained in the Preserve.	This species would be covered by the MSCP because: over 73,300 acres of existing and potential gnatcatcher habitat would be conserved and linked together; over 91% of the core areas where the species occurs (Otay, San Miguel, Mission Trails, Santee, Kearny Mesa, Poway, San Pasqual, and Lake Hodges) would be conserved; and 65% of the known locations would be conserved.	The Proposed Project would preserve 51% of suitable habitat within the Project Area.
common barn owl (*Tyto alba*)	None None Not Covered Group 2	No preservation requirements	This species is not a Covered Species.	The Proposed Project would preserve 43% of suitable habitat within the Project Area.

Table 8
Otay Ranch RMP and MSCP Anticipated Conservation Levels for Special-Status Wildlife Species

Species Common Name (Scientific Name)	Regulatory Status: Federal/State/ MSCP/ County Group	Otay Ranch RMP	MSCP Table 3-5	Project Preservation
Mammals				
San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)	None SSC Not Covered Group 2	No preservation requirements	This species is not a Covered Species.	The Proposed Project would preserve 37% of suitable habitat within the Project Area.
mule deer (*Odocoileus hemionus*)	None None Covered Group 2	No preservation requirements	This species would be covered by the MSCP because 81% of the core areas, which support its habitat, would be conserved.	The Proposed Project would preserve 37% of suitable habitat within the Project Area.
American badger (*Taxidea taxus*)	None SSC Covered Group 2	No preservation requirements	This species would be covered by the MSCP because 58% of its potential habitat would be conserved.	The Proposed Project would preserve 43% of suitable habitat within the Project Area.
Invertebrates				
San Diego fairy shrimp (*Branchinecta sandiegonensis*)	FE None Not Covered Group 1	The RMP states that the San Diego fairy shrimp is widespread on Otay Ranch, although most common in the vernal pool areas, which would be included in the Preserve. Table 5 of the RMP indicates 100% of the Otay Ranch populations of this species retained in the Preserve.	This species would be covered by the MSCP because 88% of its potential habitat (vernal pool habitat) would be conserved.	The Proposed Project would preserve 100% of known occupied features within the Project Area.
monarch (*Danaus plexippus*)	None None Not Covered Group 2	No preservation requirements	This species is not a Covered Species.	The Proposed Project would preserve 94% of suitable habitat within the Project Area.

3.3 Habitat Connectivity and Wildlife Corridors

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the immigration and emigration of animals. Wildlife corridors contribute to

population viability by ensuring the continual exchange of genes between populations, which helps maintain genetic diversity; providing access to adjacent habitat areas, representing additional territory for foraging and mating; allowing for a greater carrying capacity; and providing routes for colonization of habitat lands following local population extinctions or habitat recovery from ecological catastrophes (e.g., fires).

Habitat linkages are patches of native habitat that function to join two larger patches of habitat. They serve as connections between habitat patches and help reduce the adverse effects of habitat fragmentation. The linkage does represent a potential route for gene flow and long-term dispersal. Habitat linkages may serve as both habitat and avenues of gene flow for small animals such as reptiles and amphibians. Habitat linkages may be represented by continuous patches of habitat or by nearby habitat "islands" that function as "stepping stones" for dispersal.

The MSCP Plan identifies 16 Biological Resource Core Areas (BRCAs) and associated habitat linkages within the MSCP Study Area. BRCAs are generally defined in the MSCP as areas "supporting a high concentration of sensitive biological resources which, if lost or fragmented, could not be replaced or mitigated elsewhere." Figure 2-2, Generalized Core and Biological Resources Area and Linkages, in the MSCP Plan depicts portions of Village 14 almost entirely within the Jamul Mountains BRCA with a small portion within the Sweetwater Reservoir/San Miguel Mountain/Sweetwater River BRCA (Figure 3-3, Biological Resources Core Area). The southern portions of Planning Areas 16/19 are located within the Jamul Mountains BRCA.

The Baldwin Otay Ranch Wildlife Corridors Studies Report (Ogden 1992) identifies several local and regional wildlife corridors in the Project Area. Figure 3-4, Wildlife Corridor and Habitat Linkages, shows the locations of these corridors in conjunction with land ownership. Although landscapes in San Diego County have changed significantly over the last two decades, the corridors identified in this study are still viable and currently traverse between large areas of open lands. As shown in Figure 3-4, these corridors are given identifications and are primarily located within public lands that provide undeveloped areas connected to each other that support wildlife movement across the landscape, including movement between various reservoirs, creeks, and upland habitats.

The L4 corridor traverses the Proctor Valley drainage and facilitates movement of species such as birds, small mammals, reptiles, and some amphibians. L4 is located primarily within Otay Ranch RMP Preserve as it crossed through the Project Area. The corridor is currently within open space areas managed by various entities except for the point at which it crosses the southern and northern portions of the existing Proctor Valley Road. Within the Project Area, it traverses chamise chaparral, cismontane alkali marsh, coastal sage scrub vegetation types, non-native grassland, open water, unvegetated channel, developed land, and disturbed habitat. This corridor

connects to L3 in the northern portion, which then passes south through the BLM land in the eastern portion connecting to R1. Where L3 connects to L4 in the south, L3 continues east through Otay Ranch RMP Preserve lands and MCSP Preserve lands, and BLM land and connects to R7 near the Jamul and San Ysidro Mountains. The L3 corridor is composed of two sections, the southern one that runs mostly east/west and the northern one that runs mostly north/south. With the Project Area, it traverses Diegan coastal sage scrub, disturbed habitat, non-native grassland, open water, and southern mixed chaparral. A regional corridor R1 is designated in a general east/west direction and follows along drainages toward Sweetwater Reservoir to the west and Jamul Mountains to the east. Species that travel farther distances could use this corridor as part of their home range or dispersal, including mule deer, coyote, and cougar, as well as birds and other species. The R1 corridor traverses chamise chaparral, coastal sage scrub vegetation types, non-native grassland, vernal pools, developed land, and disturbed habitat within the Project Area. Because the Proctor Valley Parcel is situated adjacent to Otay and Sweetwater Reservoirs, it could be used as a stopover or foraging area for species travel between the reservoirs. All of the R1 corridor would remain within the Otay Ranch RMP Preserve. To facilitate wildlife movement across Proctor Valley Road, which currently crosses the R1 corridor, a wildlife crossing would be installed (Figure 3-4).

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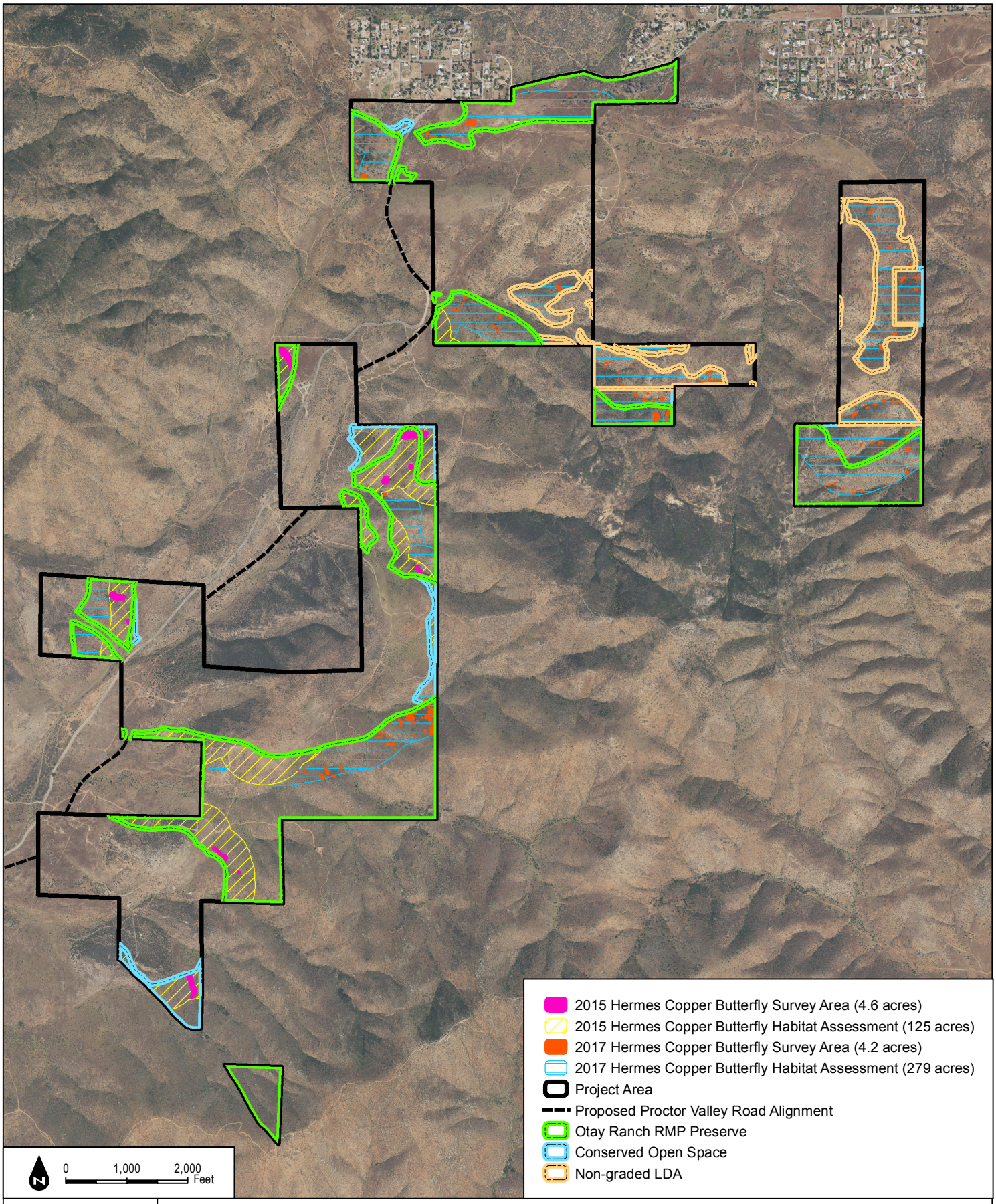

SOURCE: NAIP 2016; Hunsaker 2017

FIGURE 3-2

Hermes Copper Survey Area

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