

2.3 **Biological Resources**

The analysis of biological resources contained in this section is based on the Otay Ranch Resort Village Biological Resources Technical Report (Dudek 2014) located in **Appendix C-3** of this EIR. This section:

- describes, at a project-level, the existing biological resources on and adjacent to the Project site and the governing plans and policies (e.g., Otay Ranch RMP and County of San Diego MSCP) relating to biological resources;
- identifies guidelines for determining the significance of biological impacts;
- evaluates potential Project effects (including cumulative effects) on biological resources; and
- identifies feasible mitigation measures.

Existing conditions, potential effects, and mitigation measures related to biological resources associated with the Project were previously analyzed at a programmatic level in the Otay Ranch PEIR, which covered the entire Otay Ranch area consisting of approximately 23,000 acres in the County of San Diego, the City of Chula Vista, and the City of San Diego. The Otay Ranch PEIR identified significant unavoidable impacts to biological resources in Otay Ranch due to loss of raptor foraging habitat. Subsequent to the certification of the PEIR and adoption of the Otay SRP, the County of San Diego adopted the MSCP Subarea Plan, which is described in more detail in this section. The MSCP planning program provided for mitigation of impacts on sensitive species and their habitats on a regional basis. Such mitigation was not available at the time the PEIR was certified. Because of the level of conservation provided for habitats that support raptor foraging on a regional basis, new feasible mitigation for the impacts identified in the PEIR to raptor foraging habitat is now available to mitigate project-level impacts. The Otay Ranch PEIR (Ogden 1992a) is incorporated by reference and available for public inspection and review at the County of San Diego, Planning and Development Services, 5510 Overland Avenue, Suite B, San Diego, California.

2.3.1 **Existing Conditions**

Generally, the Project site consists of a broad mesa sloping to the south, broken by several steep canyons draining from north to south toward Lower Otay Lake. The Project site is traversed by several dirt roads, and has been subject to historic cattle grazing in certain portions. The current biological resources database for the Project site and adjacent off-site areas was accumulated through review of studies performed between 1989 and 1991 (prior to the adoption of the Otay SRP), and more recent Project-specific surveys conducted between 1998 and 2014. Detailed information, including survey methodologies, is in the Otay Ranch Resort Village Biological Resources Technical Report in **Appendix C-3** to this EIR. The following subsections summarize existing biological conditions and applicable resource planning programs.

2.3.1.1 *Vegetation Communities*

Vegetation communities were mapped within the Project site and a 100-foot perimeter surrounding the Project site. In addition, vegetation communities were mapped off-site along Otay Lakes Road where improvements are proposed. Consistent with the requirements of the County of San Diego (County of San Diego 2010a), vegetation communities were classified in accordance with Holland (1986) and Oberbauer (1996).

The 1,869-acre Project site is dominated by coastal sage scrub, with substantial amounts of grassland and chaparral. In total, 16 distinct vegetation communities or land covers were mapped within the Project site: coastal sage scrub, disturbed coastal sage scrub, chamise chaparral, disturbed chamise chaparral, southern mixed chaparral, scrub oak chaparral, disturbed valley needlegrass grassland, nonnative grassland, cismontane alkali marsh, disturbed cismontane alkali marsh (equivalent to Holland Code 11200 [disturbed wetland]), mulefat scrub, open water, southern willow scrub, stock pond, disturbed habitat, and developed land (**Table 2.3-1**).

Areas associated with the off-site proposed improvements to Otay Lakes Road, a total of 40.06 acres, consist of the following 12 communities: coastal sage scrub, disturbed coastal sage scrub, disturbed valley needlegrass grassland, nonnative grassland, freshwater marsh, disturbed mulefat scrub, open water, southern willow scrub, eucalyptus woodland, ornamental, disturbed habitat, and developed land. Developed land (i.e., existing Otay Lakes Road) is the predominant land cover type within the off-site area.

As depicted in **Table 2.3-1**, coastal sage scrub, chamise chaparral, cismontane alkali marsh, and mulefat scrub were subdivided as non-disturbed versus disturbed depending on the percent native shrub cover and dominance of nonnative species. The distribution of mapped vegetation communities is depicted in **Figure 2.3-1**. **Appendix C-3** provides details regarding distribution and species composition of mapped vegetation communities.

2.3.1.2 *Special-Status Species*

For the purposes on this EIR, special-status species include the following:

- Species listed (or proposed for listing) under the FESA or CESA
- Species protected under other state or federal regulations (e.g., California Fish and Game Code Sections 3503 and 3512, MBTA)
- Wildlife species identified by CDFW as Species of Special Concern (SSC)
- Plant species ranked by the California Native Plant Society (CNPS)
- Species considered sensitive by the County of San Diego (i.e., plants included on County Lists A through D and wildlife included in County Groups 1 or 2)
- Species covered by the Final Multiple Species Conservation Program MSCP Plan (see Table 3-5 of the MSCP Plan [MSCP 1998])

Focused surveys for special-status plant and wildlife species were conducted per appropriate protocols from 1999 to 2009, as described in **Appendix C-3** to this EIR.

Special-Status Plant Species

Sixteen special-status plant species were recorded on the Project site during surveys conducted from 1999 through 2009, as summarized in **Table 2.3-2** and depicted in **Figure 2.3-2**. Two additional species (little mousetail [*Myosurus minimus* ssp. *apus*] and California adder's-tongue [*Ophioglossum californicum*]) were detected during previous studies but were not found during more recent survey efforts. These species may no longer be present.

The site supports one federally and state-listed plant species: San Diego thornmint (*Acanthomintha ilicifolia*). Other special-status plant species detected were California adolphia (*Adolphia californica*), small-flowered morning-glory (*Convolvulus simulans*), western dichondra (*Dichondra occidentalis*), variegated dudleya (*Dudleya variegata*), San Diego barrel cactus (*Ferocactus viridescens*), Palmer's grapplinghook (*Harpagonella palmeri*), San Diego marsh-elder (*Iva hayesiana*), southwestern spiny-rush (*Juncus acutus* spp. *leopoldii*), small-flowered microseris (*Microseris douglasii* ssp. *platycarpha*), San Diego goldenstar (*Muilla clevelandii*), golden-flowered pentachaeta (*Pentachaeta aurea*), Coulter's matilija poppy (*Romneya coulteri*), Munz's sage (*Salvia munzii*), and San Diego County viguiera (*Viguiera laciniata*).

Nuttall's scrub oak (*Quercus dumosa*) was documented on-site. More recent information challenges the identification of this species on-site due to the inland location of the site and general coastal distribution of Nuttall's scrub oak. In fact, most records of Nuttall's scrub oak are restricted to areas of low elevation within sight of the ocean (Fryer 2012). Generally, occurrences of scrub oak in the Project's region would more likely be the common, inland species (i.e., California scrub oak [*Quercus berberidifolia*]), which was also documented on-site. However, without more concrete documentation, the current conclusion that Nuttall's scrub oak occurs on-site is assumed to be correct.

Appendix F of the Otay Ranch Resort Village Biological Resources Technical Report in **Appendix C-3** to this EIR includes a list of potentially occurring special-status plant species that were not recorded during focused plant surveys. Twenty-one additional special-status plant species were determined to have moderate potential to occur on the Project site, although many of these species are conspicuous species that would likely be detected during the extensive focused plant surveys performed for the Project.

Special-Status Wildlife Species

Forty-one special-status wildlife species were recorded on the Project site during focused surveys conducted from 1999 through 2009 or have moderate to high potential to occur based on range and habitat requirements, as summarized in **Table 2.3-3** and **Figure 2.3-3**. The site supports three federally listed animal species: California gnatcatcher (*Polioptila californica*), Quino checkerspot butterfly (*Euphydryas editha quino*), and San Diego fairy shrimp (*Branchinecta*

sandiegensis). Two CDFW fully protected species use the Project site for foraging purposes only: golden eagle (*Aquila chrysaetos*) and white-tailed kite (*Elanus leucurus*).

A number of other sensitive bird and reptile species occur on the site or have a moderate to high likelihood to occur on-site due to their distribution and the presence of suitable habitat. These include the following CDFW SSC: western spadefoot toad (*Spea hammondi*), southwestern pond turtle (*Actinemys marmorata pallida*), orange-throated whiptail (*Aspidozelis hyperythra beldingi*), San Diego (coast) horned lizard (*Phrynosoma coronatum blainvillii* population), coast patch-nosed snake (*Salvadora hexalepis virgulata*), two-striped garter snake (*Thamnophis hammondi*), northern red diamond rattlesnake (*Crotalus ruber ruber*), grasshopper sparrow (*Ammodramus savannarum*), northern harrier (*Circus cyaneus*), loggerhead shrike (*Lanius ludovicianus*), western burrowing owl (*Athene cunicularia*), summer tanager (*Piranga rubra*), Dulzura California pocket mouse (*Chaetodipus californicus femoralis*), northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), Townsend's western big-eared bat (*Coryorhinus townsendii townsendii*), spotted bat (*Euderma maculatum*), western red bat (*Lasiurus blossevillii*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), and San Diego desert woodrat (*Neotoma lepida intermedia*).

CDFW Watch List species found on-site are Cooper's hawk (*Accipiter cooperii*), sharp-shinned hawk (*Accipiter striatus*), Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), Bell's sage sparrow (*Amphispiza belli belli*), ferruginous hawk (*Buteo regalis*), California horned lark (*Eremophila alpestris actia*), and prairie falcon (*Falco mexicanus*).

Species considered sensitive by the County of San Diego only (i.e., species identified by the County of San Diego as Group 1 or Group 2 and not identified with special status by USFWS or CDFW) are coastal rosy boa (*Charina trivirgata roseofusca*), coastal western whiptail (*Aspidozelis tigris multiscutatus*), San Diego banded gecko (*Coleonyx variegatus abbotti*), San Diego ringneck snake (*Diadophis punctatus similis*), red-shouldered hawk (*Buteo lineatus*), turkey vulture (*Cathartes aura*), western bluebird (*Sialia mexicana*), barn owl (*Tyto alba*), and mountain lion (*Puma concolor*).

The Project site is occupied by a wide variety of avian species. Nearly all of these species are afforded protection by the MBTA. The MBTA generally protects all native species regardless of whether they are considered to be special status. A total of 81 species of birds (including special-status species noted in **Table 2.3-3**) were observed on-site or immediately off-site during recent Dudek surveys (see Appendix B of the Otay Ranch Resort Village Biological Resources Technical Report in **Appendix C-3** to this EIR). The following species were commonly observed on the Project site: California quail (*Callipepla californica*), mourning dove (*Zenaidura macroura*), greater roadrunner (*Geococcyx californianus*), Anna's hummingbird (*Calypte anna*), common raven (*Corvus corax*), wrentit (*Chamaea fasciata*), California thrasher (*Toxostoma redivivum*), California towhee (*Pipilo crissalis*), house finch (*Carpodacus mexicanus*), and lesser goldfinch (*Carduelis psaltria*). Other bird species less commonly seen included red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), white-throated swift (*Aeronautes saxatalis*), Bewick's wren (*Thryomanes bewickii*), Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), and western meadowlark (*Sturnella neglecta*). A variety of

raptor species likely use the site for foraging. Suitable nesting locations for tree-nesting raptors were minimal on-site. Cliff- and ground-nesting raptors may nest within the Project site.

2.3.1.3 *Jurisdictional Wetlands and Waterways*

Wetlands or other “waters” under the jurisdiction of the U.S. Army Corps of Engineers (ACOE) or CDFW were mapped for the 1,869-acre Project site and the 40.06-acre off-site road improvement area. There are several vegetated and unvegetated waters under the jurisdiction of ACOE, CDFW, the Regional Water Quality Control Board (RWQCB), and the County of San Diego. Only wetlands and waters on San Diego County lands are purview to County of San Diego jurisdiction. Jurisdictional waters, including wetlands, are depicted in **Figure 2.3-4**. **Table 2.3-4** provides a summary of the wetland habitat acreages on the Project site by jurisdiction, and the acreage of unvegetated waters.

In general, stream channels on the Project site drain from north to south. Drainages are dammed artificially in three areas to create stock ponds. Most of the drainages are relatively steep and narrow and do not hold water most of the year. A few areas exhibit less rapid flow and have, thus, developed more extensive hydrophytic vegetation and hydric soils. These areas occur intermittently along the stream channels and are typically represented by cismontane alkali marsh vegetation. Acreages of this community are presented in **Table 2.3-1**.

The drainages on the Project site generally flow into 12- to 36-inch-diameter culverts that flow under Otay Lakes Road and eventually drain into Lower Otay Reservoir. Jurisdictional waters, including wetlands, within the off-site mapping areas are generally extensions of the on-site stream channels.

Vernal pool complexes were mapped on two mesas in the southern part of the Project site (K6 and K8 mesas) (**Figure 2.3-5**). A third, the K9 mesa, is located on the relatively flat area approximately 2,000 feet east of the K8 mesa and was investigated for potential inundation repeatedly over a number of years during survey visits conducted for fairy shrimp in other locations on-site. No basins, signs of ponding, or indicator species were observed in the K9 mesa during the 1999, 2000, and 2008 surveys of the other vernal pools on the site.

A total of 34 potential vernal pools were studied during current surveys. In general, vernal pools on the Project site contain vernal pool indicator plant species, including wooly marbles (*Psilocarphus brevissimus*), graceful hairgrass (*Deschampsia danthonioides*), soft chess (*Bromus hordeaceus*), narrow-leaved filago (*Filago gallica*), broad-leaved filaree (*Erodium botrys*), fascicled tarplant (*Deinandra [Hemizonia] fasciculata*), and doveweed (*Eremocarpus setigerus*). In addition to some of the species listed above, pools that held water during most of the survey period were found to contain America pillwort (*Pilularia americana*), long-stalk water-starwort (*Callitriche longipedunculata*), pale spike-sedge (*Elocharis macrostachya*), wild heliotrope (*Heliotropium curvassavicum*), and aquatic crassula (*Crassula aquatica*). The surrounding vegetation on the western mesa (K6) consists of valley needlegrass grassland, and sparse coastal sage scrub is found on the eastern mesa (K8).

None of the vernal pools in the Project site have been confirmed to be connected to jurisdictional waters of the U.S. Based on observations of the site, it appears that water is collected on the mesa following rain events and eventually either percolates into the ground or evaporates. Because the vernal pools on the mesa may not be connected to any other waters of the U.S., they may not be under the jurisdiction of the ACOE, however, that decision has not yet been made by the ACOE. The pools are not under the jurisdiction of CDFW because the California Fish and Game Code only regulates stream channels (i.e., areas with a defined bed and bank) and adjacent wetlands. An RWQCB jurisdictional determination with regard to the vernal pools has not yet been made due to unclear guidance from RWQCB regarding its jurisdictional reach, as well as uncertainty in the law regarding the extent to which the Porter-Cologne Act extends to vernal pools.

Based on inundation records, fairy shrimp surveys, and floral inventory, the following potential vernal pools meet the previously applied ACOE jurisdictional criteria:

- K6 – Vernal Pools 1, 3, 5, 6, 7, 8, 9, 10, 12, and 13 (0.112 acre – total basin area)
- K8 – Vernal Pools 1, 2, 4, 5, 6, 7, 8, 10, 11, 13, 14, 15, 16, A1, and A4 (0.263 acre – total basin area)

2.3.1.4 Wildlife Corridors and Habitat Linkages

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 (1) ensuring the continual exchange of genes between populations, which helps maintain genetic diversity; (2) providing access to adjacent habitat areas, representing additional territory for foraging and mating; (3) allowing for a greater carrying capacity; and (4) 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. Although individual animals may not move through a habitat linkage, the linkage represents 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.

Ogden (1992b) conducted a comprehensive study of wildlife corridors within Otay Ranch. The study identified one regional corridor on the Project site: Jamul Mountains to Dulzura Creek, Regional Corridor R2 (**Figure 2.3-6**). The corridor currently allows animal movement between Dulzura Creek and the Jamul Mountains through the topographically steep drainage in the eastern portion of the Project site. A portion of the R2 linkage for animals following Dulzura Creek and connecting to the Jamul Mountains traverses the eastern portion of the Project site, continues off-site across Otay Lakes Road to the south, and then continues east along Dulzura Creek. The discussion of this linkage focuses on movement within Dulzura Creek and the resources located within Dulzura Creek, which are off-site and east of the Project site. This

regional corridor is connected to other off-site regional corridors that are located along the southern side of Lower Otay Lake (R5), and other corridors much farther away from the Project site that connect the east-facing slope of the Jamul Mountains with Dulzura Creek and continue north toward the San Miguel Mountains and south into the San Ysidro Mountains. Currently there are no culverts or other means for terrestrial wildlife species to safely move across Otay Lakes Road between the Project site and other habitat areas south of the site.

There are also local corridors for mammal movement that were designated in the Ogden study, including a corridor along the ridgeline north of the Project site (L3) and one that connects Dulzura Creek with the San Ysidro Mountains (L8). Additional local corridors farther away from the Project site are located in the streambed in the southern portion of Proctor Valley and within a drainage of the San Ysidro parcel. Habitat connectivity between the Project site and open space immediately surrounding Otay Lakes and south to Otay River and Otay Mountain is not identified in the Ogden study (1992b).

Based on the discussion provided by Ogden (1992), the general area may function to convey large and small mammals. Evidence of this is observation of bobcat, mule deer, and mountain lion sign. These species may use the path of least resistance, which, in this document, is assumed to be the drainage that is located within the eastern portion of the Project site. However, wildlife will also likely use ridgelines and the numerous dirt roads that are on-site, depending on time of day. It is unlikely that this R2 linkage functions specifically for winged species, such as coastal California gnatcatcher or Quino checkerspot butterfly, since these species would be able to move freely over the entire site. The entire area currently functions as a block of habitat and is not constrained to only function as a wildlife corridor between two larger blocks; therefore, the designation of a specific linkage is premature.

2.3.1.5 Regional Conservation Planning Context

The regional resource planning of the Project site and surrounding area has mainly been conducted through the Otay SRP and MSCP processes. These plans are important to the evaluation of impacts to biological resources because the loss of resources is anticipated by these plans and will be compensated through the assemblage of a preserve that will conserve Covered Species. The Otay SRP and the Otay Ranch RMP establish the mechanism for mitigation of overall impacts related to Otay Ranch, and provide for conservation and management of the entire Otay Ranch Preserve. Planning for the Otay Ranch RMP has been incorporated into the MSCP. The Otay Ranch Preserve represents an important part of the MSCP Subarea Plan South County Segment.

Otay SRP and Otay Ranch RMP

On a region-wide basis, the Otay SRP and Otay Ranch RMP are implemented through the RMP requirements of preserve conveyance and preserve management funding. These requirements have resulted in offers for conveyance of preserve land within Otay Ranch and the establishment of the Preserve Owner Manager (POM) to monitor, manage, and maintain these preserve areas. The conveyance and management of the preserve is being actively

coordinated between the City of Chula Vista and the County of San Diego (as the POM) in consultation with the resource agencies.

Based on preservation of the most sensitive resources known at the time and on development feasibility, the Village 13 site plan, as adopted in the Otay SRP (Otay Ranch 1993), preserved the northern portion of the Project site as preserve open space and identified the southern portion for development. The vernal pools located within the K6 and K8 mesas were within the development area; separate permits would be required for take of these resources.

Specific to the Project site, the Otay Ranch RMP identifies certain sensitive resources, including vernal pools, San Diego thornmint, and a corridor between the Jamul Mountains and the San Ysidro Mountains. The preservation requirements of these resources are summarized in the Mitigation Monitoring and Reporting Program (MMRP) for the Otay SRP DEIR. The requirements of the MMRP and the contribution that the Otay Ranch Resort Village makes to these requirements are provided in Appendix G of the Otay Ranch Resort Village Biological Resources Technical Report in **Appendix C-3** to this EIR.

The 3.3-acre patch of San Diego thornmint located in the western portion of the Project site was designated as preserve area in the Otay Ranch RMP. In addition, a 100-foot buffer was required around the patch of San Diego thornmint to provide protection from indirect effects. Changes in the Otay Ranch RMP preserve boundary would be subject to analysis and findings pursuant to the boundary modification provisions of the Otay Ranch RMP.

MSCP

Subsequent to adoption of the Otay SRP and Otay Ranch RMP, development plans for Otay Ranch, including Village 13, were incorporated into the MSCP as implemented by the MSCP Subarea Plan, with some alterations. With respect to the Project site, the most significant of these alterations was the re-designation of approximately 139.7 acres in the southeastern quarter of the site, adjacent to Otay Lakes Road, as preserve open space rather than development as part of the Baldwin Letter Agreement, which provided that the property owner amend the 1993 Otay SRP to designate this area as open space. The County MSCP South County Subarea Plan (County 1997) designated the area as “Otay Ranch areas where no ‘Take Permits’ will be issued.” The Baldwin Letter Agreement was incorporated into the MSCP. In 2001, the County of San Diego adopted GPA 98-03, which converted the eastern areas from developable to open space. This distinction is shown on the current Preserve boundary (**Figure 2.3-1**); however, the San Diego County General Plan was not updated accordingly, as shown in **Figures 3.3-2** and **3.3-3**. This change was made to achieve greater conservation in the eastern portions of Otay Ranch and to concentrate development in the western portions. Additionally, the preservation of the eastern portion of the Resort Village site was thought to aid in the establishment of a corridor between the Jamul and San Ysidro Mountains. The result was a total preserve size of approximately 1,115 acres for the Village 13 Project site.

In terms of permitting development of the site under the MSCP Subarea Plan, the portion of the Project site outside of the preserve boundary is identified as “Developable Area” and is an authorized take area. The portion of the Project site within the preserve is where no take is

authorized, and any proposed impacts in these areas would need to be permitted, consistent with the requirements of the MSCP Subarea Plan, through a boundary adjustment and equivalency analysis.

City of San Diego MSCP Cornerstone

The City of San Diego Water Department owns four large areas of land within the MSCP that contain valuable biological resources. They total 10,400 acres and are commonly referred to as the Cornerstone Lands because they are considered essential building blocks for creating the City of San Diego preserve system. Cornerstone lands within the vicinity of the Project site include the lands surrounding portions of Upper and Lower Otay Lakes. These Cornerstone Lands are known for high-quality coastal sage scrub, with a riparian forest area present where Dulzura Creek empties into Lower Otay Lake.

The San Diego City Charter restricts the use and disposition of Water Department utility assets and, thus, the Water Department must be compensated for any title restrictions placed on the Cornerstone Lands. To meet the policy objectives of the MSCP and comply with the San Diego City Charter, the City of San Diego entered into a Conservation Land Bank Agreement with the wildlife agencies for the Cornerstone Lands.

Specific to the Project site, the improvements to Otay Lakes Road, as required by the County of San Diego, would affect portions of Cornerstone Lands. These impacts have been minimized to the maximum extent possible through iterative site designs, and are quantified below. Coordination is ongoing with the City of San Diego on the permits and approvals that are required for the proposed widening of Otay Lakes Road.

2.3.2 Analysis of Project Effects and Determination as to Significance

This section describes the potential impacts to sensitive biological resources resulting from Project implementation. The Project has been designed around an extensive open space system in close coordination with USFWS and CDFW. Development areas have been moved specifically to preserve important wildlife corridors, species, and habitat, including vernal pools, San Diego fairy shrimp and the Quino checkerspot butterfly. As a result, potential impacts to sensitive biological resources have been greatly avoided and minimized. Nonetheless, potential impacts to sensitive biological resources are expected to occur as a result of Project implementation.

Biological resources may be either directly or indirectly impacted, and these impacts may be either permanent or temporary in nature. These key terms are defined below.

Direct: Direct impacts are caused by a project and occur at the same time and place as the project.

Indirect: Indirect impacts occur later in time or are farther removed in distance but are still reasonably foreseeable and attributable to project-related activities.

Permanent (Long-term): All impacts that result in irreversible effects or removal of biological resources are considered permanent. For the purposes of this analysis, long-term impacts are synonymous with permanent impacts.

Temporary: Any impacts considered to have reversible effects on biological resources may be viewed as temporary. As a general rule, impacts are considered temporary only if timely efforts would ensure that the impact is corrected to conditions equal to or superior to the conditions that existed prior to impact and if a monitoring program is implemented to ensure that the efforts are successful within a reasonable time frame.

Guidelines to determine the significance of each potential impact to sensitive biological resources are listed below. These significance guidelines are consistent with the County of San Diego's *Guidelines for Determining Significance and Report Format and Content Requirements – Biological Resources* (County Biology Guidelines) (County 2010) and Appendix G of the CEQA Guidelines. For organizational and presentation purposes, the order of the guidelines presented below differs slightly from the order presented in the County Biology Guidelines and CEQA Guidelines.

In accordance with these guidelines, a significant impact to biological resources would result if the Project would do the following:

1. Have a substantial adverse effect on riparian habitat or other sensitive natural communities (including riparian habitats) identified in local or regional plans, policies, or regulations, or by CDFW or USFWS.
2. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, marsh, vernal pool, coastal) through direct removal, filling, hydrological interruption, or other means.
3. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS.
4. Interfere substantially with the movement of a native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
5. Conflict with one or more local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, and/or conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

The following discussion of potential effects to sensitive biological resources is divided into five subject areas based on the significance guidelines outlined above: (1) riparian habitat and other sensitive natural communities; (2) federally protected wetlands; (3) special-status species; (4) wildlife movement and nursery sites; and (5) local policies, ordinances, and adopted plans. The analysis described herein for each of these subject areas considers the information presented in the County Biology Guidelines for each significance guideline. In addition to consideration of the criteria outlined in the County Biology Guidelines, the analysis below considers performance

relative to the biological requirements of the Otay Ranch RMP, particularly preservation goals for sensitive vegetation communities and special-status species (see Appendix G of the Otay Ranch Resort Village Biological Resources Technical Report in **Appendix C-3** to this EIR) when assessing significance of potential impacts.

As described in the following subsections, the Project would result in significant impacts to biological resources. However, significant impacts can be mitigated to a level below significance. Section 2.3.5 provides mitigation measures that reduce each significant impact to a level below significance.

2.3.2.1 Riparian Habitat and Other Sensitive Natural Communities

Guidelines for the Determination of Significance

A significant impact to riparian habitat and other sensitive natural communities would occur if the Project would do the following:

- Have a substantial adverse effect on riparian habitat or another sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFW or USFWS.

Rationale for Selection of Guidelines

This significance threshold is based on Appendix G of the CEQA Guidelines. Sensitive vegetation communities (including riparian communities) were mapped within the Project site and on off-site areas along Otay Lakes Road (see Section 2.3.1.1). In addition, jurisdictional wetlands and waterways were delineated on the Project site and on off-site areas (see Section 2.3.1.3). This guideline requires evaluation of the Project's impacts on these sensitive vegetation communities and jurisdictional wetlands and waterways.

Analysis

The analysis of direct and indirect impacts to riparian habitat and other sensitive natural communities considers the criteria outlined in the County Biology Guidelines. Each criterion is listed below, followed by a discussion of the potential effects associated with the Project relative to the criterion.

Criterion A: Project-related grading, clearing, construction, or other activities would temporarily or permanently remove sensitive native or naturalized habitat (as listed in Table 5 of the County Biology Guidelines, excluding those without a mitigation ratio) on or off the Project site.

On-Site Removal of Sensitive Vegetation Communities

Permanent and temporary direct impacts to sensitive vegetation communities within the Project site are summarized in **Table 2.3-5** and depicted in **Figure 2.3-7**. Permanent removal of sensitive

vegetation communities would total 786.8 acres and result from grading, fuel management, and installation of a water tank and detention basins. Permanent impacts to sensitive vegetation communities resulting from grading and fuel management would total approximately 778.8 acres outside of the proposed Otay Ranch Preserve; permanent impacts to sensitive vegetation communities resulting from installation of the water tank (including an access road) and detention basins would total approximately 8.1 acres inside the proposed Otay Ranch Preserve. Infrastructure such as the water tank, access road for the water tank, and detention basins are allowable land uses within the Otay Ranch Preserve per the Otay Ranch RMP.

Temporary removal of sensitive vegetation communities would total approximately 19 acres and result from slope manufacturing outside neighborhoods and installing an underground water line. These impacts would occur within the Otay Ranch Preserve and would be restored following construction of the Project.

Proposed preserve vegetation community acreages are shown in **Table 2.3-6** and includes those areas not impacted by grading or fuel modification zones, as well as areas proposed to be restored and areas that are considered to be allowable as a land use within the preserve (i.e., detention basins, the water tank, and the road that provides access to the water tank). The proposed preserve totals approximately 1,089 acres, of which 1,083 acres would support sensitive vegetation communities (**Table 2.3-6**). The remaining 6 acres would consist of non-sensitive vegetation communities and land cover types (i.e., developed land, disturbed habitat, and stock pond).

A trail is proposed as part of the Project. However, the location of the trail is entirely within the impact area/project development footprint and will be separated from the preserve by protective fencing. Thus, no biological impacts (including impacts to sensitive vegetation communities) would result from the construction or use of the trail that are not already included in the impact analysis for the Project.

Project design features would reduce and avoid on-site impacts to sensitive vegetation communities to the extent feasible, and the Project would establish a large preserve supporting a variety of sensitive vegetation communities. However, impacts to disturbed and non-disturbed coastal sage scrub (**Impact BI-1a**), disturbed and non-disturbed chamise chaparral (**Impact BI-1b**), scrub oak chaparral (**Impact BI-1c**), southern mixed chaparral (**Impact BI-1d**), valley needlegrass grassland (**Impact BI-1e**), nonnative grassland (**Impact BI-1f**), disturbed and non-disturbed cismontane alkali marsh (**Impact BI-1g**), mulefat scrub (**Impact BI-1h**), southern willow scrub (**Impact BI-1i**), and open water (**Impact BI-1j**) are considered *significant* absent mitigation. Temporary impacts to sensitive upland vegetation communities that are adjacent to the existing Otay Ranch Preserve and consist of manufactured slopes that are appropriate to restore are also considered *significant* absent mitigation (**Impact BI-1k**).

Off-Site Removal of Sensitive Vegetation Communities

Implementation of the Project would result in the permanent removal of sensitive vegetation communities off-site along Otay Lakes Road. Off-site impacts to sensitive vegetation communities would total approximately 19 acres and would occur within City of San Diego

Cornerstone Lands, County of San Diego lands (Otay Lakes right-of-way), lands within the City of Chula Vista, and areas within Otay Ranch but outside of the Project site (i.e., off-site Otay Ranch lands). **Table 2.3-7** summarizes the impacts to these off-site areas based on vegetation community type and location of the off-site impact; **Figure 2.3-7** depicts impacts to off-site areas. The significance of off-site impacts to sensitive vegetation communities is addressed for each jurisdiction below.

- City of San Diego MSCP Cornerstone Lands – Otay Lakes Road is currently adjacent to City of San Diego MSCP Cornerstone Lands around Lower Otay Lake. Direct impacts to City of San Diego Cornerstone Lands as a result of the widening of Otay Lakes Road total 11.09 acres. Of this total, 9.47 acres would occur to sensitive upland communities, 0.82 acre would occur to wetlands, and 0.80 acre would occur to non-sensitive communities. The Project includes a General Plan Amendment to reclassify Otay Lakes Road as a “Boulevard with Raised Median,” which would reduce impacts to Cornerstone Lands by 48.5% compared to a “Four-Lane Major Road.” Regardless, impacts to Cornerstone Lands are considered *significant* absent mitigation (**Impact BI-2**).
- Lands within City of Chula Vista – Direct impacts to lands within the City of Chula Vista as a result of the widening of Otay Lakes Road total 3.70 acres. Of this total, 1.51 acres of impacts are to sensitive upland communities and 2.19 acres of impacts are to non-sensitive communities. The off-site impact areas within the City of Chula Vista are consistent with the city’s planning guidelines and do not conflict with the goals or standards of the city’s Subarea Plan since the impacts are for the road improvements. However, compliance with the City of Chula Vista’s Habitat Loss and Incidental Take (HLIT) Ordinance would require conformance with several standard measures to address habitat loss. Vegetation communities considered sensitive under the City of Chula Vista’s Subarea Plan are those listed as Tier I through Tier III (rare uplands to common uplands), as well as wetlands. Therefore, impacts to nonnative grassland (Tier III) and disturbed and non-disturbed coastal sage scrub (Tier II) on lands within the City of Chula Vista are considered *significant* absent mitigation (**Impact BI-3**). Impacts to Tier IV habitats (other uplands) on lands within the City of Chula Vista, consisting of disturbed land and developed land, are considered *less than significant*.
- County of San Diego Lands – Direct impacts to lands within the County of San Diego (Otay Lakes Road right-of-way) as a result of the widening of Otay Lakes Road total 20.82 acres. Of this total, 3.34 acres would occur to sensitive upland communities and 17.47 acres would occur to non-sensitive communities, including 17.21 acres of existing Otay Lakes Road. This off-site area is located outside of the Otay Ranch boundary and is within the jurisdiction of the County of San Diego. All of the impacts are within the right-of-way of Otay Lakes Road. Impacts are required to comply with the regulations set forth by the County of San Diego. In compliance with the MSCP Subregional Plan and the County of San Diego Subarea Plan (County MSCP) (County 1997), the County of San Diego established the Biological Mitigation Ordinance (BMO) (San Diego County Code Title 8, Division 6, Chapter 5) to provide the requirements and mitigation measures necessary for projects within the plan area. Certain areas within the County MSCP were designated as “take areas” within the South County Segment of the MSCP. The take areas designated in the County MSCP were developed through

a comprehensive planning effort with the affected jurisdictions, and describe areas that are not subject to further mitigation because direct and cumulative impacts to MSCP Covered Species were considered in the overall MSCP planning effort. The County of San Diego specifically exempted the take areas from the BMO in Section 86.503, Exemptions, (a)(4), which states that “the chapter shall not apply to any Take Authorization Area approved by the Board of Supervisors and the Wildlife Agencies as part of the County Subarea Plan, as shown on Attachment B of Document No. 0769999 on file with the Clerk of the Board or any approved Habitat Loss Permit issued pursuant to 16 U.S.C. Sec. 1533(d).” The right-of-way for Otay Lakes Road is located within the South County Segment, and the proposed impact area is designated as “take authorized.” As such, and in accordance with the County MSCP and BMO, no additional biological mitigation is required for development to occur. The “take” as defined by the Endangered Species Act already has been adequately mitigated for in the form of land set aside as “Hard Line” preserves during the negotiations between the landowners, wildlife agencies, and County of San Diego during preparation of the Subarea Plan. The off-site impact areas are consistent with the requirements for the road improvements per the County of San Diego, and do not conflict with the goals or standards of the County’s Subarea Plan. Thus, impacts are considered *less than significant*.

- Off-Site Otay Ranch Lands – Direct impacts to areas within Otay Ranch but outside of the Project site total 4.45 acres and result from widening Otay Lakes Road. Of this total, 3.75 acres would occur to sensitive upland communities and 0.70 acre would occur to non-sensitive communities. This off-site area is located outside of the Otay Ranch Resort Village boundary but within Otay Ranch. Impacts to these off-site Otay Ranch lands are subject to the requirements of the Otay Ranch RMP. Because the impacts to off-site Otay Ranch lands are associated with road improvements as required by the County of San Diego, conveyance per the Otay Ranch RMP is not required, and no mitigation is required. Thus, impacts to vegetation communities within Otay Ranch are considered *less than significant*.

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

On-Site Impacts to Jurisdictional Waters and Wetlands

Permanent and temporary impacts to 0.24 acre of wetlands would occur on-site as a result of the Project (**Table 2.3-5**). Approximately 0.03 acre of the total 0.24 acre of wetland impacts is under the jurisdiction of CDFW only; the remaining 0.21 acre is under the jurisdiction of ACOE, CDFW, and RWQCB. Impacts to jurisdictional wetlands are depicted in **Figure 2.3-8**.

In addition, the Project would permanently and temporarily impact jurisdictional waters. These jurisdictional waters were mapped within upland vegetation communities and, thus, are not

included in **Table 2.3-8**. Permanent impacts to jurisdictional waters within the Project site would total approximately 1.03 acres (i.e., approximately 0.99 acre of ephemeral waters and 0.04 acre of intermittent waters) (**Table 2.3-8**). Temporary impacts to jurisdictional waters (ephemeral waters) within the Project site would total approximately 0.07 acre (**Table 2.3-8**). Impacts to jurisdictional waters are depicted in **Figure 2.3-8**. Permanent and temporary impacts to on-site jurisdictional waters and wetlands are considered *significant* absent mitigation (**Impact BI-4**).

The Project would also result in permanent impacts to potential jurisdictional vernal pool habitat. A definitive jurisdictional determination with regard to vernal pools has not yet been made due to unclear guidance from RWQCB regarding its jurisdictional reach, as well as uncertainty in the law regarding the extent to which the Porter-Cologne Act extends to vernal pools. However, potential jurisdiction over vernal pools was determined by applying the previously applied ACOE jurisdictional criteria (i.e., inundation, occupied by a vernal pool plant indicator species, or occupied by a vernal pool branchiopod species). The Project includes development on the K6 mesa, resulting in the destruction of approximately 4,576 square feet (0.11 acre) of potentially jurisdictional vernal pool habitat. The K6 vernal pools were last studied in 2008, and have been documented to not become inundated. Thus, these pools would be considered low to moderate quality. Nevertheless, permanent impacts to potential jurisdictional vernal pools are considered *significant* absent mitigation (**Impact BI-5**). Potential jurisdictional vernal pools on the K8 mesa (a total of approximately 0.26 acre) would be preserved as part of the Project. **Figure 2.3-5** depicts the locations of vernal pools.

In addition to these direct impacts, the Project would result in indirect impacts to jurisdictional waters and vernal pools. Potential indirect impacts to jurisdictional waters include runoff, sedimentation, erosion, exotics introduction, and habitat-type conversion in the short and long term, particularly within waterways that drain into Otay Lakes and vernal pools located on the K8 mesa. Potential indirect impacts to jurisdictional waters and vernal pools are considered *significant* absent mitigation (**Impact BI-6**).

Off-Site Impacts to Jurisdictional Waters and Wetlands

Permanent and temporary impacts to 0.83 acre of jurisdictional wetlands would occur off-site as a result of Project implementation (**Table 2.3-7**). In addition, approximately 0.02 acre of permanent impacts to ephemeral waters under the jurisdiction of ACOE, CDFW, and RWQCB would occur off-site (**Table 2.3-8**). These jurisdictional ephemeral waters were mapped within upland vegetation communities and, thus, are not included in **Table 2.3-7**.

Off-site impacts would occur within City of San Diego Cornerstone Lands and County of San Diego lands (Otay Lakes right-of-way). The significance of off-site impacts to jurisdictional wetlands and waters is addressed for each jurisdiction below.

- City of San Diego MSCP Cornerstone Lands – Direct impacts to jurisdictional features within City of San Diego Cornerstone Lands as a result of the widening of Otay Lakes Road total 0.82 acre of wetlands (**Table 2.3-7**) and 0.02 acre of ephemeral waters (**Table 2.3-8**). The City of San Diego requires projects to demonstrate that they avoid or reduce impacts to Cornerstone Lands to the maximum extent feasible. The Project includes a

General Plan Amendment to reclassify Otay Lakes Road to a “Boulevard with Raised Median,” which reduces impacts to Cornerstone Lands by 48.5% compared to a “Four-Lane Major Road.” Impacts to wetlands specifically are reduced from 2.01 acres to 0.82 acre per the General Plan Amendment. Regardless, wetland impacts on Cornerstone Lands are considered *significant* absent mitigation (**Impact BI-7**).

- County of San Diego Lands – Direct impacts to jurisdictional wetlands within the County of San Diego (Otay Lakes Road right-of-way) as a result of the widening of Otay Lakes Road total 0.1 acre (**Table 2.3-7**). This off-site area is located outside of the Otay Ranch boundary and is subject to the County of San Diego Resource Protection Ordinance. The off-site impact areas are consistent with the requirements for the road improvements per the County of San Diego, and do not conflict with the goals or standards of the County of San Diego’s Subarea Plan; however, compliance with the County of San Diego’s Resource Protection Ordinance would require conformance with several standard measures to address habitat loss. Impacts to wetland habitats and ephemeral waters are considered *significant* absent mitigation (**Impact BI-8**).

Criterion C: The Project would draw down the groundwater table to the detriment of groundwater-dependent habitat, typically a drop of 3 feet or more from historical low groundwater levels.

The regional groundwater table is at least 300 feet below the surface. During the rainy season, perched water conditions may develop within the drainage areas where none previously existed due to the permeability characteristics of the surficial geologic units encountered; however, this seepage is dependent on seasonal precipitation and varies as a result. The Project is not proposing any grading or other feature that would disturb the regional groundwater table, and *no impact* would occur.

Criterion D: The Project would cause indirect impacts, particularly at the edge of proposed development adjacent to proposed or existing open space or other natural habitat areas, to levels that would likely harm sensitive habitats over the long term.

Indirect impacts are difficult to identify and quantify, but are presumed to occur as a result of the Project. Indirect effects primarily result from adverse “edge effects”: either short-term indirect impacts related to construction or long-term chronic indirect impacts associated with urban development in proximity to biological resources within natural open space.

During construction of the Project, edge effects to vegetation communities may include dust, which could disrupt plant vitality in the short term, or construction-related soil erosion and runoff. Long-term indirect impacts on vegetation communities most likely would occur as a result of trampling of vegetation by humans and domestic pets, invasion by exotic species, alteration of the natural fire regime, and exposure to urban pollutants. Potential indirect impacts to vegetation communities are considered *significant* absent mitigation (**Impact BI-9**).

Criterion E: The Project does not include a wetland buffer adequate to protect the functions and values of existing wetlands.

The Project site is not subject to the RPO (see Section 86.605 of the RPO); thus, County of San Diego guidelines for wetland buffers do not apply to the Project site. However, the Otay Ranch RMP does provide for buffers from certain sensitive habitat. The Project would establish a 100-foot buffer around the development in accordance with the Preserve Edge Plan (**Appendix C-23**). In addition, the Project would establish a 100-foot buffer around the watershed of preserved vernal pools on the K8 mesa. The 100-foot buffers associated with the Project would be adequate to protect the functions and values of wetlands that would not be permanently impacted by the Project.

2.3.2.2 Federally Protected Wetlands

Guidelines for the Determination of Significance

A significant impact to federally protected wetlands would occur if the Project would do the following:

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

Rationale for Selection of Guidelines

This significance threshold is based on Appendix G of the CEQA Guidelines. Federally protected wetlands and waters were delineated within the Project site and on off-site areas along Otay Lakes Road (see Section 2.3.1.3). This guideline requires evaluation of the Project impacts on these federally regulated wetlands and waterways.

Analysis

In accordance with the County Biology Guidelines, the analysis of direct and indirect impacts to federally protected wetlands considers Criteria B, C, and E for riparian habitats and other sensitive vegetation communities. The Project would result in *significant* direct and indirect impacts to federally protected wetlands absent mitigation (**Impact BI-4 – BI-8**). Refer to Criteria B, C, and E in Section 2.3.2.1 for a discussion of impacts to federally protected wetlands resulting from Project implementation.

2.3.2.3 Special-Status Species

Guidelines for the Determination of Significance

A significant impact to special-status species would occur if the project would do the following:

Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS.

Rationale for Selection of Guidelines

This significance threshold is based on Appendix G of the CEQA Guidelines. This guideline requires evaluation of the Project's impacts on species afforded protections or otherwise identified as sensitive by federal, state, and/or local agencies.

Analysis

Impacts to special-status plant and wildlife species are summarized in **Table 2.3-9** and **Table 2.3-10**, respectively. Generally, impacts to special-status species include destruction of occupied or suitable habitat and potential removal, injury, or mortality of individuals. Habitat destruction would occur as result of grading, fuel management, installation of a water tower (including access road) and detention basins, and improvements to Otay Lakes Road. Removal, injury, or mortality of special-status plant and wildlife species may result during grading and other construction-related activities within occupied habitat.

The following analysis of direct and indirect impacts to special-status species considers the criteria outlined in the County Biology Guidelines. Each criterion in the County Biological Guidelines is listed below, followed by a discussion of the potential effects associated with the Project relative the criterion. The requirements of the Otay Ranch RMP (see Appendix G of the Otay Ranch Resort Village Biological Resources Technical Report in **Appendix C-3** to this EIR) were considered when determining significance of impacts to special-status species. Criteria D, J, and K of the County Biology Guidelines are not applicable to the Project, given that impacts to suitable and occupied habitat for arroyo toad (*Anaxyrus californicus*), coastal cactus wren (*Campylorhynchus brunneicapillus*), and Hermes copper butterfly (*Lycaena hermes*) are not anticipated to result from implementation of the Project; therefore, these criteria are not addressed in detail below.

Criterion A: The Project would impact one or more individuals of a species listed as federally or state endangered or threatened.

Federally and State Listed Plants

The Project would result in permanent impacts to the federally endangered and state threatened San Diego thornmint (*Acanthomintha ilicifolia*) (**Table 2.3-9; Figure 2.3-9**). Two populations of this species were mapped within the Project site, covering approximately 0.1 acre and 3.3 acres. The 0.1-acre population of San Diego thornmint would be permanently impacted by the Project. The 3.3-acre population of San Diego thornmint would be avoided and preserved as part of the Project, resulting in preservation of 97% of the occupied acreage on-site. This preservation level exceeds the requirement of the Otay Ranch RMP (i.e., 95% preservation), thus, impacts to the 0.1-acre population of San Diego thornmint are considered *less than significant*.

Two additional federally and state-listed plants were determined to have moderate potential to occur on-site based strictly on their distribution, habitat, and soils requirements: the federally listed endangered San Diego ambrosia (*Ambrosia pumila*) and federally listed threatened and state-listed endangered Otay tarplant (*Deinandra [Hemizonia] conjugens*) (see Appendix F of

the Otay Ranch Resort Village Biological Resources Technical Report in **Appendix C-3** to this EIR). Potential impacts to these species are considered *less than significant* because the potential for impact is low given that these species were not detected on-site despite extensive surveys.

Federally and State Listed Wildlife

The Project would result in impacts to three federally listed wildlife species: San Diego fairy shrimp (*Branchinecta sandiegonensis*; federally endangered), Quino checkerspot butterfly (*Euphydryas editha quino*; federally endangered), coastal California gnatcatcher (*Polioptila californica californica*; federally threatened) (**Table 2.3-10**). Impacts to each of these species are discussed and quantified below.

Ten vernal pool basins within the Project site were confirmed occupied by San Diego fairy shrimp. Of these 10 basins, one occupied basin totaling approximately 0.005 acre would be permanently impacted by the Project. The remaining nine basins would be preserved as part of the Project, resulting in preservation of 97% of the occupied vernal pool basins on-site. Although this preservation level exceeds the requirements of the Otay Ranch RMP (i.e., 95% preservation), impacts to San Diego fairy shrimp are considered *significant* absent mitigation because this species is not covered by the Otay Ranch RMP or the MSCP Subarea Plan (**Impact BI-10**).

A total of 127 individual Quino checkerspot butterflies were recorded over 4 years of surveys on the Project site. The species was observed most frequently along ridgelines and hilltops in the northern and eastern portions of the Project site. Twenty of the 127 total observation locations would be permanently impacted by the Project, which is approximately 16% of the total number of individuals observed on-site during 4 years of surveys (**Table 2.3-10; Figure 2.3-10**). The remaining 107 observation locations would be preserved as part of the Project, resulting in preservation of 84% of observation locations. The Project would also permanently impact 483 acres of suitable Quino checkerspot butterfly habitat, which overlaps a portion of the Otay Unit of designated critical habitat for the species (**Figure 2.3-11 and Figure 2.3-12**). The total acreage of critical habitat within the Otay Unit is 1,782 acres; the Project would impact approximately 27% of this critical habitat unit. The proposed MSCP Subarea Plan Quino Checkerspot Butterfly Amendment (Quino Amendment), which has been used as guidance for this analysis, would require 2:1 preservation of suitable habitat for impacts to the Quino checkerspot butterfly, for a total of 966 acres. The Project proposes to include 962 acres of suitable or occupied coastal sage scrub and 4 additional acres of Quino checkerspot butterfly habitat restoration equaling 966 acres of total habitat mitigation, meeting the proposed Quino Amendment mitigation ratio. This acreage is available on-site within the proposed Preserve. Because the proposed Quino Amendment has not been adopted, impacts to Quino checkerspot butterfly individuals and potentially occupied habitat are considered *significant* absent mitigation (**Impact BI-11**).

A total of 32 coastal California gnatcatcher locations were recorded during Project surveys; 29 locations were documented on the Project site and three were documented off-site on Cornerstone Land. Of these 32 locations, 14 locations would be impacted by the Project (**Figure 2.3-10**). The remaining locations would be preserved as part of the Project, resulting in

preservation of 56% of documented coastal California gnatcatcher locations. In addition, the Project would permanently impact 483 acres of suitable coastal California gnatcatcher habitat. This represents approximately 33% of the total amount of suitable habitat within the Project site; the remaining potentially occupied habitat (approximately 962 acres) would be preserved as part of the Project. Preservation of 56% of coastal California gnatcatcher observations and suitable habitat would exceed the level required by the Otay Ranch RMP (i.e., 52%); thus, impacts are considered *less than significant*.

Criterion B: The Project would impact an on-site population of a County List A or B plant species, or a County Group I animal species, or a species listed as a state Species of Special Concern.

County List A and List B Plants

The Project would result in impacts to eight plant species on either County List A or List B: San Diego thornmint (List A), variegated dudleya (*Dudleya variegata*; List A), San Diego goldenstar (*Bloomeria clevelandii*; List A), Nuttall's scrub oak (*Quercus dumosa*; List A), California adolphia (*Adolphia californica*; List B), San Diego barrel cactus (*Ferocactus viridescens*; List B), San Diego marsh-elder (*Iva hayesiana*; List B), and Munz's sage (*Salvia munzii*; List B) (**Table 2.3-9; Figure 2.3-9**). The significance of impacts to San Diego thornmint is addressed above under Criterion A, given that the species is federally and state listed.

As shown in **Table 2.3-9**, the Project achieves the Otay Ranch RMP preservation requirements for Munz's sage and variegated dudleya. Thus, these impacts are considered *less than significant*. For San Diego marsh-elder, the Otay Ranch RMP indicates that 75% must be preserved. The Project would preserve 47% of the species on-site site, thereby contributing to the ranch-wide RMP goal. Thus, impacts to San Diego marsh-elder are considered *less than significant*. Impacts to San Diego barrel cactus and San Diego goldenstar, species adequately covered in the MSCP Subarea Plan, are mitigated by following the provisions set out in the Otay Ranch RMP and MSCP Subarea Plan. Impacts to California adolphia, however, are considered *significant* absent mitigation (**Impact BI-12**).

As noted in Section 2.3.1.2, recent information challenges the identification of Nuttall's scrub oak on-site. Due to the atypical location, the small area (6.2 acres) and isolated number of plants proposed to be impacted, and the potential that individuals are the more common California scrub oak, impacts to Nuttall's scrub oak are considered *less than significant*.

Eighteen additional County List A and List B plants were determined to have moderate potential to occur on-site based strictly on their distribution, habitat, and soils requirements: San Diego ambrosia (addressed above under Criterion A), Otay tarplant (addressed above under Criterion A), Dean's milk-vetch (*Astragalus deanei*), coast salt-scale (*Atriplex pacifica*), south long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*), Lakeside ceanothus (*Ceanothus cyaneus*), Campo clarkia (*Clarkia delicata*), summer holly (*Comarostaphylis diversifolia* ssp. *diversifolia*), Tecate cypress (*Hesperocyparis forbesii*), Tecate tarplant (*Deinandra floribunda*), San Diego gumplant (*Grindelia hallii*), felt-leaved monardella (*Monardella hypoleuca* ssp. *lanata*), snake cholla (*Cylindropuntia californica* var. *californica*), Moreno currant (*Ribes*

canthariforme), San Miguel savory (*Clinopodium chandleri*), Parry's tetraococcus (*Tetraococcus dioicus*), San Diego bur-sage (*Ambrosia chenopodiifolia*), and purple stemodia (*Stemodia durantifolia*) (see Appendix F of the Otay Ranch Resort Village Biological Resources Technical Report in **Appendix C-3** to this EIR). Potential impacts to these species are considered ***less than significant*** because the potential for impact is low given that these species were not detected on-site despite extensive surveys.

County Group I Wildlife and State Species of Special Concern

The Project would result in impacts to 22 species listed as a County Group I species and/or a CDFW SSC (**Table 2.3-10**). Of these 22 species, the significance of impacts to San Diego fairy shrimp, Quino checkerspot butterfly, and coastal California gnatcatcher are addressed under Criteria A, given that they are federally listed as endangered or threatened.

Impacts to the 19 remaining County Group I species and CDFW SSC are considered ***less than significant***. Conservation provided through the Otay Ranch RMP and MSCP Subarea Plan conformance/equivalency would provide mitigation for direct impacts to four species: orange-throated whiptail (*Aspidoscelis hyperythra*), San Diego [coast] horned lizard (*Phrynosoma blainvillii*), Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), and burrowing owl (*Athene cunicularia*). Impacts to the remaining 15 species are considered ***less than significant*** due to limited sensitivity, limited amount of impacts, or the lack of use of the Project site for breeding. In addition, the Project's contribution to the MSCP and Otay Ranch RMP Preserve would provide suitable habitat in a configuration that preserves genetic exchange and species viability.

Criterion C: The Project would impact the local long-term survival of a County List C or D plant species or a County Group II animal species.

County List C and D Plants

Impacts to County List C plants are not anticipated. The Project would result in impacts to six County List D species: western dichondra (*Dichondra occidentalis*), Palmer's grappling hook (*Harpagonella palmeri*), southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*), small-flowered microseris (*Microseris douglasii* ssp. *platycarpa*), golden-rayed pentachaeta (*Pentachaeta aurea* ssp. *aurea*), and San Diego County viguiera (*Viguiera laciniata*) (**Table 2.3-9**). Impacts to these species are considered ***less than significant*** because these species are of low sensitivity, and the on-site populations are not significant in terms of the ability for each of these species to persist. In addition, the species either do not occur on-site in a population that is considered regionally significant or are very common on-site and have adequate preservation.

County Group II Wildlife

The Project would result in impacts to 12 County Group II wildlife species (**Table 2.3-10**). Of these 12 species, the significance of impacts to eight species are addressed under Criteria B given that they are listed as SSC by CDFW: orange-throated whiptail, San Diego [coast] horned lizard, coast patch-nosed snake (*Salvadora hexalepis virgultea*), red-diamond rattlesnake (*Crotalus*

ruber), Dulzura California pocket mouse (*Chaetodipus californicus femoralis*), northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), and San Diego desert woodrat (*Neotoma lepida intermedia*). Impacts to the remaining four County Group II wildlife species are considered **less than significant** because these species are of low sensitivity, and the on-site populations are not significant in terms of the ability for each of these species to persist. In addition, the species either do not occur on-site in a population that is considered regionally significant or are very common on-site and have adequate preservation.

Criterion E: The Project would impact golden eagle habitat.

Golden eagle (*Aquila chrysaetos*) was observed in 2008 in the eastern and north-central portion of the Project site. The Project site is located within a mapped primary foraging area for a known territory, located more than 3 miles from the site. A total of 1,660 acres of suitable golden eagle foraging habitat is present on the Project site. The Project would result in impacts to approximately 620 acres of suitable golden eagle foraging habitat (**Table 2.3-10**). A total of 1,015 acres of foraging habitat would be preserved on-site as part of the Project, representing 61% of the foraging habitat on-site. With implementation of the Otay Ranch RMP and associated conveyance of preserve land, impacts to golden eagle foraging habitat are considered **less than significant** due to the 1,015 acres of suitable foraging habitat preserved on-site.

Criterion F: The Project would result in the loss of functional foraging habitat for raptors.

Golden eagle, sharp-shinned hawk (*Accipiter striatus*), turkey vulture (*Cathartes aura*), and other raptors likely use the site for foraging (see Appendix B of the Otay Ranch Resort Village Biological Resources Technical Report in **Appendix C-3** to this EIR for complete list of raptors recorded on-site). Impacts to golden eagle foraging habitat are discussed above under Criterion E. Loss of foraging habitat is quantified for special-status raptor species in **Table 2.3-10**, and impacts to vegetation communities (particularly open scrub and grassland habitats) within the Project site that provide foraging habitat for the other raptors that occur on-site are summarized in **Table 2.3-5**.

The Otay Ranch Raptor Management Study (Ogden Environmental and Energy Services 1992), prepared in accordance with the Otay Ranch RMP (Phase 2), provides the framework and guidelines for how raptor resources (including foraging habitat) will be preserved ranch-wide. The Otay Ranch Raptor Management Study provides a discussion on the species composition, identification of important habitat areas, a description of area-use by specific species, and management recommendations. Recommendations include monitoring of populations, revegetation of the Otay River Valley and portions of Proctor Valley with large trees for nesting and perching, designation of buffer zones for nesting locations of specific species, and development of environmental awareness programs.

The significance of impacts to raptor foraging habitat is based on consistency with the Otay Ranch Raptor Management Study. The Project would comply with applicable recommendations of the Otay Ranch Raptor Management Study and would preserve a significant amount of space that provides potential foraging habitat for a variety of raptor species (i.e., approximately 1,083

acres). Therefore, the loss of functional raptor foraging habitat associated with the Project is considered *less than significant*.

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

Totalling approximately 1,869 acres, the Project site is large enough to be considered a core wildlife area per the County Biology Guidelines. Approximately 786.1 acres of potential wildlife habitat (i.e., all vegetation communities within the Project site except developed land) would be permanently impacted with implementation of the Project. Approximately 1,089 acres of potential wildlife habitat would be preserved on-site as natural open space, in part, for the benefit of wildlife species. These 1,089 acres are expected to be sufficient to support viable populations of common and sensitive wildlife species known to occur on the Project site. Therefore, impacts to this core wildlife area are considered *less than significant*.

Criterion H: The Project would cause indirect impacts, particularly at the edge of proposed development adjacent to proposed or existing open space or other natural habitat areas, to levels that would likely harm sensitive species over the long term.

Most of the indirect impacts to vegetation communities cited above under Section 2.3.2.1, Criterion D can also affect sensitive plants. Of particular sensitivity is the preserved population of San Diego thornmint, adjacent to the Otay Lakes Road, in the west-central portion of the site. During construction of the project, indirect effects may include dust, which could disrupt plant vitality in the short term, or construction-related soil erosion and runoff. Long-term edge effects could include intrusions by humans and domestic pets and possible trampling of individual plants, invasion by exotic plant and wildlife species, exposure to urban pollutants (fertilizers, pesticides, herbicides, and other hazardous materials), soil erosion, litter, fire, and hydrologic changes (e.g., surface and groundwater level and quality). Indirect impacts to sensitive plant species are considered *significant* absent mitigation (**Impact BI-13**).

Short-term indirect impacts to sensitive wildlife species, particularly nesting bird species, include construction noise impacts. Species potentially affected by such activities include, but are not limited to, coastal California gnatcatcher and nesting raptors. Indirect impacts to sensitive bird species may occur if construction is conducted during the breeding season for coastal California gnatcatcher (February 15 to August 15) and raptors (January 15 to July 31). Long-term indirect impacts to sensitive wildlife species would also occur as a result of the project. Potential long-term indirect impacts would consist of lighting, human activity in the preserve, noise, and domestic animal predation. Indirect impacts to sensitive wildlife species are considered *significant* absent mitigation (**Impact BI-14**).

Criterion I: The Project would impact occupied burrowing owl habitat.

A total of 190 acres of suitable burrowing owl (*Athene cunicularia*) habitat was identified within the Project site. Although burrowing owls have not been observed recently (most recent

observation in 2000), the species may occupy suitable portions of the Project site in the future. Approximately 137 acres of suitable, potentially occupied burrowing owl habitat would be permanently impacted by the Project (**Table 2.3-10**). The remaining acreage of suitable burrowing owl habitat within the Project site (approximately 51 acres or 27% of the total suitable habitat on-site) would be preserved as part of the Project. The Project contributes to ranch-wide conservation goals of the Otay Ranch RMP for burrowing owl. Therefore, impacts to burrowing owl habitat would be considered *less than significant*.

Criterion L: The Project would impact nesting success of the following sensitive bird species through grading, clearing, fire fuel modification, and/or other noise-generating activities such as construction: coastal cactus wren, coastal California gnatcatcher, least Bell's vireo, southwestern willow flycatcher, tree-nesting raptors, ground-nesting raptors, golden eagle, and light-footed clapper rail.

Of the sensitive avian species included in this criterion, coastal California gnatcatcher and raptors may nest within the Project site. With respect to raptors, tree-nesting raptors are not expected, as no suitable nesting locations were identified; however, cliff-nesting and ground-nesting raptors may nest within the Project site. The Project may result in *significant* impacts to nesting sensitive bird species if construction is conducted during the breeding season (**Impact BI-15**).

2.3.2.4 Wildlife Movement and Nursery Sites

Guidelines for the Determination of Significance

A significant impact to wildlife movement and nursery sites would occur if the Project would do the following:

- Interfere substantially with the movement of a native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

Rationale for Selection of Guidelines

This significance threshold is based on Appendix G of the CEQA Guidelines. Currently, the Project site functions as part of a large habitat block within which wildlife movement occurs (see Section 2.3.1.4). This guideline requires evaluation of the Project's impacts on wildlife movement, including access to areas necessary for reproduction.

Analysis

The analysis of direct and indirect impacts to wildlife movement and nursery sites considers the criteria outlined in the County Biology Guidelines. Each criterion is listed below, followed by a discussion of the potential effects associated with the Project relative to the criterion.

Criterion A: The Project would impede wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction.

The Project would prevent wildlife access to foraging habitat, breeding habitat, water sources, and other areas necessary for their reproduction. Specifically, the Project would result in the permanent removal of approximately 786.1 acres of wildlife habitat (i.e., all vegetation communities within the Project site except developed land; see **Table 2.3-5**) that supports various life-cycle functions such as foraging and breeding habitat. The Project would preserve 1,089 acres of potential wildlife habitat on-site, and would incorporate four wildlife culverts to convey animals from preserved open space in the northern portion of the Project site to the City of San Diego Cornerstone Lands south of Otay Lakes Road. Regardless, impacts associated with removal of sensitive vegetation communities providing wildlife habitat are considered *significant* absent mitigation (**Impact BI-1a-1j**).

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

The Project site functions as part of a large habitat block and is not considered a discrete habitat linkage or wildlife corridor (see Section 2.3.1.4). Nevertheless, wildlife movement is expected to occur through the broader habitat block and permanent impacts to wildlife movement are considered *significant* absent mitigation (**Impact BI-16**).

The Project site is surrounded by a variety of public lands: at least 22,000 acres of the Otay Ranch Preserve, BLM, and USFWS lands to the north; at least 9,000 acres of the Otay Ranch Preserve, USFWS, MSCP Preserve, BLM, and CDFW lands to the east; and at least 31,000 acres of the Otay Ranch Preserve, MSCP Preserve, CDFW, and BLM lands to the south. Combined, this is 62,000 acres of open space in the form of preserves and public lands. The Project is designed with the goal to convey the focal species, including mountain lion, mule deer, bobcat, and coyote, across the internal roads and Otay Lakes Road; maintain suitable dimensions for the movement of these species; and enable movement of Quino checkerspot butterfly to resources within the Project site and to off-site areas.

Proposed open space in the northern portion of the Project site would preserve an east/west movement corridor and habitat linkage across the northern portion and ridgelines of the site. To allow for north/south movement, two primary linkages are proposed on the Project site (**Figure 2.3-13**). First, the previously identified R2 corridor follows the steeply sloped canyon and ridgeline west of the prominent hilltop. This corridor includes the south face of the prominent hilltop, and steep slopes along the northeast border of the Project site. Within this proposed corridor, the steep canyon west of the prominent hilltop narrows to approximately 600 feet wide and is crossed by one proposed local two-lane roadway, as well as the existing Otay Lakes Road.

The second north/south movement corridor occurs within the middle portion of the Project site and is proposed to function as a local corridor. This corridor narrows to approximately 1,200 feet and is crossed by one, two-lane local roadway, as well as the existing Otay Lakes Road.

Currently there is no culvert under Otay Lakes Road to facilitate movement of large animals. To convey animals from the open space Preserve areas in the north portion of the Project site to the City of San Diego Cornerstone Lands south of Otay Lakes Road, the Project proposes four wildlife culverts (see Criterion C, below).

Additionally, an approximately 300-foot-wide swath along the far eastern boundary of the Project site continues off-site in a large area of open space lands and is proposed for inclusion in the Otay Ranch Preserve; this would contribute to the preservation of north/south wildlife movement across that portion of the site. The 300-foot-wide swath narrows at the property limits; however, it is situated directly adjacent to USFWS lands, and the rest of the length is situated adjacent to other Preserve lands.

Criterion C: The Project would create artificial wildlife corridors that do not follow natural movement patterns.

Natural movement patterns are expected to be maintained through the preservation of existing corridors on-site. Thus, the Project is not expected to create wildlife corridors that do not follow natural movement patterns. Criterion B, above, describes the existing corridors that would be maintained. As noted under Criterion B, above, permanent impacts to wildlife movement are considered *significant* absent mitigation (*Impact BI-16*) despite preservation of existing movement corridors.

In addition to preserving natural corridors on-site, the Propose proposes four wildlife culverts to convey animals from the open space Preserve areas in the north portion of the Project site to the City of San Diego Cornerstone Lands south of Otay Lakes Road (**Figure 2.3-14**). Requirements for culverts or wildlife undercrossings, according to the MSCP Subarea Plan, include minimizing roads that cross wildlife corridors, installing fencing that channels wildlife to underpasses or culverts, designing the underpass such that the length-to-width ratio is less than two, using bridges rather than tunnels, installing sound insulation, including a natural substrate that is vegetated, providing line-of-sight through the tunnel, and including low-level illumination if needed.

The proposed wildlife crossings/culverts have adequate configuration, bottom surface, size, and openness ratios to accommodate the movement of focal wildlife species. A detailed analysis of the proposed wildlife crossings is provided in detail in Section 4.3 of the Otay Ranch Resort Village Biological Resources Technical Report in **Appendix C-3** to this EIR. The Otay Ranch Resort Village Biological Resources Technical Report also includes figures illustrating size and shape of proposed crossings. In general, the design of the wildlife culverts has been developed to be consistent with the MSCP Subarea Plan and also to be consistent with the scientific literature to the maximum extent practical.

Criterion D: The Project would increase noise and/or nighttime lighting in a wildlife corridor or linkage to levels likely to affect the behavior of the animals identified in a site-specific analysis of wildlife movement.

The resort, single-family housing, and roadways associated with the Project would generate long-term noise and nighttime lighting that may disrupt wildlife movement. Impacts to wildlife movement (including impacts resulting from noise and nighttime lighting) are considered *significant* absent mitigation (**BI-16**). Implementation of the Preserve Edge Plan (**Appendix C-23**) would avoid and minimize effects of noise and nighttime lighting on wildlife movement. Specifically, the Preserve Edge Plan requires a 100-foot buffer between development and preserved open space, and includes measures to address noise and lighting.

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

As noted in Criterion B, above, the Project site currently functions as part of a large habitat block and is not considered a habitat linkage or wildlife corridor. Although not considered a linkage or corridor, wildlife movement is expected to occur through the broader habitat block, and impacts to wildlife movement are considered *significant* absent mitigation (**Impact BI-16**). Criterion B, above, describes how movement would be maintained within the Project site despite these impacts.

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

The Project would maintain adequate visual continuity to allow for wildlife movement. Criteria B and C, above, discuss how movement would be maintained through natural and artificial corridors.

2.3.2.5 Local Policies, Ordinances, and Adopted Plans

Guidelines for the Determination of Significance

A significant impact to local policies, ordinances, and adopted plans would occur if the Project would do the following:

- Conflict with one or more local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, and/or would conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Rationale for Selection of Guidelines

This significance threshold is based on Appendix G of the CEQA Guidelines. A variety of regional resource planning efforts are applicable to the Project site and vicinity (see Section 2.3.1.5). This guideline requires evaluation of the Project's impacts and/or conformance with these applicable local policies, ordinances, and other adopted plans (e.g., NCCPs).

Analysis

The analysis of impacts to local policies, ordinances, and adopted plans considers the criteria outlined in the County Biology Guidelines. Each criterion is listed below, followed by a discussion of the potential effects associated with the Project relative the criterion.

Criterion A, B, F, H, and L of the County Biology Guidelines are not applicable to the Project. Specifically, the Project site is located within the County of San Diego MSCP and, therefore, Criteria A and B do not apply. In addition, the Project site, while located within the County of San Diego MSCP Subarea, is not subject to the County of San Diego's BMO. Instead, the Otay Ranch RMP guides preservation, enhancement, and management of sensitive biological resources within Otay Ranch (including the Project site). Thus, criteria that address the BMO are not applicable. Lastly, golden eagles are not known to nest within the Project site (nearest known nest location is greater than 3 miles away), and direct impacts to golden eagle individuals (including eggs) are not expected. Impacts to golden eagle foraging habitat are discussed under Criterion E in Section 2.3.2.3. Because these criteria are not applicable to the Project, they are not addressed further below.

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

Otay Ranch is exempt from the RPO (see Section 86.605 of the RPO); thus, on-site impacts to sensitive habitats and wetlands discussed in Criteria A and B in Section 2.3.2.1 are not applicable. However, off-site impacts on County of San Diego lands resulting from widening of Otay Lakes Road are subject to the RPO. As described under Criteria A and B in Section 2.3.2.1, off-site impacts to wetlands on County of San Diego lands are considered *significant* absent mitigation (*Impact BI-8*).

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

Section 4.3 of the Southern California Coastal Sage Scrub NCCP Process Guidelines require project designs to be consistent with the Conservation Guidelines and with any guidelines adopted by the subregion, and project designs to be approved by CDFW and USFWS. Projects must, to the maximum extent practicable, minimize habitat loss. Any impacts to coastal sage scrub habitat and target species must be mitigated to insignificant levels as required by CEQA by using one or more of the following options:

- Acquisition of habitat
- Dedication of land
- Management agreements
- Restoration
- Payment of fees
- Transfer of development rights
- Other mitigation measures approved in writing by CDFW and USFWS

The Project is consistent with the Southern California Coastal Sage Scrub NCCP Process Guidelines. Specifically, the Project would preserve approximately 848 acres of coastal sage scrub habitat within the Otay Ranch Preserve, which would be included as part of the County of San Diego MSCP Subregional Preserve.

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

The Project proposes a boundary adjustment to the MSCP Subarea Plan and the Otay Ranch RMP. The primary goal of the boundary adjustment is to respond to the agencies' request to provide for greater conservation of Quino checkerspot butterfly, vernal pools (in particular the K8 complex), and San Diego fairy shrimp. The Project applicants redesigned the Project to achieve these conservation goals, but also to reflect the changed nature of development in the eastern portions of Otay Ranch, specifically third-party acquisitions that have reduced the amount of development, including the amount of lower-density, large-lot single-family homes, in Villages 14 and 15, and Planning Area 16. The following subsections summarize the Project's conformance with the MSCP Subarea Plan and Otay Ranch RMP.

County of San Diego MSCP Subarea Plan

The County MSCP Subarea Plan identifies a "hard line" preserve/development boundary for the Otay Ranch Resort Village. The MSCP Subarea Plan originally designated approximately 1,115 acres for the Preserve and approximately 754 acres for development on the Project site. The Project proposes a boundary adjustment to the MSCP Subarea Plan that would decrease the size of the on-site Preserve to approximately 1,089 acres (**Figure 2.3-15**). A detailed functional equivalency analysis of the Project's proposed Preserve configuration relative to the previously approved Preserve is provided in Section 4.0 of the Otay Ranch Resort Village Biological Resources Technical Report in **Appendix C-3** to this EIR. The functional equivalency analysis considered effects on significantly and sufficiently conserved habitats, effects on Covered Species, effects on habitat linkages, effects on Preserve configuration and management, effects on ecotones or other conditions affecting species diversity, and effects on species of concern not on the Covered Species list. A summary of the functional analysis is provided below.

Generally, the proposed boundary adjustment would result in greater impacts to certain sensitive vegetation types—coastal sage scrub and chaparral—and reduced impacts to other sensitive vegetation types—disturbed coastal sage scrub, disturbed chamise chaparral, southern mixed chaparral, disturbed native grassland, and nonnative grassland—when compared to the existing MSCP hardline development footprint for the Project site. The decrease in preservation of coastal sage scrub and chaparral is offset by both the preservation of rarer habitats (e.g., vernal pools) and by improvements in overall Preserve design resulting from the modifications to better accommodate Quino checkerspot butterfly. Habitat restoration of approximately 19 acres would also be incorporated into the long-term maintenance and management plans for the Preserve, and includes preparation of conceptual restoration plans with management and monitoring and success criteria. These restoration efforts would further increase the function and value of the

habitat within the Preserve with improved species conservation and establishment of effective habitat corridor and linkage connectivity.

The principal focus of the redesign is for Quino checkerspot butterfly. The modified Preserve boundary provides for significantly enhanced conservation of Quino checkerspot butterfly and dot seed plantain (*Plantago erecta*) habitat, one of the host plants for the species. Seventeen additional Quino checkerspot butterfly sighting locations are proposed to be added to the Preserve, with only four sighting locations being converted to development, for a net increase of 13 locations. In addition, Quino checkerspot butterfly host plant populations are preserved on the ridgelines proposed to be incorporated into the Preserve. Based on the overall surveys conducted on the site, approximately 83% of the population would be preserved in the proposed boundary-adjusted Preserve. In general, the ridgelines and hilltops in the northern and eastern portion of the site where Quino checkerspot butterfly has been observed most frequently would be preserved.

Within the approved MSCP Preserve boundary, development is shown in areas containing the K6 and K8 vernal pool resources. The proposed boundary adjustment incorporates the K8 vernal pool series, including nine pools occupied by San Diego fairy shrimp, into a large, intact Preserve that conserves the entire watershed area and provides a 100-foot buffer. Impacts to the K6 vernal pools would remain the same under the existing and proposed MSCP Preserve boundaries. With the proposed Preserve, there would be increased preservation of vernal pools occupied by San Diego fairy shrimp. The revised MSCP Preserve would also result in an increase in preservation of nonnative grassland, which is considered a sensitive upland habitat, within which the K8 pools occur.

Other features that are included with the boundary adjustment are wildlife linkages that are improved over the approved MSCP and culverts under Otay Lakes Road. The originally designated R2 regional linkage would be preserved as a new configuration with the proposed MSCP Preserve. In addition, a new linkage would be provided in the central portion of the site, including a culvert under Otay Lakes Road. This new central linkage was not originally analyzed or anticipated with the wildlife movement studies conducted for Otay Ranch because of the lack of data on use of the region by Quino checkerspot butterfly. The new central linkage is especially important for Quino checkerspot butterfly, since individuals of the species use this area, which includes the preservation of a ridgeline that contains populations of dot seed plantain, a host plant for Quino checkerspot butterfly. A linkage along the eastern edge of the Project site would also be maintained, and would connect with off-Preserve areas to the east, including Dulzura Creek. The Otay Lakes Road crossings are designed to achieve openness ratios prescribed by Donaldson (2005) for large animals. These culverts are costly to build, do not currently exist under Otay Lakes Road, and were not originally considered by the MSCP. The culverts would provide for increased wildlife movement from the Preserve lands north of the proposed Project to other preserved lands to the south, including Lower Otay Lake and City of San Diego Cornerstone Lands.

Finally, as part of the proposed boundary adjustment, the Project applicants are proposing a 10.2-acre parcel north of the Project site to be added as MSCP Preserve. This 10.2-acre parcel consists of chaparral, grassland, and coastal sage, and is adjacent to other Preserve lands. The agencies

have reviewed this parcel and concur that it is acceptable for the proposed boundary adjustment. Thus, the Project would result in the equivalent of 1,099.5 acres of Preserve.

The resulting Preserve design is shown in **Figure 2.3-16**. Although smaller than the original Preserve envision by the MSCP Subarea Plan, the proposed Preserve design is equivalent or improved over the approved MSCP Preserve. Therefore, the Project would have a *less than significant* impact on the County of San Diego MSCP Subarea Plan.

Otay Ranch Resource Management Plan

The Otay Ranch RMP includes conveyance procedures for dedicating parcels of land to the Otay Ranch Preserve. The Otay Ranch RMP establishes an obligation for each new development to convey its fair share of the Otay Ranch Preserve. Fair share contribution requirements are established in the RMP as a proportion of ranch-wide development to ranch-wide preserve land. The RMP established a fair share contribution to the creation of the Preserve as a ratio of 1.188 acres of preserve conveyance required for every one (1.000) acre of development. Accordingly, the conveyance ratio for all development is 1.188 acres for each 1 acre of project development area, excluding development areas that include “common uses,” such as schools, parks, and arterial roadways. These “common use” areas are excluded from the required mitigation/conveyance. The Otay Ranch RMP was incorporated into the County’s MSCP Subarea Plan. A project’s compliance with the Otay Ranch RMP constitutes its compliance with the County’s MSCP. The proposed Project would have significant impacts related to biological resources unless the Otay Ranch Preserve is assembled proportionally and concurrently with development in accordance with provisions of the County’s MSCP Subarea Plan via compliance with the Otay Ranch RMP.

The Project would permanently impact approximately 778.8 acres (excluding temporary impacts to slopes, which would be revegetated, and infrastructure uses permitted within the Preserve). Of this amount, common uses include 20.7 acres of public parks, the 10-acre elementary school, and the 2.1-acre public safety site. Thus, the overall number of developable acres subject to the Otay Ranch RMP preserve conveyance ratio of 1.188 is 747.2. Therefore, the 747.2 acres of developable land within the Resort Village is subject to a conveyance obligation of 887.7 acres ($747.2 \text{ acres} \times 1.188 = 887.7 \text{ acres}$). Conveyance of the required amount of RMP preserve land will be achieved through discussions and consultations with the resource agencies. The Otay Ranch RMP does not require that conveyance of preserve land occur within the Specific Plan boundaries, as it is a ranch-wide obligation, and the Otay Ranch RMP allows for conveyance of land anywhere within the Otay Ranch Preserve. Nevertheless, the Project will meet its RMP preserve conveyance obligation onsite. In fact, the Project’s MSCP hardline boundary would ultimately establish a preserve area of 1,089 acres in size.

In summary, the Otay Ranch RMP conveyance obligation is the required fair-share mitigation based on the Otay Ranch RMP and the MSCP. The total acreage of the Resort Village Preserve is a function of the boundaries of the Specific Plan Area. Upon conveyance of 887.7 acres to the Otay Ranch Preserve, the Project will be consistent with the Otay Ranch RMP conveyance requirement. The difference between the conveyance requirement (887.7 acres) and the Project’s

MSCP hardline boundary (1,089 acres), approximately 201.3 acres, is available to meet conveyance or other preserve mitigation obligations for other Otay Ranch impacts.

The Otay Ranch RMP also established required preservation ratios for the entire Otay Ranch. Based on the on-site and cumulative Otay Ranch conservation of selected species, the Project is consistent with the requirements of the Otay Ranch RMP. Therefore, the Project would have a *less than significant* impact related to conformance with the Otay Ranch RMP.

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

The Project would result in *significant* impacts to coastal sage scrub absent mitigation (*Impact BI-1a*). However, the Project would preserve approximately 828 acres of coastal sage scrub habitat and would not preclude connectivity between areas of high habitat values.

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

The following MSCP narrow endemic species would be impacted with implementation of the Project: San Diego thornmint and variegated dudleya. Mitigation for impacts to these MSCP narrow endemic species would be achieved through compliance with species-specific mitigation in accordance with the Otay Ranch RMP. The proposed impact to San Diego thornmint is 3% of the on-site population, resulting in 97% preservation of the species, including a 100-foot buffer around the population of the plant. The Otay Ranch RMP requires preservation of 95% of San Diego thornmint, which the Project achieves. Thus, impacts to San Diego thornmint are considered *less than significant*.

The proposed impact to variegated dudleya is 19%, resulting in 81% preservation of the species. The Otay Ranch RMP requires preservation of 75% of variegated dudleya, which the Project achieves. Thus, impacts to variegated dudleya are considered *less than significant*.

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

The Project would result in direct impacts to four species listed by USFWS and/or CDFW: San Diego thornmint, San Diego fairy shrimp, Quino checkerspot butterfly, and coastal California gnatcatcher (see Criterion A under Section 2.3.2.3). However, the Project is not expected to reduce the likelihood of survival and recovery of these species. Conservation of these species would be provided through the Otay Ranch RMP and MSCP Subarea Plan conformance/equivalency. For Quino checkerspot butterfly, if mitigation is not pursued under the proposed MSCP Subarea Plan Quino Checkerspot Butterfly Amendment, take of this species would be addressed through a Section 7 Consultation or Section 10 incidental take permit. These processes would ensure that impacts would not affect the likelihood of survival or recovery of the species. Moreover, because the Quino Checkerspot Amendment has not yet been adopted, the Project applicant has independently proposed mitigation that would preserve 966 acres of Quino

checkerspot butterfly habitat (962 acres of preservation on-site and 4 acres of restoration on-site) and result in a net gain of 13 Quino checkerspot butterfly sighting locations. Therefore, impacts related to reducing the likelihood of survival and recovery of listed species in the wild are considered *less than significant*.

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

The Project site is occupied by a wide variety of migratory avian species afforded protection under the MBTA. The Project could result in injury to or mortality of migratory birds (including eggs) or the destruction of active nests if construction occurs during the breeding season. Injury or mortality to migratory birds resulting from construction most frequently occurs during vegetation clearing and involves eggs, nestlings, and recently fledged young that cannot safely avoid equipment. Direct impacts to migratory birds would be considered *significant* absent mitigation (*Impact BI-15*).

2.3.3 Cumulative Impact Analysis

The geographic extent of the Project's cumulative impact analysis includes the South County Segment of the MSCP. Implementation of the proposed Project would contribute to the cumulative loss of biological resources within Otay Ranch and the County of San Diego MSCP Subarea Plan. Impacts to sensitive resources are all identified and addressed by the Otay Ranch RMP and MSCP Subarea Plan for Covered Species and species addressed in the Otay Ranch RMP. The exceptions to these are Quino checkerspot butterfly, vernal pools, and San Diego fairy shrimp, which are not Covered Species.

Both the Otay Ranch RMP and the MSCP Subarea Plan provide mitigation for cumulative impacts to biological resources. The Otay Ranch RMP and MSCP were specifically designed to ensure that cumulative impacts to biological resources from development in this area, including the proposed Project site, are reduced to a less-than-significant level. The Otay Ranch RMP specifically provides the outline of the CEQA mitigation required by the Otay SRP Program EIR. Although portions of the Project would designate open space in addition to existing planned Preserves, encroachment into both the Otay Ranch RMP and MSCP Subarea Plan Preserves requires a demonstration that the modified Preserve would provide for an equal or higher level of biological value. As analyzed in Section 4.0 of the Otay Ranch Resort Village Biological Resources Technical Report (**Appendix C-3**), the proposed reconfiguration of the Preserve provides for an improved preservation of biological value and Preserve design compared to the original Preserve; therefore, significant cumulative impacts related to losses of habitats and species covered by the MSCP Subarea Plan and Otay Ranch RMP would be reduced to *less than significant*.

Cumulative impacts to non-Covered Species are not addressed by the MSCP or the Otay Ranch RMP. Hence, the significant impacts to Quino checkerspot butterfly, vernal pools, and San Diego fairy shrimp may result in cumulatively significant impacts. A review of projects within the MSCP Subarea Plan South County Segment was conducted to evaluate the cumulative impact of the proposed Project on these resources.

San Diego Fairy Shrimp

Absent mitigation, the Project would result in significant impacts to the San Diego fairy shrimp and its habitat (refer to Criterion B in Section 2.3.2.1 and Criterion A in Section 2.3.2.3). One past, present, or foreseeable future projects within the cumulative study area that include vernal pools: Otay Ranch Villages 14, 16, and 19 (**Figure 2.3-17**). Village 14 is designated for 829 acres of development; Village 16 is designated for 1,117 acres of development and Village 19 is designated for 20 acres of development. These villages contain vernal pools and also a population of fairy shrimp that has not been surveyed or quantified as yet. The impact and mitigation also has not been defined. The Project will result in impacts to vernal pools and San Diego fairy shrimp, however the cumulative impact cannot be defined at this time since there is no information available for the cumulative projects. In addition, the Otay Ranch RMP requires preservation of 95% of vernal pools. The overall Otay Ranch Project area, including the Project site, is achieving a 97.8% conservation ratio for vernal pools. The required mitigation measures listed below in Section 2.3.5.3 and Section 2.3.5.5 would address the direct impacts to these resources, and would provide not only for no-net-loss of vernal pool habitat, but would increase the total acreage of restored vernal pools and would provide for increased habitat for San Diego fairy shrimp. Thus, potential cumulative impacts to vernal pools and the San Diego fairy shrimp are considered *less than significant*.

Quino Checkerspot Butterfly

Absent mitigation, the Project would result in significant impacts to the Quino checkerspot butterfly and its habitat (refer to Criterion A in Section 2.3.2.3). This same impact, if not mitigated, would constitute a cumulatively considerable contribution to cumulative effects on Quino checkerspot butterfly. As shown below, however, proposed mitigation measures will preserve 966 acres of Quino checkerspot habitat, including 962 acres of preservation on-site 4 acres of restoration on site, and will result in a net gain of 13 Quino checkerspot sighting areas. Regardless of whether and when the County adopts a Quino Checkerspot Butterfly Amendment to the MSCP Subarea Plan South County Segment, these measures will reduce the Project's contribution to cumulative impacts on Quino checkerspot butterfly to *less than cumulatively considerable*, as that term is defined and used in CEQA Guidelines section 15130.

The Project would result in significant impacts to the Quino checkerspot butterfly and its habitat (refer to Criterion A in Section 2.3.2.3). Cumulative impacts to Quino checkerspot butterfly were evaluated by reviewing past, present, and future projects within the MSCP Subarea Plan South County Segment that included impacts to Quino checkerspot butterfly. Projects with proposed Quino checkerspot butterfly impacts include the Otay Tech Center, Otay Mesa Generating Project, East Otay Mesa Landfill, Otay Hills Quarry, Otay Ranch Villages 14, 16, and 19, and Otay Business Park (**Figure 2.3-17**).

- The Otay Tech Center is a 171-acre project northeast of Otay Mesa Road and State Route 905. This project was required to purchase 5.4 acres of native grassland and 48.6 acres of nonnative grassland.

- The Otay Mesa Generating Project is a 46-acre site on the east side of Altra Road north of Otay Mesa Road. Mitigation includes purchase of 35.9 acres of Quino checkerspot butterfly habitat.
- The Otay Business Park is a 162-acre site southeast of the intersection of Alta Road and Airway Road. The mitigation required for Quino checkerspot butterfly was identified in the project SEIR; however, Section 7 consultation has not yet taken place.
- East Otay Mesa Landfill is a 450 acre site in the East Otay Mesa area approximately two miles east of the Siempre Viva Road exit from Interstate 905. Impacts are to 340 acres that were not identified as to habitat type. Mitigation required for the Quino checkerspot butterfly was not identified but will likely be required.
- Otay Hills Quarry is a 210 acre site that includes a 112 acres impact area of which 99.2 acres is composed of sensitive vegetation communities. Quino checkerspot butterfly is known to be present on the site. The mitigation required for the impacts to Quino checkerspot butterfly has not yet been identified but will likely be required.
- Otay Ranch Villages 14, 16, and 19 includes three development areas within the Proctor Valley Parcel of the Otay Ranch. The villages are located along Proctor Valley Road between Chula Vista and Jamul. Village 14 is designated for 829 acres of development; Village 16 is designated for 1,117 acres of development and Village 19 is designated for 20 acres of development. Quino checkerspot butterfly has been recorded within Proctor Valley however focused surveys have not been conducted and the population size and impact to the species is unknown at this time. The mitigation required for the impacts to Quino checkerspot butterfly has not yet been identified but will likely be required.

Like the proposed Project, the cumulative projects discussed above provide project-specific mitigation to reduce impacts to less than significant on an individual basis; where applicable, they must contribute to the achievement of planning goals for the MSCP, including preservation of sensitive resources. The Otay Ranch Resort Village, as it is proposed in this document, especially meets that goal, since it was designed to minimize impacts to Quino checkerspot butterfly.

The County has prepared a draft Quino Checkerspot Butterfly Amendment that addresses the conservation needs of Quino checkerspot butterfly in the context of projected growth and future and known projects within the MSCP. The MSCP and associated environmental documentation address projected cumulative and growth-inducing impacts to Covered Species and their habitats. The County, however, has yet to adopt the Quino Checkerspot Amendment. Therefore, the Project applicant has proposed mitigation measures that (i) would be consistent with the stated goals identified of the draft Quino Amendment, and (ii) would independently avoid or mitigate project-level biological impacts to Quino checkerspot butterfly and its occupied habitat. Therefore, the Project's contribution to cumulative impacts on Quino checkerspot would be mitigated to less than cumulatively considerable in one of two ways – either (a) the County will adopt the Quino Checkerspot Amendment, in which case all cumulative impacts on Quino checkerspot butterfly within the MSCP area will be deemed mitigated to a less than significant level, or (b) the Project applicant will implement the preserve design and other mitigation

measures described herein and independently reduce to less than cumulatively considerable the Project's contribution to cumulative impacts on Quino checkerspot butterfly.

The applicable mitigation measures for reducing the Project's contribution to cumulative impacts on Quino checkerspot butterfly are **M-BI-9a** and **M-BI-9b**, described below.

2.3.4 Significance of Impacts Prior to Mitigation

The following significant impacts were identified in the analysis of the Project's effect on biological resources:

<u>Impact Number</u>	<u>Description of Project's Effect</u>
BI-1a-k	Potential permanent and temporary impacts to sensitive vegetation communities on-site
BI-2	Potential permanent impacts to sensitive vegetation communities on City of San Diego Cornerstone Lands
BI-3	Potential permanent impacts to sensitive vegetation communities on City of Chula Vista lands
BI-4	Potential permanent and temporary impacts to jurisdictional waters and wetlands on-site
BI-5	Potential permanent impacts to jurisdictional vernal pools on-site
BI-6	Potential indirect impacts to jurisdictional waters and vernal pools
BI-7	Potential permanent impacts to jurisdictional waters and wetlands on Cornerstone Lands
BI-8	Potential permanent impacts to jurisdictional waters and wetlands on County of San Diego lands
BI-9	Potential indirect impacts to vegetation communities.
BI-10	Potential permanent impacts to San Diego fairy shrimp
BI-11	Potential permanent impacts to Quino checkerspot butterfly
BI-12	Potential permanent impacts to California adolphia
BI-13	Potential indirect impacts to sensitive plant species
BI-14	Potential indirect impacts to sensitive wildlife species
BI-15	Potential direct and indirect impacts to nesting migratory birds
BI-16	Potential direct and indirect impacts to wildlife movement

2.3.5 Mitigation

The following mitigation measures are recommended to reduce the proposed Project's potentially significant, long-term direct and indirect impacts on biological resources to less-than-significant levels.

2.3.5.1 *Vegetation Communities*

Significant impacts to sensitive upland habitats (***Impact BI-1a-1k***) would be mitigated to a ***less-than-significant*** level with conformance of the Project to the requirements of the Otay Ranch RMP and MSCP Subarea Plan, and with implementation of the following mitigation measures.

M-BI-1a **Conveyance.** Prior to the approval of the first Final Map for the Project, the Project applicants shall coordinate with the County of San Diego to establish and annex the Project site into a county-administered Community Facilities District to pay for the on-going management and maintenance of the Otay Ranch Preserve. Prior to the recordation of the first Final Map within each Tentative Map, the Project applicants shall convey land within the Otay Ranch Preserve to the Otay Ranch Preserve Owner/Manager or its designee at a 1.188 acre for each "Developable Acre" impacted at Final Map as define by the Otay Ranch RMP. The total required conveyance for this project is 887.7 acres.

M-BI-1b **Biological Monitoring.** Prior to issuance of land development permits, including clearing, grubbing, grading, and/or construction permits for any areas adjacent to the Preserve and the off-site facilities located within the Preserve, the Project applicants shall provide written confirmation that a county-approved biological monitor has been retained and will be on-site during clearing, grubbing, and/or grading activities. The biological monitor shall attend all pre-construction meetings and be present during the removal of any vegetation to ensure that the approved limits of disturbance are not exceeded and provide periodic monitoring of the impact area, including trenches, stockpiles, storage areas, and protective fencing. The biological monitor shall also be responsible for implementing the monitoring as required and specified in the restoration plans. The biological monitor shall be authorized to halt all associated activities that may be in violation of the county's MSCP Subarea Plan and/or permits issued by any other agencies having jurisdictional authority over the Project.

Before construction activities occur in areas adjacent to preserve areas containing sensitive biological resources, all workers shall be educated by a county-approved biologist to recognize and avoid those areas that have been marked as sensitive biological resources.

M-BI-1c **Temporary Fencing.** Prior to issuance of land development permits, including clearing, grubbing, grading, and/or construction permits, the Project applicants shall install prominently colored fencing and signage wherever the limits of grading are adjacent to sensitive vegetation communities or other biological resources, as identified by the qualified monitoring biologist. Fencing shall remain in place during

all construction activities. All temporary fencing shall be shown on grading plans for areas adjacent to the Preserve and for all off-site facilities constructed within the Preserve. Prior to release of grading and/or improvement bonds, a qualified biologist shall provide evidence to the satisfaction of the Director of Planning and Development Services (or his/her designee) and the Director of Parks and Recreation, that work was conducted as authorized under the approved land development permit and associated plans.

M-BI-1d Upland Restoration. Restoration areas may incorporate salvaged materials such as seed collection and translocation of plant materials as determined to be appropriate. The project biologist shall review the plant materials prior to grading and will determine if salvage is warranted. If salvage is not appropriate due to site conditions, plant conditions, or reproductive stage of the plants, a letter indicating that will be prepared and submitted to the Director of the Department of Planning and Development Services and the Director of Parks and Recreation. Prior to grading, a Conceptual Upland Restoration Plan (Appendix H of the Otay Ranch Resort Village Biological Resources Technical Report in **Appendix C-3** to this EIR) shall be submitted to and receive approval from the Director of Planning and Development Services (or his/her designee) and the Director of Parks and Recreation.

The Conceptual Upland Restoration Plan shall include the following to ensure the establishment of the restoration objectives: a 24- by 36-inch map showing the restoration areas, site preparation information, type of planting materials (species ratios, source, size of container), planting program, 80% success criteria, 5-year monitoring plan, and detailed cost estimate. The cost estimate shall include planting, plant materials, irrigation, maintenance, monitoring, and report preparation. The report shall be prepared by a county-approved biologist and a state of California licensed landscape architect. The habitat created pursuant to the Conceptual Upland Restoration Plan must be placed within an open space easement dedicated to the County of San Diego prior to or immediately following the approval of the Conceptual Upland Restoration Plan.

M-BI-1e Limited Building Zone (LBZ) Easement. In order to protect sensitive biological resources in the adjacent preserve, a Limited Building zone (LBZ) easement will be granted to the County, as shown on the Tentative Map. The purpose of this easement is to limit the need to clear or modify vegetation for fire protection purposes within the preserve, restrict unauthorized access, prohibit landscaping with exotic pest plants that may invade the preserve, and prohibit artificial lighting and focal use areas that would alter wildlife behavior in the preserve. This easement requires the landowner to maintain permanent fencing and signage. The easement precludes 1) placement, installation, or construction of habitable structures, including garages or accessory structures designed or intended for occupancy by humans or animals; 2) landscaping with exotic pest plants; 3) artificial lighting except low-pressure sodium fixtures shielded and directed away from the preserve; and 4) focal use areas including arenas, pools, and patios.

M-BI-1f Fencing and Signage. In order to protect the preserve from entry upon completion of construction, an open space fence or wall will be installed along all open space edges where open space is adjacent to residential uses, along internal streets, and as indicated in the Otay Ranch Resort Village Preserve Edge Plan and Proposed Fencing, Preserve signage, and Fuel Modification Zones (see map pocket). The barrier must be a minimum construction of vertical metal fencing, but may be other suitable construction material, as approved by Department of Planning and Development Services and the Director of Parks and Recreation. In order to protect the preserve from entry, informational signs will be installed, where appropriate, along all open space edges where open space is adjacent to residential uses, along internal streets, and as indicated in the Otay Ranch Resort Village Preserve Edge Plan. The signs must be corrosion resistant, a minimum of 6 inches by 9 inches in size, on posts not less than three (3) feet in height from the ground surface, and state “Sensitive Environmental Resources Protected by Easement. Entry without express written permission from the County of San Diego is prohibited.”

M-BI-1g Habitat Manager for the Offsite 10.2-acre Parcel. In order to provide for the long-term management of the proposed 10.2-acre parcel that will be added to the MSCP Preserve, a habitat manager shall be designated either privately selected, a non-profit organization, or a government agency. If a private or non-profit organization is selected as the habitat manager, a Resource Management Plan (RMP) will be prepared and implemented. The final RMP will be completed to the satisfaction of the Director of Department of Planning and Development Services, as follows: 1) the plan will be prepared and approved pursuant to the most current version of the County of San Diego Biological Report Format and Content Requirements; 2) the habitat land to be managed will be owned by a land conservancy or equivalent; 3) open space easements will be dedicated in perpetuity; 4) a resource manager will be selected and approved, with evidence provided demonstrating acceptance of this responsibility; 5) the RMP funding mechanism will be identified and adequate to fund annual costs for implementation; and 6) a contract between the applicant and County will be executed for the implementation of the RMP, and funding will be established with the County as the third party beneficiary. In lieu of providing a private habitat manager as noted above, the applicant may contract with a federal, state, or local government agency with the primary mission of resource management to take fee title and manage the 10.2-acre parcel of land. Evidence of satisfaction must include a copy of the contract with the agency, and a written statement from the agency that (1) the land contains the specified acreage and the specified habitat, or like functioning habitat; and (2) the land will be managed by the agency for conservation of natural resources in perpetuity.

Implementation of the following mitigation measure would reduce significant impacts to City of San Diego Cornerstone Lands (**Impact BI-2**) to a *less-than-significant* level.

M-BI-2 Prior to widening Otay Lakes Road, the Project applicants shall mitigate for the 11.09 acres of impacts to Cornerstone Lands and complete an MHPA Boundary Adjustment to the satisfaction of the City of San Diego Development Services Director (or his/her designee). Replacement of MHPA lands within Cornerstone Lands is proposed to be at a 1:1 ratio for lands replaced inside the MSCP Preserve. For replacement lands that are located outside of the MSCP Preserve, the mitigation is at a 4:1 ratio. Mitigation for impacts to the various vegetation communities shall be based on the tier of the impacted lands in accordance with the mitigation ratios provided by the MSCP. The mitigation and MHPA Boundary Adjustment may be implemented within the Otay Ranch Preserve on property surrounding the existing Cornerstone Lands, north of Otay Lakes Road, or may be off-site at a location determined to be acceptable by the City of San Diego.

Compliance with the Chula Vista HLIT through implementation of the following mitigation measure would reduce significant impacts to sensitive habitats on City of Chula Vista lands (*Impact BI-3*) to a *less-than-significant* level.

M-BI-3 Prior to issuance of any land development permits, including clearing or grubbing and grading and/or construction permits, the Project shall be required to obtain a HLIT permit pursuant to Section 17.35 of the Chula Vista Municipal Code for impacts to Chula Vista MSCP Tier I, II, and II vegetation communities as shown in **Table 2.3-11** and in accordance with Table 5-3 of the Chula Vista MSCP Subarea Plan. Mitigation for off-site impacts outside of Otay Ranch shall be in accordance with the Chula Vista MSCP Subarea Plan and the Chula Vista HLIT Ordinance.

Prior to issuance of any land development permits, the Project applicants shall mitigate for direct impacts pursuant to Section 5.2.2 of the City of Chula Vista MSCP Subarea Plan. In compliance with the Subarea Plan, the applicants shall secure mitigation credits within a City- and wildlife-agency-approved conservation bank or other approved location offering mitigation credits consistent with the ratios specified in **Table 2.3-11** herein.

The Project applicants shall be required to provide verification of purchase to the City of Chula Vista prior to issuance of any land development permits.

In the event that Project applicants are unable to secure mitigation through an established mitigation bank approved by the City of Chula Vista and the wildlife agencies, the Project applicants shall secure the required mitigation through the conservation of an area containing in-kind habitat within the City of Chula Vista's MSCP Subarea Plan or MSCP Planning Area in accordance with the mitigation ratios contained in Table 5-3 of the City of Chula Vista's MSCP Subarea Plan and subject to wildlife agency concurrence.

Prior to issuance of any land development permit for the widening of Otay Lakes Road, and to the satisfaction and oversight of the city's Development Services

Director (or his/her designee), the Project applicants shall secure the parcel(s) that would be permanently preserved for in-kind habitat impact mitigation, if a mitigation bank purchase is unavailable, prepare a long-term management and monitoring plan for the mitigation area, secure an appropriate management entity to ensure that long-term biological resource management and monitoring of the mitigation area is implemented in perpetuity, and establish a long-term funding mechanism for the management and monitoring of the mitigation area in perpetuity.

The long-term management and monitoring plan shall provide management measures to be implemented to sustain the viability of the preserved habitat and identify timing for implementing the measures prescribed in the management and monitoring plan. The mitigation parcel shall be restricted from future development and permanently preserved through the recordation of a conservation easement or other mechanism approved by the wildlife agencies as being sufficient to ensure that the lands are protected in perpetuity. The conservation easement or other mechanism approved by the wildlife agencies shall be recorded prior to issuance of any land development permits.

2.3.5.2 Jurisdictional Waters and Wetlands

Implementation of the following mitigation measures would ensure no net loss of jurisdictional wetlands within the watershed, and would reduce significant direct impacts to jurisdictional waters and wetlands (*Impact BI-4, Impact BI-7, and Impact BI-8*) to a *less-than-significant* level.

M-BI-4 Prior to impacts occurring to waters and wetlands under the jurisdiction of ACOE, CDFW, and RWQCB, the Project applicants shall obtain the following permits: ACOE 404 permit, RWQCB 401 Water Quality Certification, and a CDFW Code 1600 Streambed Alteration Agreement. Impacts shall be mitigated at a 1:1 ratio by creation or purchase of credits for the creation of jurisdictional habitat of similar functions and values. A suitable mitigation site shall be selected and approved by the resource agencies during the permitting process. The ratio of wetland mitigation shall be 3:1 overall. A total of 2.15 acres of wetlands shall be created (1:1 creation-to-impact ratio). An additional 4.30 acres of wetlands shall be enhanced (2:1 enhancement-to-impact ratio). Creation/enhancement shall occur within the Dulzura Creek/Otay River watershed in accordance with a Conceptual Wetlands Mitigation and Monitoring Plan (Appendix I of the Otay Ranch Resort Village Biological Resources Technical Report in **Appendix C-3** to this EIR) approved by the County of San Diego and appropriate resource agencies. The wetland creation shall include at least a 1:1 ratio of each of the wetland vegetation communities impacted. The remainder of the creation/enhancement obligation may be fulfilled with any wetlands type.

Prior to issuance of land development permits, including clearing, grubbing, and grading permits that impact jurisdictional waters, the Project applicants shall prepare a Wetlands Mitigation and Monitoring Plan to the satisfaction of the

Director of Planning and Development Services (or his/her designee), the Director of Parks and Recreation, ACOE, RWQCB, and CDFW. The Conceptual Wetlands Mitigation and Monitoring Plan shall, at a minimum, prescribe site preparation, planting, irrigation, and a 5-year maintenance and monitoring program with qualitative and quantitative evaluation of the revegetation effort and specific criteria to determine successful revegetation. The temporary impacts to ephemeral and intermittent waters shall be mitigated by restoring them to original their conditions immediately upon completion of the Project, and shall be subject to all of the success criteria and monitoring as the permanent impacted wetlands.

M-BI-5

Prior to impacts occurring to waters and wetlands within the City of San Diego Cornerstone Lands, under the jurisdiction of ACOE, CDFW, and RWQCB, the Project applicants shall obtain the following permits: ACOE 404 permit, RWQCB 401 Water Quality Certification, and a CDFW Code 1600 Streambed Alteration Agreement. Impacts shall be mitigated at a 1:1 ratio by creation or purchase of credits for the creation of jurisdictional habitat of similar functions and values. A suitable mitigation site shall be selected and approved by the resource agencies during the permitting process. The ratio of wetland mitigation shall be 3:1 overall. A total of 2.15 acres of wetlands shall be created (1:1 creation-to-impact ratio). An additional 4.30 acres of wetlands shall be enhanced (2:1 enhancement to impact ratio). Creation/enhancement shall occur within the Dulzura Creek/Otay River watershed in accordance with a Conceptual Wetlands Mitigation and Monitoring Plan (Appendix I of the Otay Ranch Resort Village Biological Resources Technical Report in **Appendix C-3** to this EIR) that is approved by the County of San Diego and the appropriate resource agencies. The wetland creation shall include at least a 1:1 ratio of each of the wetland vegetation communities impacted. The remainder of the creation/enhancement obligation may be fulfilled with any wetlands type.

Prior to issuance of land development permits, including clearing, grubbing, and grading permits that impact jurisdictional waters, the Project applicants shall prepare a Wetlands Mitigation and Monitoring Plan to the satisfaction of the Director of Planning and Development Services (or his/her designee), ACOE, and CDFW. The Conceptual Wetlands Mitigation and Monitoring Plan shall, at a minimum, prescribe site preparation, planting, irrigation, and a 5-year maintenance and monitoring program with qualitative and quantitative evaluation of the revegetation effort and specific criteria to determine successful revegetation. The temporary impacts to ephemeral and intermittent waters shall be mitigated by restoring them to original conditions immediately upon completion of the Project, and shall be subject to all of the success criteria and monitoring as the permanent impacted wetlands.

M-BI-6

Prior to impacts occurring to waters within the County of San Diego under the jurisdiction of ACOE, CDFW, and RWQCB, the Project applicants shall obtain the following permits: ACOE 404 permit, RWQCB 401 Water Quality Certification, and a CDFW Code 1600 Streambed Alteration Agreement. Impacts

shall be mitigated at a 1:1 ratio by creation or purchase of credits for the creation of jurisdictional habitat of similar functions and values. A suitable mitigation site shall be selected and approved by the resource agencies during the permitting process. The ratio of wetland mitigation shall be 3:1 overall. A total of 0.01 acre of waters of the U.S. shall be created (1:1 creation-to-impact ratio). An additional 0.02 acre of waters of the U.S. shall be enhanced (2:1 enhancement-to-impact ratio). Creation/enhancement shall occur within the Dulzura Creek/Otay River watershed in accordance with a Conceptual Wetlands Mitigation and Monitoring Plan (Appendix I of the Otay Ranch Resort Village Biological Resources Technical Report in **Appendix C-3** to this EIR) that is approved by the County of San Diego and the appropriate resource agencies. The wetland creation shall include at least a 1:1 ratio of each of the wetland vegetation communities impacted. The remainder of the creation/enhancement obligation may be fulfilled with any wetlands type.

Prior to issuance of land development permits, including clearing, grubbing, and grading permits that impact jurisdictional waters, the Project applicants shall prepare a Wetlands Mitigation and Monitoring Plan to the satisfaction of the Director of Planning and Development Services (or his/her designee), ACOE, and CDFW. The Conceptual Wetlands Mitigation and Monitoring Plan shall, at a minimum, prescribe site preparation, planting, irrigation, and a 5-year maintenance and monitoring program with qualitative and quantitative evaluation of the revegetation effort and specific criteria to determine successful revegetation. The temporary impacts to ephemeral and intermittent waters shall be mitigated by restoring them to their original conditions immediately upon completion of the Project, and shall be subject to all of the success criteria and monitoring as the permanently impacted wetlands.

2.3.5.3 Vernal Pools

The Otay Ranch RMP contains guidelines for preservation and, when applicable, mitigation for impacts to vernal pools. The Otay Ranch RMP was written to mitigate for biological resource impacts to satisfy CEQA, and includes the requirement for providing a 100-foot buffer around the watershed but does not identify mitigation ratios. The County of San Diego provides a mitigation ratio of 2:1 for Tier 1 habitat (includes vernal pools), but also indicates that 5:1 mitigation is required for areas outside of the MSCP (County of San Diego 2010b). Because the K6 vernal pools impacted by the proposed Project are characterized as having low to moderate value, the proposed mitigation will use a 2:1 mitigation ratio for the pools not occupied by San Diego fairy shrimp, and a 5:1 mitigation ratio for the occupied pool. Thus, 0.025 acre will mitigate for impacts to the occupied pool, and 0.214 acre will mitigate for the impacts to the unoccupied pools, for a total mitigation of 0.239 acre of vernal pool basin area.

Implementation of either of the following mitigation options would reduce direct impacts to 0.11 acre of potential jurisdictional vernal pools (**Impact BI-5**) to a *less-than-significant* level by ensuring that there would be no net loss of vernal pool basin area within the region.

M-BI-7

Option No. 1: This option consists of mitigation in the form of restoration of vernal pools within the Resort Village Project site. This option shall involve restoration and reconfiguration of the K8 vernal pool group. These vernal pools are proposed to be preserved, and a 100-foot minimum buffer is provided for protection of the pools and their watershed. Mitigation shall involve reconfiguration and reconstruction of the mima mounds and basins, removal of weedy vegetation, revegetation of the mounds with upland sage scrub species, and inoculation of the pools with vernal pool species. A Conceptual Vernal Pool Mitigation Plan shall be prepared that outlines the location and activities of the restoration (Appendix J of the Otay Ranch Resort Village Biological Resources Technical Report in **Appendix C-3** to this EIR). The plan will be submitted to, and be to the satisfaction of, both the Directors of the Departments of Planning & Development Services and of Parks and Recreation. A ratio of at least 1:1 restoration shall include the establishment of new vernal pool basins within the K8 vernal pool group. The balance of the mitigation ratio shall include enhancement of the existing pools. There is a total of 0.26 acre available for enhancement within the existing pools. The additional restoration mitigation requirement (a total of 0.112 acre) shall be directed toward establishing new basins within the K8 vernal pool group to the greatest extent feasible. An additional area of potential vernal pool restoration is located within the K9 mesa, if needed. This area is also composed of suitable soils for vernal pools. These soils are present on the K6 and K8 mesas. This additional area is composed of nonnative grass species, is of relatively flat topography, and exhibits some mounding characteristics similar to mima mounds.

Based on the inundation records, fairy shrimp surveys, and floral inventory, the following potential vernal pools meet the previously applied ACOE jurisdictional criteria:

- K6 – Vernal Pools 1, 3, 5, 6, 7, 8, 9, 10, 12, and 13 (0.11 acre – total basin area)
- K8 – Vernal Pools 1, 2, 4, 5, 6, 7, 8, 10, 11, 13, 14, 15, 16, A1, and A4 (0.26 acre – total basin area)

Assuming all of K6 is impacted and the mitigation requirement is a combination of 2:1 and 5:1, as outlined above, a total mitigation of 0.239 acre shall be required. This is typically satisfied by providing at least 1:1 as restoration and the balance as enhancement. Enhancement within the K8 pools will likely be restricted by the resource agencies to those pools not containing fairy shrimp. **Table 2.3-12** summarizes the existing conditions of the pools within the K8 mesa.

Option No. 2: This option consists of mitigation in the form of purchase of vernal pool mitigation bank credits for a total of 0.239 acre at a combined 2:1 and 5:1 mitigation ratio.

2.3.5.4 Sensitive Plant Species

Direct impacts to most sensitive plant species would be mitigated to a *less-than-significant* level with conformance of the Project to the requirements of the Otay Ranch RMP and MSCP Subarea Plan, as well as mitigation measures **M-BI-1a through 1g**. However, direct impacts to California adolphia are considered significant (**Impact BI-12**). This San Diego County List B species is not covered under the MSCP and requires species-specific mitigation. Implementation of the following measure would reduce impacts to California adolphia to a *less-than-significant* level. Alternatively, documentation of preservation of this species would provide mitigation to reduce the impact to a *less-than-significant* level.

M-BI-8 Prior to the issuance of land development permits, including clearing or grubbing and grading permits, for areas with salvageable California adolphia, the Project applicants may prepare a Resource Salvage Plan if seed collection is considered to be warranted. As described above in **M-BI-1d**, the project biologist shall review the California adolphia (approximately 20 plants) proposed to be impacted prior to grading and will determine if salvage is warranted. If salvage is not appropriate due to site conditions, plant conditions, or reproductive stage of the plants, a letter indicating that will be prepared and submitted to the Director of the Department of Planning and Development Services and the Director of Parks and Recreation. If determined that salvage is appropriate, a Resource Salvage Plan shall be prepared by a county-approved biologist to the satisfaction of the Director of Planning and Development Services (or his/her designee) and the Director of Parks and Recreation.

The Resource Salvage Plan shall, at a minimum, evaluate options for seed collection within the Preserve or from the plants proposed to be impacted. The Resource Salvage Plan shall include collection methods and timing. Relocation efforts may include seed collection and/or transplantation to a suitable receptor site within the slope restoration areas and will be based on the most reliable methods of successful restoration. The plan shall also contain a recommendation for method of salvage and relocation/application based on feasibility of implementation and likelihood of success; identification of receptor locations; discussion of the goals of the plan; maintenance activities during the monitoring period; monitoring plan; and inclusion of performance standards, reporting schedules, and long-term management. As an alternative, the California adolphia may be included within planting palettes for the slope revegetation areas that shall receive monitoring and shall be required to meet restoration goals and success criteria. Prior to grading the project, a Conceptual Upland Restoration Plan (Appendix H of the Otay Ranch Resort Village Biological Resources Technical Report in **Appendix C-3** to this EIR), as noted in **M-BI-1d**, will be submitted to and receive approval from the Director of the Department of Planning and Development Services (or their designee) and the Director of Parks and Recreation. The program shall include, at a minimum, an implementation plan, maintenance and monitoring program, estimated completion time, and any relevant contingency measures. The program shall also be subject to the oversight

of the Director of Planning and Development Services (or his/her designee) and the Director of Parks and Recreation.

2.3.5.5 *Sensitive Wildlife Species*

Potential permanent impacts to San Diego Fairy Shrimp and Quino checkerspot butterfly are considered significant due to the very limited number of extant occurrences of these species in San Diego County (**Impact BI-10** and **Impact BI-11, respectively**). Because these species are federally listed as endangered, take would be addressed either by compliance with the MSCP Subarea Plan Quino Amendment being prepared by the County of San Diego, or a Section 7 Consultation or Section 10 incidental take permit. Mitigation for direct impacts to Quino checkerspot butterfly individuals requires development and implementation of a long-term Quino Checkerspot Butterfly Management/Enhancement Plan until such time that the Quino Amendment is approved or individual take is authorized through either the Section 7 Consultation process or a Section 10 Incidental Take permit is issued. Mitigation for direct impacts to San Diego fairy shrimp and the loss of habitat for the species requires development and implementation of a Conceptual Vernal Pool Mitigation Plan. It should be noted that 97% of the San Diego fairy shrimp would be preserved, which exceeds the requirements of the Otay Ranch RMP to preserve 95%.

Since it is likely that all of the coastal sage scrub and disturbed coastal sage scrub in the proposed Resort Village Preserve (962 acres of preserved upland habitat) is occupied by the Quino checkerspot butterfly, a sufficient amount of habitat is provided on-site to ensure the long-term conservation of the species. There is additional upland habitat also within the Preserve (87 acres of chaparral and grassland communities) that may be used by Quino checkerspot butterfly as well. The Preserve design includes significant larval host plant populations, known occurrences of Quino checkerspot butterfly from multiple years of surveys, suitable habitat for the species, and ridgelines and hilltops where the species has been recorded. There also is connectivity to off-site occupied areas to the north, east, and south, and provisions are included in the Project design to provide for connectivity within the site and to off-site areas. Thus, the Project includes preservation of occupied Quino checkerspot butterfly habitat within the same region as the impact at both on-site and off-site locations. Implementation of the following measures would reduce direct impacts to Quino checkerspot butterfly and its critical habitat (**Impact BI-11**) to a *less-than-significant* level.

M-BI-9a Take Authorization: Prior to the issuance of the first grading permit that impacts Quino checkerspot butterfly, the Project applicants shall demonstrate to the satisfaction of the Director of Planning and Development Services (or his/her designee) it has secured the necessary take authorization for Quino checkerspot butterfly through either the Section 7 Consultation, Section 10 incidental take permit requirements, or the MSCP Subarea Plan Quino Checkerspot Butterfly Amendment, if/when approved. The Project shall provide preservation of 962 acres of the required mitigation of 966 acres (2 x 483 acres). The Project is required to provide an additional 4 acres of occupied habitat. This mitigation is proposed to be accomplished by restoration of unsuitable habitat within the Preserve to suitable coastal sage scrub. **Figure 2.3-18** illustrates the location of

these potential restoration areas. A total of 6.3 acres is designated as potential restoration of which 4 acres will be needed.

M-BI-9b Quino Management/Enhancement Plan: Prior to the issuance of the first grading permit that impacts Quino checkerspot butterfly, the Project applicants shall prepare a long-term Quino Checkerspot Butterfly Management/Enhancement Plan that shall, at a minimum, include a survey methodology for on-site preserve areas pre- and post-construction to monitor effects on Quino checkerspot butterfly population health. This plan will be submitted to, and be to the satisfaction of, both the Directors of the Departments of Planning & Development Services and of Parks and Recreation. The Quino Checkerspot Butterfly Management/Enhancement Plan shall be superseded or unnecessary upon completion and adoption of the County of San Diego Quino Checkerspot Butterfly MSCP Amendment. Adaptive management techniques shall be developed within the plan with contingency methods for changed circumstances. These measures shall ensure that the potential loss of individuals and the loss of habitat for the species related to the proposed development are adequately offset by measures that will enhance the existing preserved population, and shall provide data that will help the species recover throughout its range.

Mitigation for impacts to San Diego fairy shrimp habitat is addressed in **M-BI-7**. Implementation of mitigation measures **M-BI-7** and **M-BI-10** (below) would reduce direct impacts to San Diego fairy shrimp (*Impact BI-10*) to a *less-than-significant* level.

M-BI-10 Prior to the issuance of the first grading permit that impacts the K6 vernal pool complex, the Project applicants shall demonstrate to the satisfaction of the Director of Planning and Development Services (or his/her designee) that the Project has secured take authorization of San Diego fairy shrimp through Section 7 Consultation, a Section 10 incidental take permit, or as may be incorporated into the provisions of the MSCP Subarea Plan Quino Checkerspot Butterfly Amendment to achieve the best results toward the survival and recovery of the species.

The Project site is occupied by a wide variety of migratory avian species afforded protection under the MBTA. The Project could result in injury or mortality of migratory birds (including eggs) or the destruction of active nests. Direct impacts to migratory birds would be considered a significant impact (*Impact BI-15*). Implementation of the following mitigation measure would reduce potential impacts to raptors and/or any migratory birds protected under the MBTA to a *less-than-significant* level.

M-BI-11 To avoid any direct impacts to raptors and/or any migratory birds protected under the MBTA, removal of habitat that supports active nests on the proposed area of disturbance shall occur outside of the breeding season for these species. If removal of habitat on the proposed area of disturbance must occur during the breeding season, the Project applicants shall retain a County-of-San-Diego-approved biologist to conduct a pre-construction survey to determine the presence

or absence of nesting birds on the proposed area of disturbance. The pre-construction survey shall be conducted within 10 calendar days prior to the start of construction, and the results shall be submitted to the County of San Diego for review and approval prior to initiating any construction activities. If nesting birds are detected, a letter report or mitigation plan, as deemed appropriate by the County of San Diego, shall be prepared and include proposed measures to be implemented to ensure that disturbance of breeding activities are avoided. The report or mitigation plan shall be submitted to the County of San Diego for review and approval, and implemented to the satisfaction of the Director of Planning and Development Services (or his/her designee). The County of San Diego's mitigation monitor shall verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction.

2.3.5.6 *Habitat Linkages/Movement Corridors*

Implementation of the following mitigation measure, combined with the proposed preserve configuration, would reduce significant impacts to wildlife movement (**Impact BI-16**) to a *less than significant* level.

M-BI-12 Four wildlife culverts shall be constructed to provide and improve habitat linkages and movement corridors (**Figure 2.3-14**). In general, the design of the wildlife culverts has been developed to be consistent with the MSCP Subarea Plan, where feasible. The wildlife culverts shall have fencing to funnel wildlife movement, shall have a natural bottom with native vegetation at either end, and shall be of size and height of opening so there is direct line of site from one end to the other. Because there is natural light within the culverts, low level illumination is not included. Traffic is generally of low volume on the internal crossings hence the sound insulation is of little benefit. The details of each wildlife culvert or crossing that shall be provided are presented below.

Internal Wildlife Crossing No. 1 (214 feet long × 28.83 feet wide × 13.17 feet tall = openness ratio of 0.44)

This arch culvert structure shall be situated internal to the project site along Strada Piazza, which connects the central portion of the open space to the lake. The 150-foot length is augmented by wing walls on either side of the crossing structure. This is beneficial as it effectively visually decreases the length of the culvert.

Otay Lakes Road Wildlife Crossing No. 1 (95 feet long × 20.75 feet wide × 12.08 feet tall = openness ratio of 0.68)

This structure shall be located south of Internal Wildlife Crossing no. 1 along Otay Lakes Road. The culvert is sized appropriately and should function as intended. It is well below the grade of Otay Lakes Road to prevent wildlife movement up to the surface of the roadway. There is also a six foot wildlife path with a soft surface along this crossing to allow for wildlife movement.

Internal Wildlife Crossing No. 2 (248 feet long × 43.00 feet wide × 16.18 feet tall = openness ratio of 0.63)

This structure shall be situated along Strada Piazza, which is a single non-split roadway at this location. The culvert slopes 12% to the south. This culvert conveys wildlife to a location just east of Lower Otay Lake to quality riparian habitat and lands to the east. Wing walls occur at both ends of the culvert. There is also a six foot wildlife path with a soft surface along this crossing to allow for wildlife movement.

Otay Lakes Road Wildlife Crossing No. 2 (58 feet long × 20.75 feet wide × 12.08 feet tall = openness ratio of 1.12)

This structure shall be located south of Internal Wildlife Crossing no. 2 under Otay Lakes Road. This crossing is also located below the grade of Otay Lakes Road to prevent wildlife from gaining access to the surface of the roadway. There is also a six foot wildlife path with a soft surface along this crossing to allow for wildlife movement.

2.3.5.7 *Indirect Impacts*

The Project would potentially result in significant indirect impacts to vernal pools and jurisdictional waters (**Impact BI-6**), vegetation communities (**Impact BI-9**), sensitive plant species (**Impact BI-13**), sensitive wildlife species (**Impact BI-14**), and wildlife movement (**Impact BI-16**). This section outlines mitigation measures that would reduce these indirect impacts to a level below significance. Measures for significant indirect impacts to vegetation communities, sensitive plant species, and wildlife corridors and habitat linkages are identical.

The Project site drainage basins would be designed to provide effective water quality control measures, as outlined in the Water Quality Technical Report. Design and operational features of the drainage basins would include design features to maximize infiltration; maximize detention time for settling of fine particles; maximize the distance between basin inlets and outlets to reduce velocities; and establish maintenance schedules for periodic removal of sedimentation, excessive vegetation, and debris. The following measure would reduce indirect impacts to vernal pools and jurisdictional waters (**Impact BI-6**) near the impact areas to a *less-than-significant* level by ensuring no hydrologic change related to the proposed development:

M-BI-13 Prior to issuance of grading permits for development areas adjacent to the Preserve, the Project applicants shall develop a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP shall be developed, approved, and implemented during construction to control storm water runoff such that erosion, sedimentation, pollution, and other adverse effects are minimized. The following performance measures contained in the Project's Preserve Edge Plan (**Appendix C-23**) shall be implemented to avoid the release of toxic substances associated with urban runoff:

- Sediment shall be retained on-site by a system of sediment basins, traps, or other appropriate measures.

- Where deemed necessary, storm drains shall be equipped with silt and oil traps to remove oils, debris, and other pollutants. Storm drain inlets shall be labeled “No Dumping–Drains to Ocean.” Storm drains shall be regularly maintained to ensure their effectiveness.
- Parking lots shall be designed to allow storm water runoff to be directed to vegetative filter strips and/or oil-water separators to control sediment, oil, and other contaminants.
- Permanent energy dissipaters shall be included for drainage outlets.
- The BMPs contained in the SWPPP shall include silt fences, fiber rolls, gravel bags, and soil stabilization measures such as erosion control mats and hydro-seeding.

The following measure would reduce indirect impacts to vegetation (*Impact BI-9*), sensitive plant species near the impact areas (*Impact BI-13*), and wildlife movement (*Impact BI-16*) to a *less-than-significant* level by ensuring no change related to the proposed development:

M-BI-14

- During construction, material stockpiles shall be covered when not in use. This will prevent fly-off that could damage nearby sensitive plant communities. During grading and construction, graded areas shall be periodically watered to minimize dust affecting adjacent vegetation.
- During Project operation, all recreational areas that use chemicals or animal by-products, such as manure, that are potentially toxic or impactive to sensitive habitats or plants shall incorporate methods on-site to reduce impacts caused by the application and/or drainage of such materials into Preserve areas.
- No invasive nonnative plant species shall be introduced into areas immediately adjacent to the Preserve. All slopes immediately adjacent to the Preserve shall be planted with native species that reflect the adjacent native habitat.
- During construction, material stockpiles shall be placed such that they cause minimal interference with on-site drainage patterns. This will protect sensitive vegetation from being inundated with sediment-laden runoff.
- Dewatering shall be conducted in accordance with standard regulations of RWQCB. A National Pollutant Discharge Elimination System (NPDES) permit, issued by RWQCB to discharge water from dewatering activities, shall be required prior to start of construction. This will minimize erosion, siltation, and pollution within sensitive communities.
- Design of drainage facilities shall incorporate long-term control of pollutants and storm water flow to minimize pollution and hydrologic changes. An Urban Runoff Plan and operational BMPs shall be approved by the San Diego County Department of Planning and Development Services prior to construction.

- Grading and/or improvement plans shall include the requirement that a fencing and signage plan be prepared and that permanent fences or walls be placed along the open space boundaries. Placement of permanent fencing or walls is required at the conclusion of the grading activity and prior to Record Plan approval.
- A hydroseed mix that incorporates native species, is appropriate to the area, and is without invasives shall be used for slope stabilization in transitional areas.
- Peruvian pepper trees and other invasive vegetation would not be planted in streetscapes, or within 50 feet of the Preserve, where they could impact native habitat.

The following measure would reduce indirect impacts to sensitive wildlife species near the impact areas (**Impact BI-14**) to a *less-than-significant* level by ensuring no change related to the proposed development:

M-BI-15

- No clearing, grading, or grubbing activities may occur within occupied gnatcatcher habitat during the breeding season for coastal California gnatcatcher (February 15 to August 15, annually). If construction occurs during the breeding season, a nesting survey for California gnatcatcher shall be conducted prior to the onset of construction and construction may occur if active nests can be avoided and provided an adequate buffer or noise levels are documented to be below 60 dBA L_{eq} at the nest site.
- When clearing, grading, or grubbing activities occur during the breeding season for raptors (January 15 to July 31, annually), nesting bird surveys shall be conducted by a qualified biologist for the San Diego County Department of Planning and Development Services to identify active nest locations. Construction activities shall be restricted or modified such that noise levels related to those activities are below 60 dBA L_{eq} , or other Wildlife Agency approved restrictions, in the vicinity of the active nest site.
- Lighting of all developed areas adjacent to the preserve shall be directed away from the preserve, wherever feasible and consistent with public safety. Where necessary, development shall provide adequate shielding with non-invasive plant materials (preferably native), berming, and/or other methods to protect the preserve and sensitive species from night lighting. Consideration shall be given to the use of low-pressure sodium lighting.
- Uses in or adjacent to the preserve shall be designed to minimize noise impacts. Berms or walls shall be constructed adjacent to commercial areas and any other use that may introduce noises that could impact or interfere with wildlife utilization of the preserve. Excessively noisy uses or activities adjacent to breeding areas must incorporate noise-reduction measures or be curtailed during the breeding season of sensitive bird species.

- Grading and/or improvement plans shall include the requirement that a fencing and signage plan be prepared and that permanent fences or walls be placed along the open space boundaries. Placement of permanent fencing or walls is required at the conclusion of the grading activity and prior to Record Plan approval.

2.3.5.8 Cumulative Impacts to Quino Checkerspot Butterfly

This impact would be mitigated by the County's anticipated adoption of the draft Quino Amendment, the goals of which guided the design of the proposed project. However, in the event that the County does not finalize and adopt the Quino Amendment, this project's contribution to cumulative impacts on the Quino checkerspot butterfly would still be reduced to less than cumulatively considerable through implementation of MM-BIO-9a and MM-BIO-9b, as described above. Thus, this cumulative impact would be mitigated to *less than significant*.

2.3.6 Conclusions

The Project would result in *significant* direct and indirect impacts to the following biological resources: sensitive vegetation communities, jurisdictional waters and wetlands (including vernal pools), sensitive plant and wildlife species, and wildlife movement corridors. With implementation of Project design features to avoid potential impacts, and with mitigation measures M-BI-1 through M-BI-15, all identified significant impacts to biological resources would be reduced to a *less-than-significant* level.

Table 2.3-1. Acreages of Vegetation Communities

Vegetation Community Type	Holland Code	Project Site	Off-Site*	Total Acres
<i>Sensitive Upland Communities</i>				
Coastal Sage Scrub	32500	1,121.51	7.61	1,129.12
Disturbed Coastal Sage Scrub	32500	348.62	4.99	353.61
Chamise Chaparral	37210	143.14	—	143.14
Disturbed Chamise Chaparral	37210	15.67	—	15.67
Scrub Oak Chaparral	37900	22.45	—	22.45
Southern Mixed Chaparral	37121	4.95	—	4.95
Disturbed Valley Needlegrass Grassland	42110	110.58	0.03	110.61
Nonnative Grassland	42200	78.96	5.44	84.40
<i>Subtotal</i>		<i>1,845.88</i>	<i>18.07</i>	<i>1,863.95</i>
<i>Sensitive Wetland Communities (ACOE, RWQCB, CDFW, unless otherwise noted)</i>				
Cismontane Alkali Marsh	52310	6.39	—	6.39
Disturbed Cismontane Alkali Marsh	11200	0.17	—	0.17
Freshwater Marsh	52410	—	0.17	0.17
Mulefat Scrub, all jurisdictions		0.02		0.02
Mulefat Scrub, CDFW only	63310	0.06	—	0.06
Disturbed Mulefat Scrub, all jurisdictions			0.10	0.10
Disturbed Mulefat Scrub, CDFW only	63310	—	0.03	0.03
Open Water	64140	0.17	0.49	0.66
Southern Willow Scrub	63320	1.19	0.04	1.23
<i>Subtotal</i>		<i>8.00</i>	<i>0.83</i>	<i>8.83</i>
<i>Non-Sensitive Communities and Land Covers</i>				
Developed Land	12000	0.88	19.23	20.10
Disturbed Habitat	11300	13.46	0.38	13.85

Table 2.3-1. Acreages of Vegetation Communities

Vegetation Community Type	Holland Code	Project Site	Off-Site*	Total Acres
Eucalyptus Woodland	79100	—	0.61	0.61
Ornamental	11000	—	0.94	0.94
Stock Pond	18000	0.79	—	0.79
	<i>Subtotal</i>	<i>15.13</i>	<i>21.16</i>	<i>36.29</i>
	Total Acres	1,869.01	40.06	1,909.07

* Includes proposed off-site improvement to Otay Lakes Road and any improvements that are required within City of San Diego-owned Cornerstone Lands.

Table 2.3-2. Summary of Special-Status Plant Species Detected

Scientific Name Common Name	Status Federal/ State CRPR MSCP Coverage County List	Locations and Population Size on Site		
		<i>Previous Studies</i>	<i>Current Surveys</i>	<i>Comments</i>
<i>Acanthomintha ilicifolia</i> San Diego thornmint	FT/SE 1B.1 Covered Narrow Endemic List A	Michael Brandman Associates (MBA) 1989/1991	Observed in all recent surveys	Identified in two disturbed areas with heavy clay soils. Associated vegetation consists of nonnative grasses and annuals. Populations cover approximately 0.1 and 3.3 acres each. Because the population is densely distributed in these locations, the actual number of individuals was not quantified. Analysis of this plant is based on the acreage over which it occurs.
<i>Adolphia californica</i> California adolphia	None/None 2B.1 Not Covered List B	Not observed	Observed in 1999	Identified in two locations in the western portion of the site within sparse coastal sage scrub (<20 individuals).
<i>Convolvulus simulans</i> Small-flowered morning-glory	None/None 4.2 Not Covered List D	Not observed	Observed in 2000	Three locations in western part of Project site in clay soil grasslands; approximately 120 total individuals.
<i>Dichondra occidentalis</i> Western dichondra	None/None 4.2 Not Covered List D	MBA 1989/1990	Observed in 1999 and 2000	Recorded in eight locations on the central ridges of the site. A total of 30 patches were recorded that vary from 1 to 500 square feet. Recorded based on patch size due to low-growing dense form of the species. The species covers approximately 0.50 acre total over the 30 patches.
<i>Dudleya variegata</i> Variegated dudleya	None/None 1B.2 Covered – Narrow Endemic List A	MBA 1989/1990	Observed in 1999 and 2000	Identified in 40 locations throughout the site. Estimated population size on-site is approximately 5,833 individuals. Generally in clay soils and west-facing slopes, ridge lines, or margins of mesas.

Table 2.3-2. Summary of Special-Status Plant Species Detected

Scientific Name Common Name	Status Federal/ State CRPR MSCP Coverage County List	Locations and Population Size on Site		
		<i>Previous Studies</i>	<i>Current Surveys</i>	<i>Comments</i>
<i>Ferocactus viridescens</i> San Diego barrel cactus	None/None 2B.1 Covered List B	MBA 1989/1990	Observed in all recent surveys	Identified in approximately 50 locations throughout the Project site, generally on south-facing slopes. Occurrences usually consist of <5 individuals; large stands contain 10–15 individuals. Approximately 217 individuals were recorded. Habitat association is generally open coastal sage scrub.
<i>Harpagonella palmeri</i> Palmer's grapplinghook	None/None 4.2 Not Covered List D	Not identified	Observed in 1999 and 2000	Identified in three areas in the eastern and western portions of the site within disturbed coastal sage scrub, dirt road margins, and nonnative grassland with heavy clay soils. Approximately 114 individuals were recorded.
<i>Iva hayesiana</i> San Diego marsh-elder	None/None 2B.2 Not Covered List B	MBA 1989/1990	Observed in 1999 and 2000	Abundant within narrow drainages throughout the site. Total on-site population in the thousands. Generally associated with cismontane alkali marsh or sparsely vegetated, rocky stream channels. Due to densely occurring populations within these drainages, this plant was recorded by area rather than number of individuals. A total of 5.4 acres of this species was recorded on-site.
<i>Juncus acutus</i> ssp. <i>leopoldii</i> Southwestern spiny rush	None/None 4.2 Not Covered List D	MBA 1989/1990	Observed in 1999 and 2000	Identified in 11 locations within cismontane alkali marsh. Occurrences typically contain <10 individuals within each location. Approximately 30 individuals present on-site.
<i>Microseris douglasii</i> ssp. <i>platycarpha</i> Small-flowered microseris	None/None 4.2 Not Covered List D	Not observed	Observed in 2000	Six locations identified in the western part of the site in open nonnative grassland/coastal sage scrub. Approximately 1,270 individuals recorded on the site.

Table 2.3-2. Summary of Special-Status Plant Species Detected

Scientific Name Common Name	Status Federal/ State CRPR MSCP Coverage County List	Locations and Population Size on Site		
		<i>Previous Studies</i>	<i>Current Surveys</i>	<i>Comments</i>
<i>Bloomeria [Muilla] clevelandii</i> San Diego goldenstar	None/None 1B.1 Covered List A	MBA 1989/1990	Observed in 1999 and 2000	Identified in 21 locations in western and eastern portions of the site on mesic slopes containing sparse coastal sage scrub/native grassland. Approximately 1,146 individuals in western part of site and 1,400 individuals in eastern part in 2000. 1999 observations were fewer in number of individuals than 2000 observations, presumably due to rainfall differences.
<i>Myosurus minimus</i> ssp. <i>apus</i> Little mousetail	None/None 3.1 Not Covered List C	MBA 1989/1990	Not observed in recent surveys	Number of individuals was not recorded. Was not detected in recent focused surveys and is no longer considered to be present in K6 vernal pools.
<i>Ophioglossum californicum</i> California adder's- tongue	None/None 4.2 Not Covered List D	MBA 1989/1990	Not observed	Two locations described near Otay Lakes Road in west and south-central portions of the site. Location was not mapped by MBA. Not identified during recent surveys; may no longer be present since it was not recorded during the rare plant surveys conducted in 2000.
<i>Pentachaeta aurea</i> ssp. <i>aurea</i> Golden-rayed pentachaeta	None/None 4.2 Not Covered List D	Not observed	Observed in 2000	Four locations identified in western portion of site; approximately 91 individuals occur in coastal sage scrub/grassland.
<i>Quercus dumosa</i> Nuttall's scrub oak (Possible mis- identification)*	None/None 1B.1 Not Covered List A	Not observed	Observed in all recent surveys	Occurs as a major component in areas mapped as scrub oak chaparral (approximately 200 individuals per acre). The acreage encompassed by this species is approximately 6.2 acres, including additional small patches within chaparral in the western portion of the site.
<i>Romneya coulteri</i> Coulter's matilija poppy	None/None 4.2 Not Covered List D	Not observed	Observed on-site	Number or location not mapped. Single location described as being adjacent to a drainage in eastern part of site.

Table 2.3-2. Summary of Special-Status Plant Species Detected

Scientific Name Common Name	Status Federal/ State CRPR MSCP Coverage County List	Locations and Population Size on Site		
		<i>Previous Studies</i>	<i>Current Surveys</i>	<i>Comments</i>
<i>Salvia munzii</i> Munz's sage	None/None 2B.2 Not Covered List B	MBA 1989/1990	Observed in all recent surveys	Occurs throughout the site, but most densely in the northwestern quarter. Also occurs on K9 mesa. Most areas containing dense coastal sage scrub in this area contain approximately 50%–80% vegetation cover of <i>S. munzii</i> . Because the population is densely distributed in these locations, the actual number of individuals was not quantified. Analysis of this plant is based on the acreage over which it occurs, approximately 295 acres.
<i>Viguiera laciniata</i> San Diego County viguiera	None/None 4.2 Not Covered List D	MBA 1989/1990	Observed in all recent surveys	Occurs throughout the site, but most densely in the northern portion. Encompasses approximately 1,071 acres of the site. Comprises between 5% and 30% of vegetation cover in coastal sage scrub.

* More recent information challenges the identification of Nuttall's scrub oak on-site due to the inland location of the site and general coastal distribution of the species (see Section 2.3.1.2). However, without more concrete documentation, the current conclusion will be assumed to be correct.

Federal Designations:

FE Federally Listed as Endangered

FT Federally Listed as Threatened

State Designations:

SE State-listed as Endangered

ST State-listed as Threatened

California Native Plant Society (CNPS) Designations:

CRPR = California Rare Plant Rank

CRPR 1A: Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere

CRPR 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere

CRPR 2A: Plants Presumed Extirpated in California, But More Common Elsewhere

CRPR 2B: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere

CRPR 3: Plants About Which More Information is Needed – A Review List

CRPR 4: Plants of Limited Distribution – A Watch List

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

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

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

MSCP Designations:

Covered: Listed as Covered Species in Appendix B of Implementing Agreement between CDFW, USFWS, and County of San Diego (March 1998)

Not Covered: Not Listed as Covered Species in Appendix B of Implementing Agreement between CDFW, USFWS, and County of San Diego (March 1998)

County Designations:

List A: Plants rare, threatened, or endangered in California and elsewhere (corresponds to CRPR 1B)

List B: Plants rare, threatened, or endangered in California but more common elsewhere (corresponds to CRPR 2)

List C: Plants that may be quite rare, but need more information to determine their rarity status (corresponds to CRPR List D)

List D: Plants of limited distribution and are uncommon, but not presently rare or endangered (corresponds to CRPR 4)

Table 2.3-3. Summary of Sensitive Wildlife Species Detected On- or Off-Site or with Moderate to High Potential to Occur

Species (Scientific Name)	Regulatory Status: Federal; State; MSCP; County Group	General Habitat Association	Status		
			<i>Previous Studies</i>	<i>Current Surveys</i>	<i>Comments</i>
San Diego fairy shrimp (<i>Branchinecta sandiegonensis</i>)	USFWS: FE CDFW: None MSCP: Covered County: Group 1	Small, shallow vernal pools, occasionally ditches and road ruts	Not observed	Observed in 2000, 2004, and 2008	A total of nine basins on K8 and one basin on K6 are confirmed occupied by this species. Within off-site areas, a total of five road rut basins are occupied by this species.
Quino checkerspot butterfly (<i>Euphydryas editha quino</i>)	USFWS: FE CDFW: None MSCP: Not Covered County: Group 1	Sparsely vegetated hilltops, ridgelines, occasionally rocky outcrops; host plant dot seed plantain (<i>Plantago erecta</i>) and nectar plants must be present	Not observed (known from 1970s P. Ehrlich research)	Observed in 1999, 2000, 2004, and 2008	Focused surveys of the entire site in 1999 and 2000 resulted in the observation of 48 individuals. 2004 surveys of the open space area resulted in observation of 1 individual in the northwestern corner. Focused surveys of the entire site in 2008 resulted in the observation of 71 individuals after duplicates were removed. Observations were concentrated in the northern portion and along a ridgeline within the central portion of the site and were generally in either coastal sage scrub or disturbed coastal sage scrub habitat. A number of additional observations were scattered throughout the rest of the site.
Monarch butterfly (<i>Danaus plexippus</i>)	USFWS: None CDFW: None MSCP: Not Covered. County: Group 2	Overwinters in eucalyptus groves	Not observed	Observed	This species occurs on-site on occasion as single individuals in flight over the area; however, there are not sufficient resources available to make this a significant overwintering site.
Western spadefoot toad (<i>Spea hammondi</i>)	USFWS: None CDFW: CSC MSCP: Not Covered County: Group 2	Most common in grasslands, coastal sage scrub near rain pools or vernal pools; riparian habitats	Not observed	Observed in 2000	Tadpoles incidentally observed in a single depression on K8 mesa. Could occur within pools that inundate.

Table 2.3-3. Summary of Sensitive Wildlife Species Detected On- or Off-Site or with Moderate to High Potential to Occur

Species (Scientific Name)	Regulatory Status: Federal; State; MSCP; County Group	General Habitat Association	Status		
			<i>Previous Studies</i>	<i>Current Surveys</i>	<i>Comments</i>
Rosy boa (<i>Charina trivirgata</i>)	USFWS: None CDFW: None MSCP: Not Covered County: Group 2	Rocky chaparral, coastal sage scrub, oak woodlands, desert and semi-desert scrub	Not observed	Observed in 2008	Observed in northeastern portion of the project site.
Western pond turtle (<i>Emys marmorata</i>)	USFWS: None CDFW: CSC MSCP: Covered County: Group 1	Slow-moving permanent or intermittent streams, ponds, small lakes, reservoirs with emergent basking sites; adjacent uplands used during winter	Not observed	Observed in 2000	Incidentally observed laying eggs in a dirt road in northwestern corner of site. Another observation of an individual crossing Otay Lakes Road immediately south of the site.
Orangethroat whiptail (<i>Aspidoscelis hyperythra</i>)	USFWS: None CDFW: CSC MSCP: Covered County: Group 2	Coastal sage scrub, chaparral, grassland, juniper, and oak woodland	MBA 89	Observed in 2000 and 2008	Observed in coastal sage scrub. Probably occurs elsewhere within open patches of coastal sage scrub and grassland.
Coastal whiptail (<i>Aspidoscelis tigris stejnegeri</i>)	USFWS: None CDFW: None MSCP: Not Covered County: Group 2	Coastal sage scrub, chaparral	Not observed	Observed in 2000	Observed in sparse coastal sage scrub on-site. Probably resident in open areas and sparse coastal sage scrub and chaparral throughout the site.
San Diego banded gecko (<i>Coleonyx variegatus abbotti</i>)	USFWS: None CDFW: None MSCP: Not Covered County: Group 1	Cismontane chaparral, coastal sage scrub, desert scrub; granite outcrops	Not observed	Not observed	Moderate potential to occur on-site based on the availability of rock outcrops and suitable vegetative components.
San Diego ringneck snake (<i>Diadophis punctatus similis</i>)	USFWS: None CDFW: None MSCP: Not Covered County: Group 2	Open, rocky areas in moist habitats near intermittent streams: marsh, riparian woodland, sage scrub	Not observed	Observed on-site	Observed in the main eastern drainage. Moderate potential to occur within deeper canyons on-site and under debris on-site.

Table 2.3-3. Summary of Sensitive Wildlife Species Detected On- or Off-Site or with Moderate to High Potential to Occur

Species (Scientific Name)	Regulatory Status: Federal; State; MSCP; County Group	General Habitat Association	Status		
			<i>Previous Studies</i>	<i>Current Surveys</i>	<i>Comments</i>
San Diego (coast; Blainville's) horned lizard (<i>Phrynosoma blainvillii</i>)	USFWS: None CDFW: CSC MSCP: Covered County: Group 2	Coastal sage scrub, nonnative grassland, chaparral, oak and riparian woodland, coniferous forest	MBA 89	Observed in 1999, 2000, and 2008	Observed within undisturbed coastal sage scrub and chamise chaparral.
Coast patch-nosed snake (<i>Salvadora hexalepis virgultea</i>)	USFWS: None CDFW: CSC MSCP: Not Covered County: Group 2	Chaparral, washes, sandy flats, rocky areas	Not observed	Not observed	Probably occurs on-site.
Red-diamond rattlesnake (<i>Crotalus ruber</i>)	USFWS: None CDFW: CSC MSCP: Not Covered County: Group 2	Variety of shrub habitats where there is heavy brush, large rocks, or boulders	Not observed	Observed in 1999, 2000, and 2008	Observed throughout the site within dense and sparse coastal sage scrub and chaparral.
Two-striped garter snake (<i>Thamnophis hammondi</i>)	USFWS: None CDFW: CSC MSCP: Not Covered County: Group 1	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools	Not observed	Not observed	Probably occurs on-site.
Cooper's hawk (<i>Accipiter cooperii</i>)	USFWS: None CDFW: WL MSCP: Covered County: Group 1	Riparian and oak woodlands, montane canyons	Not observed	Observed in 2000	Observed flying over site; potential for nesting on-site is low due to lack of developed forest or woodland habitats.
Sharp-shinned hawk (<i>Accipiter striatus</i>)	USFWS: None CDFW: WL MSCP: Not Covered County: Group 1	Nests in coniferous forests, ponderosa pine, black oak, riparian deciduous, mixed conifer, Jeffrey pine; winters in lowland woodlands and other habitats	Not observed	Not observed	None observed on-site; does not nest in coastal San Diego, but likely forages on-site during winter.

Table 2.3-3. Summary of Sensitive Wildlife Species Detected On- or Off-Site or with Moderate to High Potential to Occur

Species (Scientific Name)	Regulatory Status: Federal; State; MSCP; County Group	General Habitat Association	Status		
			<i>Previous Studies</i>	<i>Current Surveys</i>	<i>Comments</i>
Southern California rufous-crowned sparrow (<i>Aimophila ruficeps canescens</i>)	USFWS: None CDFW: WL MSCP: Covered County: Group 1	Grass-covered hillsides, coastal sage scrub, chaparral with boulders and outcrops	MBA 89	Observed in 1999, 2000, and 2008	Observed throughout the site and highly likely to nest on-site.
Grasshopper sparrow (<i>Ammodramus savannarum</i>)	USFWS: None CDFW: CSC MSCP: Not Covered County: Group 1	Open grassland and prairie, especially native grassland with a mix of grasses and forbs	MBA 89	Observed in 2000 and 2008	Observed mainly in southwestern and central portions of the project site.
Bell's sage sparrow (<i>Artemisiospiza belli belli</i>) (taxonomy was changed to Bell's sparrow <i>Artemisiospiza belli</i>)	USFWS: None CDFW: WL MSCP: Not Covered County: Group 1	Coastal sage scrub and dry chaparral along coastal lowlands and inland valleys	MBA 89	Observed in 1999, 2000, and 2008	Identified in eastern and western portions of site in sparse coastal sage scrub.
Golden eagle (<i>Aquila chrysaetos</i>)	USFWS: BCC CDFW: P, WL, Golden Eagle Protection Act MSCP: Covered County: Group 1	Open country, especially hilly and mountainous regions; grassland, coastal sage scrub, chaparral, oak savannas, open coniferous forest	Not observed	Observed in 1999, 2000, and 2008	Observed in eastern and north-central portion of the site. Site is in mapped primary foraging area for known golden eagle territory. Nearest known nest site is >3 miles from project site. No nesting observed; could forage.
Red-shouldered hawk (<i>Buteo lineatus</i>)	USFWS: None CDFW: None MSCP: Not Covered County: Group 1	Riparian and woodland habitats, eucalyptus	Not observed	Observed on-site	Observed foraging over the site near the southern portion and within adjacent riparian habitat. Moderate potential to also occur on-site as a breeding bird.
Ferruginous hawk (<i>Buteo regalis</i>)	USFWS: BCC CDFW: WL MSCP: Covered County: Group 1	Open, dry country, grasslands, open fields, agriculture	Not observed	Not observed	Moderate potential to occur on-site occasionally during the winter migration. Would not breed on-site.

Table 2.3-3. Summary of Sensitive Wildlife Species Detected On- or Off-Site or with Moderate to High Potential to Occur

Species (Scientific Name)	Regulatory Status: Federal; State; MSCP; County Group	General Habitat Association	Status		
			<i>Previous Studies</i>	<i>Current Surveys</i>	<i>Comments</i>
Turkey vulture (<i>Cathartes aura</i>)	USFWS: None CDFW: None MSCP: Not Covered County: Group 1	Rangeland, agriculture, grassland; uses cliffs and large trees for roosting, nesting, and resting	Not observed	Observed in flight over site	Occasionally flies over the Project site as a possible foraging flight. No breeding potential.
Northern harrier (<i>Circus cyaneus</i>)	USFWS: None CDFW: CSC MSCP: Covered County: Group 1	Open wetlands (nesting), pasture, old fields, dry uplands, grasslands, rangelands, coastal sage scrub	Not observed	Observed in 1999, 2000, and 2008	Observed foraging over grassland areas in the K6 and K8 mesas. Could nest on-site but is more likely a winter visitor.
White-tailed kite (<i>Elanus leucurus</i>)	USFWS: None CDFW: P MSCP: Not Covered County: Group 1	Open grasslands, savanna-like habitats, agriculture for foraging; wetlands, oak woodlands, riparian for breeding.	Not observed	Observed in 1999 and 2000	Observed foraging in grassland areas; nesting is unlikely due to lack of forest or woodlands although a small amount of riparian is located on the project site.
California horned lark (<i>Eremophila alpestris actia</i>)	USFWS: None CDFW: WL MSCP: Not Covered County: Group 2	Open habitats, grassland, rangeland, shortgrass prairie, montane meadows, coastal plains, fallow grain fields	Not observed	Observed in 1999, 2000, and 2008	Observed within sparse coastal sage scrub and grasslands on the project site.
Prairie falcon (<i>Falco mexicanus</i>)	USFWS: BCC CDFW: WL MSCP: Not Covered County: Group 1	Grassland, savannas, rangeland, agriculture, desert scrub, alpine meadows; nest on cliffs or bluffs	Not observed	Observed in 2000	Observed within coastal sage scrub and grasslands. Likely is a wintering visitor and could forage on the project site.
Loggerhead shrike (<i>Lanius ludovicianus</i>)	USFWS: BCC CDFW: CSC MSCP: Not Covered County: Group 1	Open ground including grassland, coastal sage scrub, broken chaparral, agriculture, riparian, open woodland	MBA 89	Observed in 2000	Likely to nest on-site, individuals observed in grassland and sparse coastal sage scrub.

Table 2.3-3. Summary of Sensitive Wildlife Species Detected On- or Off-Site or with Moderate to High Potential to Occur

Species (Scientific Name)	Regulatory Status: Federal; State; MSCP; County Group	General Habitat Association	Status		
			<i>Previous Studies</i>	<i>Current Surveys</i>	<i>Comments</i>
Summer tanager (nesting) (<i>Piranga rubra</i>)	USFWS: None CDFW: CSC MSCP: Not Covered County: Group 2	Nests in riparian woodland; winter habitats include parks and residential areas	Not observed	Not observed	Moderate potential. Suitable habitat exists near the project site.
Coastal California gnatcatcher (<i>Polioptila californica californica</i>)	USFWS: FT CDFW: CSC MSCP: Covered County: Group 1	Coastal sage scrub, coastal sage scrub–chaparral mix, coastal sage scrub–grassland ecotone, riparian in late summer	MBA 89	Observed in 1999, 2000, and 2008	Observed nesting in coastal sage scrub and chamise chaparral throughout the site. Based on previous and currently mapped locations, approximately 17 locations occur on-site and 3 additional locations have been recorded within the Cornerstone Lands and could occur onsite (MSCP data).
Western bluebird (<i>Sialia mexicana</i>)	USFWS: None CDFW: None MSCP: Covered County: Group 2	Open forests of deciduous, coniferous or mixed trees, savanna, edges of riparian woodland saltmarsh, riparian habitats	Not observed	Observed during winter	This species once did not breed on the coastal plain; however, in recent years it has begun to do so. The only breeding opportunities for this species would be within wooded habitats which are not present on-site.
Burrowing owl (<i>Athene cunicularia</i>)	USFWS: BCC CDFW: CSC MSCP: Covered County: Group 1	Grassland, lowland scrub, agriculture, coastal dunes and other artificial open areas	MBA 89	Observed in 2000	Previously identified on eastern slope of K6 mesa as an incidental observation of single individual in central portion of site.
Barn owl (<i>Tyto alba</i>)	USFWS: None CDFW: None MSCP: Not Covered County: Group 2	Open forests of deciduous, coniferous or mixed trees, savanna, riparian habitats, abandoned structures, mines	Not observed	Observed flying over site	This species has abundant foraging opportunities but limited nesting opportunities on-site. It is unlikely that there is enough cover on-site to support nesting by this species.

Table 2.3-3. Summary of Sensitive Wildlife Species Detected On- or Off-Site or with Moderate to High Potential to Occur

Species (Scientific Name)	Regulatory Status: Federal; State; MSCP; County Group	General Habitat Association	Status		
			<i>Previous Studies</i>	<i>Current Surveys</i>	<i>Comments</i>
Dulzura California pocket mouse (<i>Chaetodipus californicus femoralis</i>)	USFWS: None CDFW: CSC MSCP: Not Covered County: Group 2	Coastal sage scrub, chaparral, riparian–scrub ecotone; more mesic areas	Not observed	Not observed	Very likely to occur on-site.
Northwestern San Diego pocket mouse (<i>Chaetodipus fallax fallax</i>)	USFWS: None CDFW: CSC MSCP: Not Covered County: Group 2	Coastal sage scrub, grassland, sage scrub–grassland ecotones, sparse chaparral; rocky substrates, loams and sandy loams	Not observed	Not observed	Likely to occur on-site.
Townsend’s western big-eared bat (<i>Corynorhinus townsendii</i>)	USFWS: None CDFW: CSC MSCP: Not Covered County: Group 2	Mesic habitats, gleans from brush or trees or feeds along habitat	No bat surveys conducted	No bat surveys conducted	Likely to occur on-site.
Spotted bat (<i>Euderma maculatum</i>)	USFWS: None CDFW: CSC MSCP: Not Covered County: Group 2	Rock crevices, riparian forest, woodland, and scrub, ponds, lakes, grassland	No bat surveys conducted	No bat surveys conducted	Moderate potential to occur on-site. Suitable habitat is present nearby.
Western red bat (<i>Lasiurus blossevillei</i>)	USFWS: None CDFW: CSC MSCP: Not Covered County: Group 2	Prefers edges with trees for roosting and open areas for foraging. Feeds over grasslands, shrublands, woodlands, forests, and croplands.	No bat surveys conducted	No bat surveys conducted	Moderate potential to occur on-site.
San Diego black-tailed jackrabbit (<i>Lepus californicus bennettii</i>)	USFWS: None CDFW: CSC MSCP: Not Covered County: Group 2	Arid habitats with open ground; grasslands, coastal sage scrub, agriculture, disturbed areas, rangelands	Not observed	Incidentally observed.	Observed throughout the site.

Table 2.3-3. Summary of Sensitive Wildlife Species Detected On- or Off-Site or with Moderate to High Potential to Occur

Species (Scientific Name)	Regulatory Status: Federal; State; MSCP; County Group	General Habitat Association	Status		
			Previous Studies	Current Surveys	Comments
San Diego desert woodrat (<i>Neotoma lepida intermedia</i>)	USFWS: None CDFW: CSC MSCP: Not Covered County: Group 2	Coastal sage scrub, chaparral, pinyon-juniper woodland with rock outcrops, cactus thickets, dense undergrowth	Not observed	Nests incidentally observed.	Middens were observed within chaparral areas on-site.
Mountain lion (<i>Puma concolor</i>)	USFWS: None CDFW: None MSCP: Covered County: Group 2	Coastal sage scrub, chaparral, riparian, woodlands, forest; rests in rocky areas, and on cliffs and ledges that provide cover	MBA 89	Not observed	Signs of movement through eastern portion of site.

Federal Designations:

BCC U.S. Fish and Wildlife Service (USFWS) Bird of Conservation Concern
 FE Federally Listed as Endangered
 FT Federally Listed as Threatened

State Designations:

CSC California Special Concern Species
 P California Department of Fish and Wildlife (CDFW) Protected and Fully Protected Species
 SE State-listed as Endangered
 ST State-listed as Threatened
 WL Watch List

Multiple Species Conservation Program (MSCP) Designations:

Covered Listed as Covered Species in Appendix B of Implementing Agreement between CDFW, USFWS, and County of San Diego (March 1998)
 Not Covered Not Listed as Covered Species in Appendix B of Implementing Agreement between CDFW, USFWS, and County of San Diego (March 1998)

County Designations:

Group 1: High level of sensitivity, either because listed as threatened or endangered or because species has very specific natural history requirements that must be met
 Group 2: Species is becoming less common, but is not yet so rare that extirpation or extinction is imminent without immediate action. These species tend to be prolific within their suitable habitat types.

Table 2.3-4. Jurisdictional Waters – Acreages and Linear Feet

	On-Site		Off-Site		Total	
	<i>Acres</i>	<i>Linear Feet</i>	<i>Acres</i>	<i>Linear Feet</i>	<i>Acres</i>	<i>Linear Feet</i>
Total COE/CDFW/RWQCB/ County of San Diego Wetlands*	7.94	—	0.80	—	8.74	—
Total CDFW Wetlands*	0.06	—	0.03	—	0.09	—
Total ACOE/CDFW/RWQCB Ephemeral Waters	2.90	61,685	0.12	2,679	3.02	64,364
Total ACOE/CDFW/RWQCB Intermittent Waters	0.04	1,711	—	—	0.04	1,711
Total	10.94	63,396	0.95	2,679	11.89	66,075

* See Table 2.3-1 for the acreage of specific wetland communities

ACOE = U.S. Army Corps of Engineers

CDFW = California Department of Fish and Wildlife

RWQCB = Regional Water Quality Control Board

Table 2.3-5. On-Site Impacts by Habitat Type

Vegetation Community Type	Existing On-Site* (Acres)	Total On-Site Impacts (Acres)							Acreage Not Impacted
		Outside Preserve			Inside Preserve				
		Permanent		Total Development Impacts	Permanent Impacts		Temporary Impacts		
		Fuel Modification Zone	Development		Water Tank	Detention Basins	Slope	Water Line	
<i>Sensitive Upland Communities</i>									
Coastal Sage Scrub	1,121.51	20.68	255.89	276.57	2.26	1.22	13.02	0.23	828.21
Disturbed Coastal Sage Scrub	348.62	4.41	202.05	206.46	0.73	2.35	4.17	—	133.91
Chamise Chaparral	143.14	0.87	112.34	113.21	—	0.07	0.74	—	29.12
Disturbed Chamise Chaparral	15.67	—	11.36	11.36	—	—	—	—	4.31
Scrub Oak Chaparral	22.45	—	22.10	22.10	—	—	0.01	—	0.34
Southern Mixed Chaparral	4.95	0.94	1.92	2.86	—	—	—	—	2.09
Disturbed Valley Needlegrass Grassland	110.58	0.80	76.21	77.01	0.27	0.06	0.25	—	32.99
Nonnative Grassland	78.96	1.65	58.40	60.05	0.08	0.92	0.16	—	17.75
<i>Subtotal</i>	<i>1,845.88</i>	<i>29.35</i>	<i>740.23</i>	<i>769.58</i>	<i>3.34</i>	<i>4.62</i>	<i>18.35</i>	<i>0.23</i>	<i>1,048.72</i>
<i>Sensitive Wetland Communities*</i>									
Cismontane Alkali Marsh	6.39	—	0.01	0.01	—	—	—	—	6.38
Disturbed Cismontane Alkali Marsh	0.17	—	0.01	0.01	0.01	—	0.01	—	0.14
Mulefat Scrub (CDFW jurisdiction only)	0.08	—	0.03	0.03	—	—	—	—	0.05
Open Water	0.17	—	0.17	0.17	—	—	—	—	—
Southern Willow Scrub	1.19	—	—	--	—	—	—	—	1.19
<i>Subtotal</i>	<i>8.00</i>	<i>—</i>	<i>0.22</i>	<i>0.22</i>	<i>0.01</i>	<i>—</i>	<i>0.01</i>	<i>—</i>	<i>7.76</i>
<i>Non-Sensitive Communities and Land Covers</i>									
Developed Land	0.88	—	0.82	0.82	0.05	—	—	—	0.01
Disturbed Habitat	13.46	0.22	7.90	8.12	0.03	0.06	0.25	—	5.00
Stock Pond	0.79	—	—	--	—	—	—	—	0.79
<i>Subtotal</i>	<i>15.13</i>	<i>0.22</i>	<i>8.75</i>	<i>8.97</i>	<i>0.08</i>	<i>0.06</i>	<i>0.25</i>	<i>—</i>	<i>5.80</i>
Totals	1,869.01	29.57	749.25	778.78	3.43	4.68	18.61	0.23	1,062.28

* Sensitive wetland communities are under the jurisdiction of the U.S. Army Corps of Engineers, California Department of Fish and Wildlife, and Regional Water Quality Control Board unless noted otherwise.

Table 2.3-6. Proposed Preserve Lands

Vegetation Community Type	Preserve (not impacted)* On-Site (acres)	Preserve Purchased for Boundary Adjustment (acres)	Preserve (Impacted Acres)				Total Preserve (Acres)
			Permanent Impacts	Temporary Impacts			
			Allowable Uses (Water Tank and associated road grading)	Detention Basins	Slopes	Water	
<i>Sensitive Upland Communities</i>							
Coastal Sage Scrub	828.21	3.18	2.26	1.22	13.02	0.23	848.12
Disturbed Coastal Sage Scrub	133.91	—	0.73	2.35	4.17	—	141.16
Chamise Chaparral	29.12	—	—	0.07	0.74	—	29.93
Disturbed Chamise Chaparral	4.31	—	—	—	—	—	4.31
Scrub Oak Chaparral	0.34	—	—	—	0.01	—	0.35
Southern Mixed Chaparral	2.09	4.28	—	—	—	—	6.37
Disturbed Valley Needlegrass Grassland	32.99	—	0.27	0.06	0.25	—	33.57
Nonnative Grassland	17.75	2.74	0.08	0.92	0.16	—	21.65
<i>Subtotal</i>	<i>1,048.72</i>	<i>10.20</i>	<i>3.34</i>	<i>4.62</i>	<i>18.35</i>	<i>0.23</i>	<i>1,085.46</i>
<i>Sensitive Wetland Communities</i>							
Cismontane Alkali Marsh	6.38	—	—	—	—	—	6.38
Disturbed Cismontane Alkali Marsh	0.14	—	0.01	—	0.01	—	0.16
Mulefat Scrub	0.05	—	—	—	—	—	0.05
Open Water	—	—	—	—	—	—	—
Southern Willow Scrub	1.19	—	—	—	—	—	1.19
<i>Subtotal</i>	<i>7.76</i>	<i>—</i>	<i>0.01</i>	<i>—</i>	<i>0.01</i>	<i>—</i>	<i>7.78</i>
<i>Non-Sensitive Communities and Land Covers</i>							
Developed Land	0.01	—	0.05	—	—	—	0.06
Disturbed Habitat	5.00	—	0.03	0.06	0.25	—	5.34
Stock Pond	0.79	—	—	—	—	—	0.79
<i>Subtotal</i>	<i>5.80</i>	<i>—</i>	<i>0.08</i>	<i>0.06</i>	<i>0.25</i>	<i>—</i>	<i>6.19</i>
Total	1,062.28	10.20	3.43	4.68	18.61	0.23	1,089.28

* Mapping within the majority of open space areas is regional scale as opposed to Project-level mapping, which is sufficient for purposes of this biological resources analysis since these areas are not proposed to be impacted.

Table 2.3-7. Off-Site Impacts by Habitat Type Within Various Ownerships

Vegetation Community Type	Permanent Off-Site Impacts (acres)			
	<i>City of San Diego Cornerstone Lands</i>	<i>County of San Diego</i>	<i>City of Chula Vista</i>	<i>Off-Site Otay Ranch</i>
<i>Sensitive Upland Communities</i>				
Coastal Sage Scrub	5.63	1.24	0.06	0.68
Disturbed Coastal Sage Scrub	3.22	1.70	0.07	---
Disturbed Valley Needlegrass Grassland	---	0.03	---	---
Nonnative Grassland	0.62	0.37	1.38	3.07
<i>Subtotal</i>	<i>9.47</i>	<i>3.34</i>	<i>1.51</i>	<i>3.75</i>
<i>Sensitive Wetland Communities*</i>				
Freshwater Marsh	0.17	---	---	---
Disturbed Mulefat Scrub – ACOE/CDFW/RWQCB/County of San Diego	0.09	0.01	---	---
Disturbed Mulefat Scrub – CDFW	0.03			
Open Water	0.49	---	---	---
Southern Willow Scrub	0.04	---	---	---
<i>Subtotal</i>	<i>0.82</i>	<i>0.01</i>	<i>0.00</i>	<i>0.00</i>
<i>Non-Sensitive Communities and Land Covers</i>				
Eucalyptus Woodland	0.27	0.11	---	0.23
Developed Land	0.01	17.21	1.97	0.04
Disturbed Habitat	0.27	0.11	---	---
Ornamental	0.25	0.04	0.22	0.43
<i>Subtotal</i>	<i>0.80</i>	<i>17.47</i>	<i>2.19</i>	<i>0.70</i>
Total	11.09	20.82	3.70	4.45

* Sensitive wetland communities are under the jurisdiction of the ACOE, CDFW, and RWQCB unless noted otherwise.

ACOE = U.S. Army Corps of Engineers

CDFW = California Department of Fish and Wildlife

RWQCB = Regional Water Quality Control Board

Table 2.3-8. Jurisdictional Waters Impacts*

Jurisdictional Water type	Permanent Impacts (acres)				Temporary Impacts (acres)				Total Impacts (acres)
	<i>Fuel Modification</i>		<i>Development</i>		<i>Detention Basin</i>		<i>Slope Revegetation</i>		
	<i>On-Site</i>	<i>Off-Site</i>	<i>On-Site</i>	<i>Off-Site (Cornerstone Lands)</i>	<i>On-Site</i>	<i>Off-Site</i>	<i>On-Site</i>	<i>Off-Site</i>	
Total ACOE/CDFW/RWQCB Ephemeral Waters	0.02	—	0.97	0.02	<0.01	—	0.07	—	1.08
Total ACOE/CDFW/RWQCB Intermittent Waters	—	—	0.04	—	—	—	—	—	0.04
Total	0.02	—	1.01	0.02	<0.01	—	0.07	—	1.12

* Impacts to jurisdictional wetlands are summarized by vegetation community type in Table 2.3-5 and Table 2.3-7. Jurisdictional waters summarized in this table were mapped within upland vegetation communities and, thus, are not included in Table 2.3-5 and Table 2.3-7.

ACOE = U.S. Army Corps of Engineers

CDFW = California Department of Fish and Wildlife

RWQCB = Regional Water Quality Control Board

Table 2.3-9. Impacts to Sensitive Plant Species Present On-Site

Species Scientific Name	Regulatory Status Federal/State CRPR MSCP Coverage County List	Basis for Impact Evaluation	Number/ Acre(s) impacted	Percent impacted	Number/ Acre(s) preserved	Percent Preserved	Otay Ranch RMP Percent Preservation Required
San Diego thornmint (<i>Acanthomintha ilicifolia</i>)	FT/SE 1B.1 Covered Narrow Endemic List A	A total of 3.4 acres of the species have been mapped on-site.	0.1 acre	3	3.3 acres	97	95
California adolphia (<i>Adolphia californica</i>)	None/None 2.1 Not Covered List B	A total of <20 individuals present at two locations. For purposes of evaluation, it is assumed that a total of 20 are currently present on-site.	20 individuals	100	0	0	75
Small-flowered morning-glory (<i>Convolvulus simulans</i>)	None/None 4.2 Not Covered List D	A total of 120 individuals observed on-site.	0 individuals	0	120 individuals	100	N/A
Western dichondra (<i>Dichondra occidentalis</i>)	None/None 4.2 Not Covered List D	A total of 0.5 acre occupied by this species on-site.	0.3 acre	60	0.2 acre	40	50
Variegated dudleya (<i>Dudleya variegata</i>)	None/None 1B.2 Covered – Narrow Endemic List A	A total of 5,833 individuals observed on-site.	925 individuals	16	4,908 individuals	84	50

Table 2.3-9. Impacts to Sensitive Plant Species Present On-Site

Species Scientific Name	Regulatory Status Federal/State CRPR MSCP Coverage County List	Basis for Impact Evaluation	Number/ Acre(s) impacted	Percent impacted	Number/ Acre(s) preserved	Percent Preserved	Otay Ranch RMP Percent Preservation Required
San Diego barrel cactus (<i>Ferocactus viridescens</i>)	None/None 2.1 Covered List B	A total of 217 individuals observed on-site.	115 individuals	53	102 individuals	47	75
Palmer's grapplinghook (<i>Harpagonella palmeri</i>)	None/None 4.2 Not Covered List D	A total of 114 individuals observed on-site.	114 individuals	100	0 individuals	0	75
San Diego marsh-elder (<i>Iva hayesiana</i>)	None/None 2B.2 Not Covered List B	A total of 5.4 acres occupied by this species on-site.	2.9 acres	53	2.5 acres	47	75
Southwestern spiny rush (<i>Juncus acutus ssp. leopoldii</i>)	None/None 4.2 Not Covered List D	A total of 30 individuals observed on-site.	12 individuals	40	18 individuals	60	50
Small-flowered microseris (<i>Microseris douglasii ssp. platycarpa</i>)	None/None 4.2 Not Covered List D	A total of 1,270 individuals observed on-site.	270 individuals	21	1,000 individuals	79	None
San Diego goldenstar (<i>Bloomeria clevelandii</i>)	None/None 1B.1 Covered List A	A total of 2,546 individuals observed on-site.	1,497 individuals	59	1,049 individuals	41	54

Table 2.3-9. Impacts to Sensitive Plant Species Present On-Site

Species Scientific Name	Regulatory Status Federal/State CRPR MSCP Coverage County List	Basis for Impact Evaluation	Number/ Acre(s) impacted	Percent impacted	Number/ Acre(s) preserved	Percent Preserved	Otay Ranch RMP Percent Preservation Required
Little mouse-tail (<i>Myosurus minimus</i> <i>spp. Apus</i>)	None/None 3.1 Not Covered List C	Although observed in 1990, this species has not been observed recently.	0	0	0	0	N/A
California adder's- tongue (<i>Ophioglossum</i> <i>californicum</i>)	None/None 4.2 Not Covered List D	Has not been observed in recent years and likely is not present.	0	0	0	0	N/A
Golden-rayed pentachaeta (<i>Pentachaeta aurea</i> <i>spp. aurea</i>)	None/None 4.2 Not Covered List D	A total of 91 individuals observed on-site.	51 individuals	56	40 individuals	44	None
Nuttall's scrub oak (<i>Quercus dumosa</i>)	None/None 1B.1 Not Covered List A	A total of 6.2 acres are occupied by this species on- site.	6.2 acres	100	0 acres	0	None
Coulter's matilija poppy (<i>Romneya coulteri</i>)	None/None 4.2 Not Covered List D	Single location observed.	0	0	1 individual	100	N/A
Munz's sage (<i>Salvia munzii</i>)	None/None 2B.2 Not Covered List B	A total of 295 acres are occupied by this species on- site.	102 acres	35	193 acres	65	46

Table 2.3-9. Impacts to Sensitive Plant Species Present On-Site

Species Scientific Name	Regulatory Status Federal/State CRPR MSCP Coverage County List	Basis for Impact Evaluation	Number/ Acre(s) impacted	Percent impacted	Number/ Acre(s) preserved	Percent Preserved	Otay Ranch RMP Percent Preservation Required
San Diego County viguiera (Viguiera laciniata)	None/None 4.2 Not Covered List D	A total of 1,071 acres of coastal sage scrub dominated with San Diego County viguiera.	160 acres	15	911 acres	85	75

Federal Designations:

FE Federally Listed as Endangered

FT Federally Listed as Threatened

State Designations:

SE State-listed as Endangered

ST State-listed as Threatened

California Native Plant Society (CNPS) Designations:

CRPR = California Rare Plant Rank

CRPR 1A: Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere

CRPR 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere

CRPR 2A: Plants Presumed Extirpated in California, But More Common Elsewhere

CRPR 2B: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere

CRPR 3: Plants About Which More Information is Needed – A Review List

CRPR 4: Plants of Limited Distribution – A Watch List

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

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

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

MSCP Designations:

Covered: Listed as Covered Species in Appendix B of Implementing Agreement between CDFW, USFWS, and County of San Diego (March 1998)

Not Covered: Not Listed as Covered Species in Appendix B of Implementing Agreement between CDFW, USFWS, and County of San Diego (March 1998)

County Designations:

List A: Plants rare, threatened, or endangered in California and elsewhere (corresponds to CRPR 1B)

List B: Plants rare, threatened, or endangered in California but more common elsewhere (corresponds to CRPR 2)

List C: Plants that may be quite rare, but need more information to determine their rarity status (corresponds to CRPR List D)

List D: Plants of limited distribution and are uncommon, but not presently rare or endangered (corresponds to CRPR 4)

Table 2.3-10. Permanent Impacts to Sensitive Wildlife Species Present On- or Off-Site or with Moderate to High Potential to Occur

Species Scientific Name	Regulatory Status: Federal; State; MSCP; County Group	Basis for Impact Evaluation	Number/ Acre(s) Impacted	Percent Permanently Impacted On-Site	Number / Acre(s) Preserved	Percent Preserved On-Site
San Diego fairy shrimp (<i>Branchinecta sandiegonensis</i>)	USFWS: FE CDFW: None MSCP: Not Covered County: Group 1	A total of nine basins on K8 mesa and one basin on K6 mesa are confirmed occupied by this species. Within off-site areas, a total of five road rut basins are occupied by this species.	1 basin/ 0.005 acre	3	Nine basins / 0.145 acre	97%
Quino checkerspot (<i>Euphydryas editha quino</i>)	USFWS: FE CDFW: None MSCP: Not Covered County: Group 1	Over 4 years of surveys, a total of 127 individuals have been observed; 71 observed in 2008. Coastal sage scrub and disturbed coastal scrub communities were considered potential habitat. Because there are Quino checkerspot butterfly observations within 0.6 mile of the entire property, no areas where Quino checkerspot butterfly have not been observed can be excluded. A total of 1,470 acres of potential habitat are located on-site.	20 individuals (inclusive over 4 years of surveys); 12 of the 2008 survey. A total of 483 acres of potential occupied habitat	16% of observations; 33% of potential habitat	107 individuals (inclusive over 4 years of surveys); 59 of the 2008 survey. A total of 962 acres of upland habitat that would be considered to be occupied is preserved.	84% of observations; 66% of potential habitat.

Table 2.3-10. Permanent Impacts to Sensitive Wildlife Species Present On- or Off-Site or with Moderate to High Potential to Occur

Species Scientific Name	Regulatory Status: Federal; State; MSCP; County Group	Basis for Impact Evaluation	Number/ Acre(s) Impacted	Percent Permanently Impacted On-Site	Number / Acre(s) Preserved	Percent Preserved On- Site
Monarch butterfly (<i>Danaus plexippus</i>)	USFWS: None CDFW: None MSCP: Not Covered County: Group 2	Incidental observation of single individuals. There are no suitable eucalyptus groves within which the species might overwinter.	0 acre	0	0	0
Western spadefoot toad (<i>Spea hammondi</i>)	USFWS: None CDFW: CSC MSCP: Not Covered County: Group 2	Based on observation and potential for inundated vernal pools on-site; 0.26 acre total.	0 acre	0	0.26 acre	100
Rosy boa (<i>Charina trivirgata</i>)	USFWS: None CDFW: None MSCP: Not Covered County: Group 2	Incidental observation. Impact based on 1,656 acres of suitable habitat.	633 acres	38	1,000 acres	60
Western pond turtle (<i>Emys marmorata</i>)	USFWS: None CDFW: CSC MSCP: Covered County: Group 1	One observed laying eggs. No suitable open water habitat on-site.	0	0	1 individual	100
Orangethroat whiptail (<i>Aspidoscelis hyperythra</i>)	USFWS: None CDFW: CSC MSCP: Covered County: Group 2	Incidental observation. Impact based on 1,656 acres of suitable habitat.	633 acres	38	1,000 acres	60
Coastal whiptail (<i>Aspidoscelis tigris stejnegeri</i>)	USFWS: None CDFW: None MSCP: Not Covered County: Group 2	Incidental observation. Impact based on 1,656 acres of suitable habitat.	633 acres	38	1,000 acres	60

Table 2.3-10. Permanent Impacts to Sensitive Wildlife Species Present On- or Off-Site or with Moderate to High Potential to Occur

Species Scientific Name	Regulatory Status: Federal; State; MSCP; County Group	Basis for Impact Evaluation	Number/ Acre(s) Impacted	Percent Permanently Impacted On-Site	Number / Acre(s) Preserved	Percent Preserved On-Site
San Diego banded gecko (<i>Coleonyx variegatus abbotti</i>)	USFWS: None CDFW: None MSCP: Not Covered County: Group 1	Based on moderate potential to occur. Impact based on 1,656 acres of suitable habitat.	633 acres	38	1,000 acres	60
San Diego ringneck snake (<i>Diadophis punctatus similis</i>)	USFWS: None CDFW: None MSCP: Not Covered County: Group 2	Incidental observation. Impact based on 8 acres of suitable habitat.	0.3 acre	3	7.7 acres	97
San Diego [coast; Blainville's] horned lizard (<i>Phrynosoma blainvillii</i>)	USFWS: None CDFW: CSC MSCP: Covered County: Group 2	Incidental observation. Impact based on 1,656 acres of suitable habitat.	633 acres	38	1,000 acres	60
Coast patch-nosed snake (<i>Salvadora hexalepis virgultea</i>)	USFWS: None CDFW: CSC MSCP: Not Covered County: Group 2	Based on moderate potential to occur. Impact based on 190 acres of suitable habitat.	137 acres	72	51 acres	27
Two-striped garter snake (<i>Thamnophis hammondi</i>)	USFWS: None CDFW: CSC MSCP: Not Covered County: Group 1	Based on moderate to high potential to occur. Impact based on 8 acres of suitable habitat.	0.3 acre	3	7.7 acres	97
Red-diamond rattlesnake (<i>Crotalus ruber</i>)	USFWS: None CDFW: CSC MSCP: Not Covered County: Group 2	Incidental observation. Impact based on 1,656 acres of suitable habitat.	633 acres	38	1,000 acres	60

Table 2.3-10. Permanent Impacts to Sensitive Wildlife Species Present On- or Off-Site or with Moderate to High Potential to Occur

Species Scientific Name	Regulatory Status: Federal; State; MSCP; County Group	Basis for Impact Evaluation	Number/ Acre(s) Impacted	Percent Permanently Impacted On-Site	Number / Acre(s) Preserved	Percent Preserved On-Site
Cooper's hawk (<i>Accipiter cooperii</i>)	USFWS: None CDFW: WL MSCP: Covered County: Group 1	Incidental observation. Impact based on 1.2 acres of suitable habitat. Foraging and nesting habitat are assumed to be the same for suitable habitat.	<0.1 acre	<0.1	1.2 acres	100
Sharp-shinned hawk (<i>Accipiter striatus</i>)	USFWS: None CDFW: WL MSCP: Not Covered County: Group 1	Likely to occur on-site for winter or migration but would not nest on-site. Foraging habitat is assumed to be the same as foraging habitat for Cooper's hawk.	<0.1 acre	<0.1	1.2 acres	100
Southern California rufous-crowned sparrow (<i>Aimophila ruficeps canescens</i>)	USFWS: None CDFW: WL MSCP: Covered County: Group 1	Incidental observation. Impact based on 1,656 acres of suitable habitat.	633 acres	38	1,000 acres	60
Grasshopper sparrow (<i>Ammodramus savannarum</i>)	USFWS: None CDFW: CSC MSCP: Not Covered County: Group 1	Incidental observation. Impact based on 190 acres of suitable habitat.	137 acres	72	51 acres	27
Bell's sage sparrow (<i>Artemisiospiza belli belli</i>) (taxonomy was changed to Bell's sparrow <i>Artemisiospiza belli</i>)	USFWS: None CDFW: WL MSCP: Not Covered County: Group 1	Incidental observation. Impact based on 1,656 acres of suitable habitat.	633 acres	38	1,000 acres	60

Table 2.3-10. Permanent Impacts to Sensitive Wildlife Species Present On- or Off-Site or with Moderate to High Potential to Occur

Species Scientific Name	Regulatory Status: Federal; State; MSCP; County Group	Basis for Impact Evaluation	Number/ Acre(s) Impacted	Percent Permanently Impacted On-Site	Number / Acre(s) Preserved	Percent Preserved On-Site
Golden eagle (<i>Aquila chrysaetos</i>)	USFWS: BCC CDFW: P, WL, Golden Eagle Protection Act MSCP: Covered County: Group 1	No impacts would occur to nesting habitat. Observed flying over site; likely forages on-site. Impact based on 1,660 acres of suitable foraging habitat. Nests are recorded in San Diego County Bird Atlas as 3 to 6 miles away.	620 acres	37	1,015 acres	61
Red-shouldered hawk (<i>Buteo lineatus</i>)	USFWS: None CDFW: None MSCP: Not Covered County: Group 1	Incidental observation. Impact based on 1.2 acres of suitable nesting and foraging habitat.	<0.1 acre	<0.1	1.2 acres	100
Ferruginous hawk (<i>Buteo regalis</i>)	USFWS: BCC CDFW: WL MSCP: Covered County: Group 1	Likely to occur on-site for winter or migration but would not nest on-site. Impact based on 79 acres of suitable foraging habitat.	60 acres	76	18 acres	23
Turkey vulture (<i>Cathartes aura</i>)	USFWS: None CDFW: None MSCP: Not Covered County: Group 1	No nesting locations observed; foraging may occur but is more dependent on carrion so cannot evaluate based on acreage.	Cannot be evaluated		Could forage in entire preserve	

Table 2.3-10. Permanent Impacts to Sensitive Wildlife Species Present On- or Off-Site or with Moderate to High Potential to Occur

Species Scientific Name	Regulatory Status: Federal; State; MSCP; County Group	Basis for Impact Evaluation	Number/ Acre(s) Impacted	Percent Permanently Impacted On-Site	Number / Acre(s) Preserved	Percent Preserved On-Site
Northern harrier (<i>Circus cyaneus</i>)	USFWS: None CDFW: CSC MSCP: Covered County: Group 1	Could nest on-site, but is more likely to occur on-site for winter or migration. Impact based on 79 acres of suitable foraging habitat.	60 acres	76	18 acres	23
White-tailed kite (<i>Elanus leucurus</i>)	USFWS: None CDFW: P MSCP: Not Covered County: Group 1	Observed flying over site; likely forages on-site, but may nest in southern willow scrub. Impact based on 1.2 acres of suitable nesting habitat and 1,660 acres of suitable foraging habitat.	Nesting: <0.1 acre; Foraging: 620 acres	Nesting: <0.1; Foraging: 37	Nesting: 1.2 acres; Foraging: 1,015 acres	Nesting: 100; Foraging: 61
California horned lark (<i>Eremophila alpestris actia</i>)	USFWS: None CDFW: WL MSCP: Not Covered County: Group 2	Incidental observation. Impact based on 190 acres of suitable habitat.	137 acres	72	51 acres	27
Prairie falcon (<i>Falco mexicanus</i>)	USFWS: BCC CDFW: WL MSCP: Not Covered County: Group 1	Likely to occur on-site for winter or migration but would not nest on-site. Impact based on 79 acres of suitable foraging habitat.	60 acres	76	18 acres	23

Table 2.3-10. Permanent Impacts to Sensitive Wildlife Species Present On- or Off-Site or with Moderate to High Potential to Occur

Species Scientific Name	Regulatory Status: Federal; State; MSCP; County Group	Basis for Impact Evaluation	Number/ Acre(s) Impacted	Percent Permanently Impacted On-Site	Number / Acre(s) Preserved	Percent Preserved On-Site
Loggerhead shrike (<i>Lanius ludovicianus</i>)	USFWS: BCC CDFW: CSC MSCP: Not Covered County: Group 1	Incidental observation. Impact based on 1,656 acres of suitable habitat.	633 acres	38	1,000 acres	60
Summer tanager (nesting) (<i>Piranga rubra</i>)	USFWS: None CDFW: CSC MSCP: Not Covered County: Group 2	Could occur on-site as a winter visitor periodically or during migration but would not nest on-site.	—	—	—	—
Coastal California gnatcatcher (<i>Polioptila californica californica</i>)	USFWS: FT CDFW: CSC MSCP: Covered County: Group 1	Coastal sage scrub, coastal sage scrub–chaparral mix, coastal sage scrub–grassland ecotone, riparian in late summer; 29 locations are recorded on-site and 3 additional locations are recorded for Cornerstone Land for a total of 32 locations recorded; 1,470 acres of suitable habitat.	483 acres; 14 locations	33% of acreage; 44% of point locations	962 acres; 18 locations	66% of acreage; 56% of point locations
Western bluebird (<i>Sialia mexicana</i>)	USFWS: None CDFW: None MSCP: Covered County: Group 2	Likely to occur on-site for winter or migration for foraging but would not nest on-site due to lack of trees.	—	—	—	—

Table 2.3-10. Permanent Impacts to Sensitive Wildlife Species Present On- or Off-Site or with Moderate to High Potential to Occur

Species Scientific Name	Regulatory Status: Federal; State; MSCP; County Group	Basis for Impact Evaluation	Number/ Acre(s) Impacted	Percent Permanently Impacted On-Site	Number / Acre(s) Preserved	Percent Preserved On-Site
Burrowing owl (<i>Athene cunicularia</i>)	USFWS: BCC CDFW: CSC MSCP: Covered County: Group 1	Incidental observation. Impact based on 190 acres of suitable habitat.	137 acres	72	51 acres	27
Barn owl (<i>Tyto alba</i>)	USFWS: None CDFW: None MSCP: Not Covered County: Group 2	No impacts to nesting habitat; foraging is opportunistic and can forage throughout much of the site where habitat is relatively open. Assuming foraging occurs in open habitat, 190 acres are present on-site.	137 acres	72	51 acres	27
Dulzura California pocket mouse (<i>Chaetodipus californicus femoralis</i>)	USFWS: None CDFW: CSC MSCP: Not Covered County: Group 2	Based on moderate potential to occur. Impact based on 1,656 acres of suitable habitat.	633 acres	38	1,000 acres	60
Northwestern San Diego pocket mouse (<i>Chaetodipus fallax fallax</i>)	USFWS: None CDFW: CSC MSCP: Not Covered County: Group 2	Based on moderate potential to occur. Impact based on 1,656 acres of suitable habitat.	633 acres	38	1,000 acres	60
Townsend's western big-eared bat (<i>Corynorhinus townsendii</i>)	USFWS: None CDFW: CSC MSCP: Not Covered County: Group 2	Likely to occur on-site to forage but no roosting/nursery habitat is present.	—	—	—	—

Table 2.3-10. Permanent Impacts to Sensitive Wildlife Species Present On- or Off-Site or with Moderate to High Potential to Occur

Species Scientific Name	Regulatory Status: Federal; State; MSCP; County Group	Basis for Impact Evaluation	Number/ Acre(s) Impacted	Percent Permanently Impacted On-Site	Number / Acre(s) Preserved	Percent Preserved On-Site
Spotted bat (<i>Euderma maculatum</i>)	USFWS: None CDFW: CSC MSCP: Not Covered County: Group 2	Likely to occur on-site to forage but no roosting/nursery habitat is present.	—	—	—	—
Western red bat (<i>Lasiurus blossevillii</i>)	USFWS: None CDFW: CSC MSCP: Not Covered County: Group 2	Likely to occur on-site to forage but no roosting/nursery habitat is present.	—	—	—	—
San Diego black-tailed jackrabbit (<i>Lepus californicus bennettii</i>)	USFWS: None CDFW: CSC MSCP: Not Covered County: Group 2	Incidental observation. Impact based on 1,660 acres of suitable habitat.	620 acres	37	1,015 acres	61
San Diego desert woodrat (<i>Neotoma lepida intermedia</i>)	USFWS: None CDFW: CSC MSCP: Not Covered County: Group 2	Based on moderate potential to occur. Impact based on 1,656 acres of suitable habitat.	633 acres	38	1,000 acres	60
Mountain lion (<i>Puma concolor</i>)	USFWS: None CDFW: None MSCP: Covered County: Group 2	Incidental observation of tracks. No suitable denning locations would be impacted, and movement routes and corridors would be preserved.	—	—	—	—

Federal Designations:

BCC U.S. Fish and Wildlife Service (USFWS) Bird of Conservation Concern
FE Federally Listed as Endangered
FT Federally Listed as Threatened

State Designations:

CSC California Special Concern Species
P California Department of Fish and Wildlife (CDFW) Protected and Fully Protected Species
SE State-listed as Endangered
ST State-listed as Threatened
WL Watch List

Multiple Species Conservation Program (MSCP) Designations:

Covered Listed as Covered Species in Appendix B of Implementing Agreement between CDFW, USFWS, and County of San Diego (March 1998)
Not Covered Not Listed as Covered Species in Appendix B of Implementing Agreement between CDFW, USFWS, and County of San Diego (March 1998)

County Designations:

Group 1: High level of sensitivity, either because listed as threatened or endangered or because species has very specific natural history requirements that must be met
Group 2: Species is becoming less common, but is not yet so rare that extirpation or extinction is imminent without immediate action. These species tend to be prolific within their suitable habitat types.

Table 2.3-11. Impacts to Sensitive Vegetation Communities within City of Chula Vista Jurisdiction

Vegetation Community	Tier	Permanent Impacts (acres)	Location of Impact	Mitigation Ratio Assuming Inside Preserve	Mitigation Required (acres)
Coastal Sage Scrub	II	0.06	Outside Preserve	1:1	0.06
Disturbed Coastal Sage Scrub	II	0.07	Outside Preserve	1:1	0.07
Nonnative Grassland	III	1.38	Outside Preserve	0.5:1	0.69

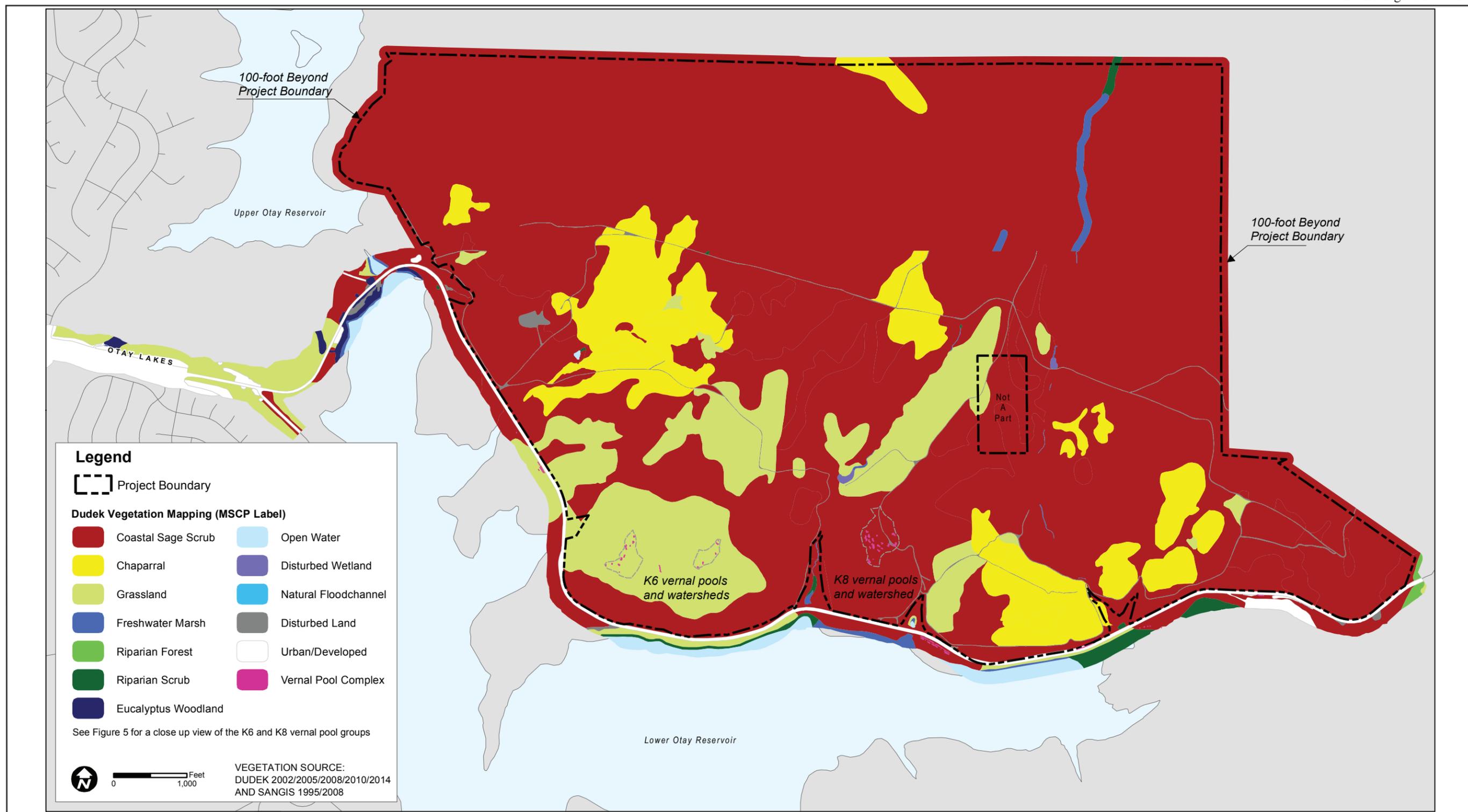
Note: Tiers and mitigation ratios are in accordance with the Chula Vista MSCP Subarea Plan's HLIT Upland Habitat Mitigation Ratios. No mitigation is required for Tier IV habitat types (i.e., non-sensitive vegetation communities and land covers including ornamental or developed land). It is assumed that mitigation will be located inside the Preserve. Mitigation outside of the Preserve (i.e., Chula Vista MSCP Subarea Plan or Planning Area boundary) will require increased mitigation.

Table 2.3-12. Existing Conditions for Potential Mitigation Pools

Vernal Pool Number	Size of Basin (Square Feet)	Size of Basin (Acres)	Inundation	Cysts	Shrimp	Vernal Pool Plants
A1	443.531300	0.0102	—	—	—	x
A2	230.750000	0.0053	—	—	—	—
A3	675.343800	0.0155	—	—	—	—
A4	997.875000	0.0229	x	—	—	x
A5	49.812500	0.0011	x	—	—	—
VP1	1693.625000	0.0389	x	—	x	x
VP10	408.968800	0.0094	x	x	—	—
VP11	1220.875000	0.0280	x	x	x	x
VP13	322.437500	0.0074	x	x	—	—
VP14	658.593800	0.0151	x	x	x	x
VP15	533.093800	0.0122	x	—	—	x
VP16	627.187500	0.0144	x	—	—	x
VP2	711.000000	0.0163	x	—	x	x
VP4	224.156300	0.0051	x	—	—	x
VP5	530.937500	0.0122	x	—	x	x
VP6	806.906300	0.0185	x	—	—	x
VP7	647.250000	0.0149	x	x	x	x
VP8	1671.406000	0.0384	x	x	—	x

Note: The pools highlighted above (Vernal Pools 1, 2, 5, 7, 10, 11, 13, and 14) are occupied by fairy shrimp and would likely not be available for enhancement mitigation. Pools not highlighted in yellow do not contain fairy shrimp and would be able to be enhanced by conducting weed removal, introducing vernal pool plant species, and potentially inoculating with other species, including fairy shrimp. A total of 0.14 acre of existing vernal pool is available for enhancement. A total of 0.14 acre is proposed to be enhancement/restoration in that the basin of existing pools would be enlarged, weeds removed, and pools inoculated as suitable. This leaves the requirement for a total of 0.108 acre of restoration of vernal pool habitat. There are potentially 18 basins that could be restored within the K8 mesa. If the average size of the new basins is 700 square feet, the total acreage of restored pools is potentially 0.289 acre, which is more than is required to satisfy the mitigation needs. Thus, the combined acreage for mitigation, including enhancement, enhancement/restoration (enlarging existing pools), and restoration for the impacts to the K6 pools and the Villages 2 and 3 is proposed to total 0.248 acre, which meets the requirement of a combined 2:1 and 5:1 mitigation ratio.

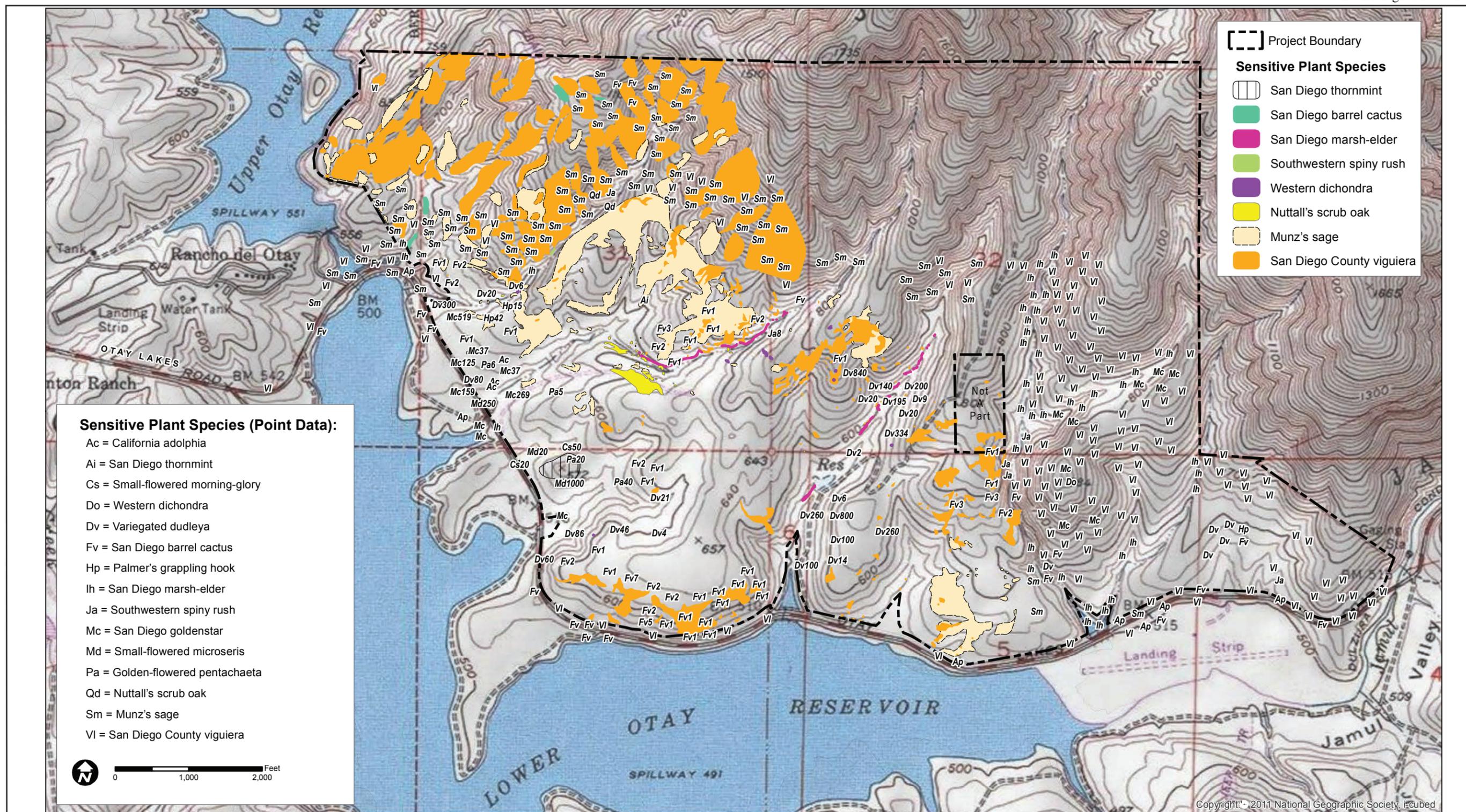
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Source: DUDEK, 2014

**Figure 2.3-1
Vegetation Map**

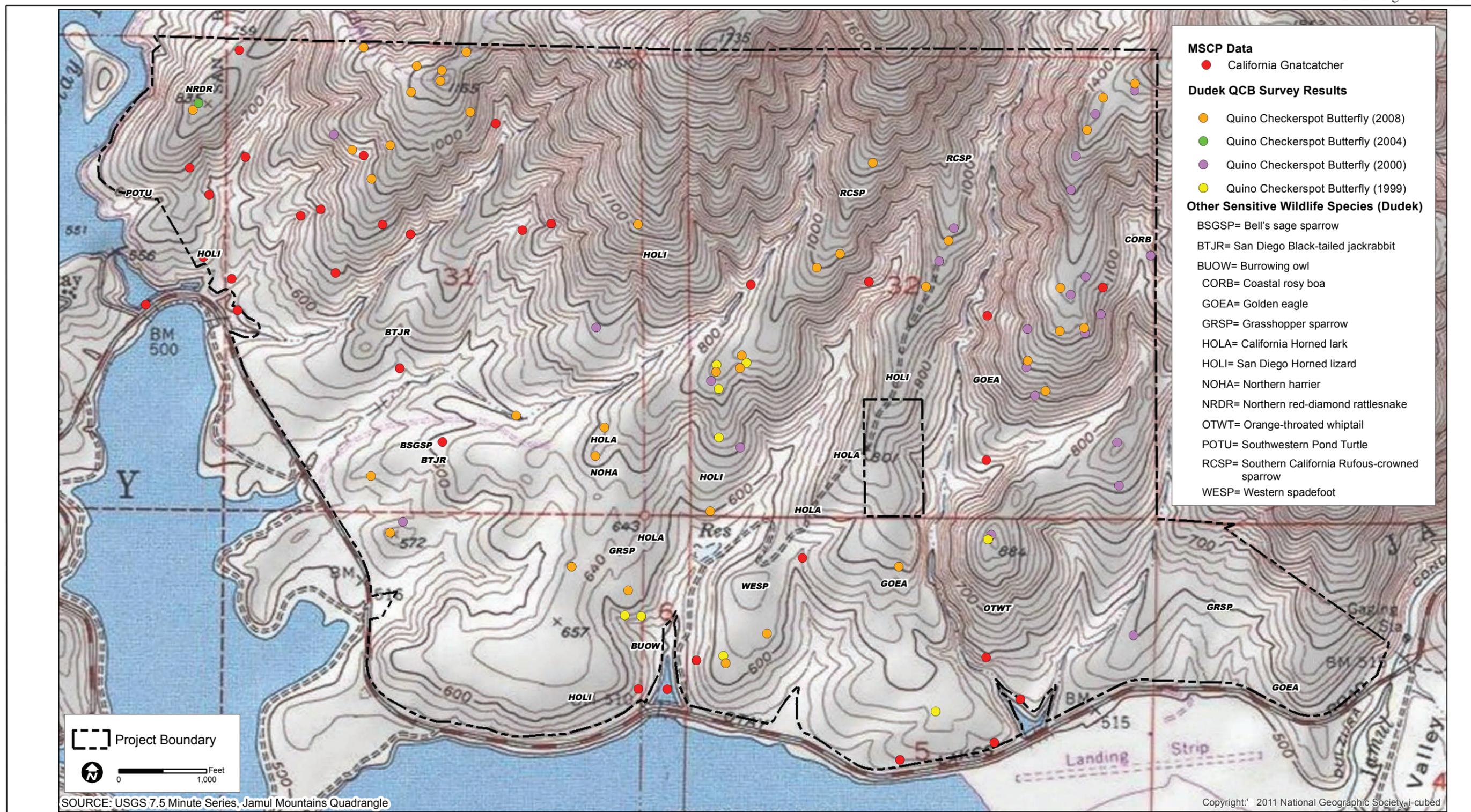
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Source: DUDEK, 2014

Figure 2.3-2
Sensitive Plant Species Map

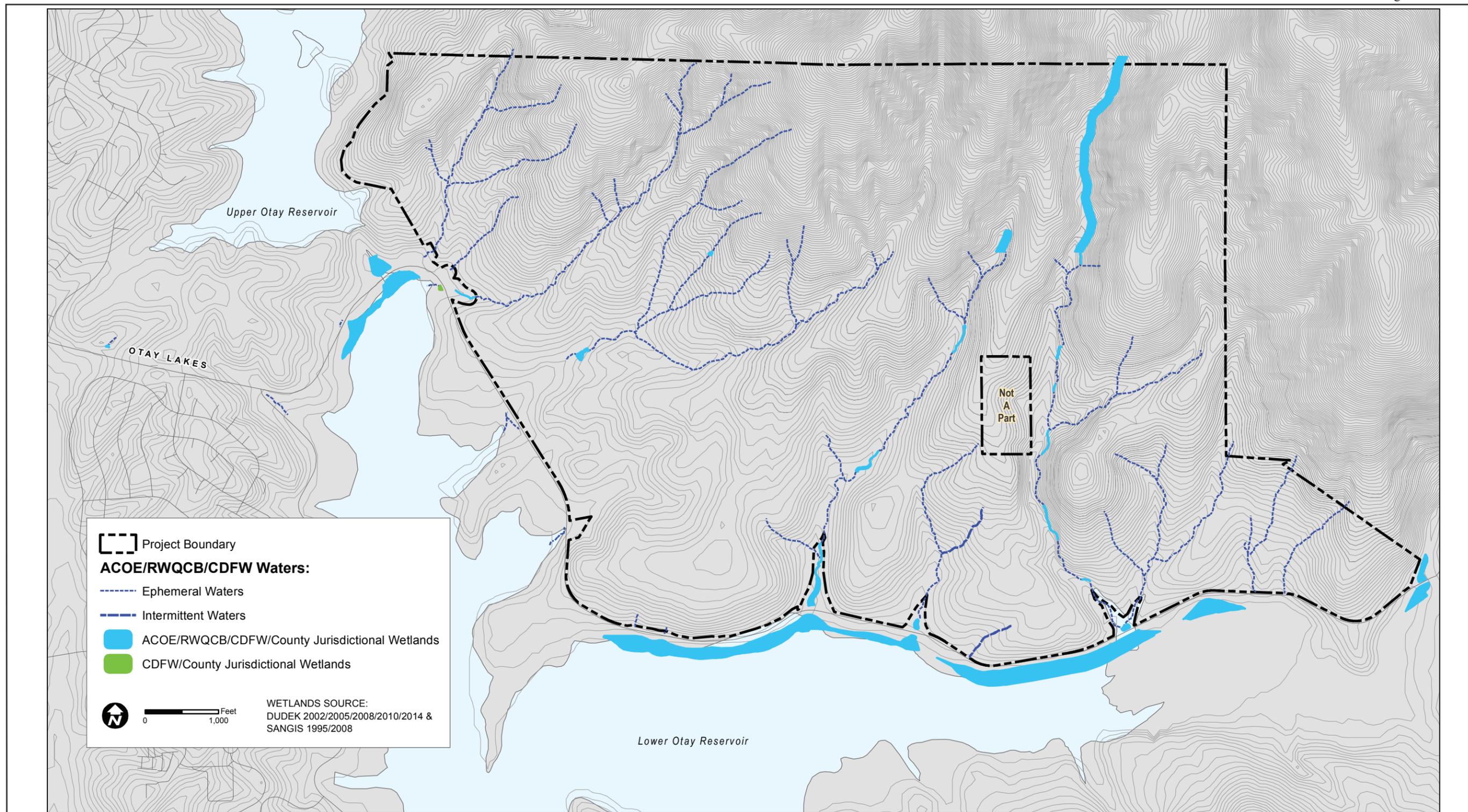
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Source: DUDEK, 2014

Figure 2.3-3
Sensitive Wildlife Species Map

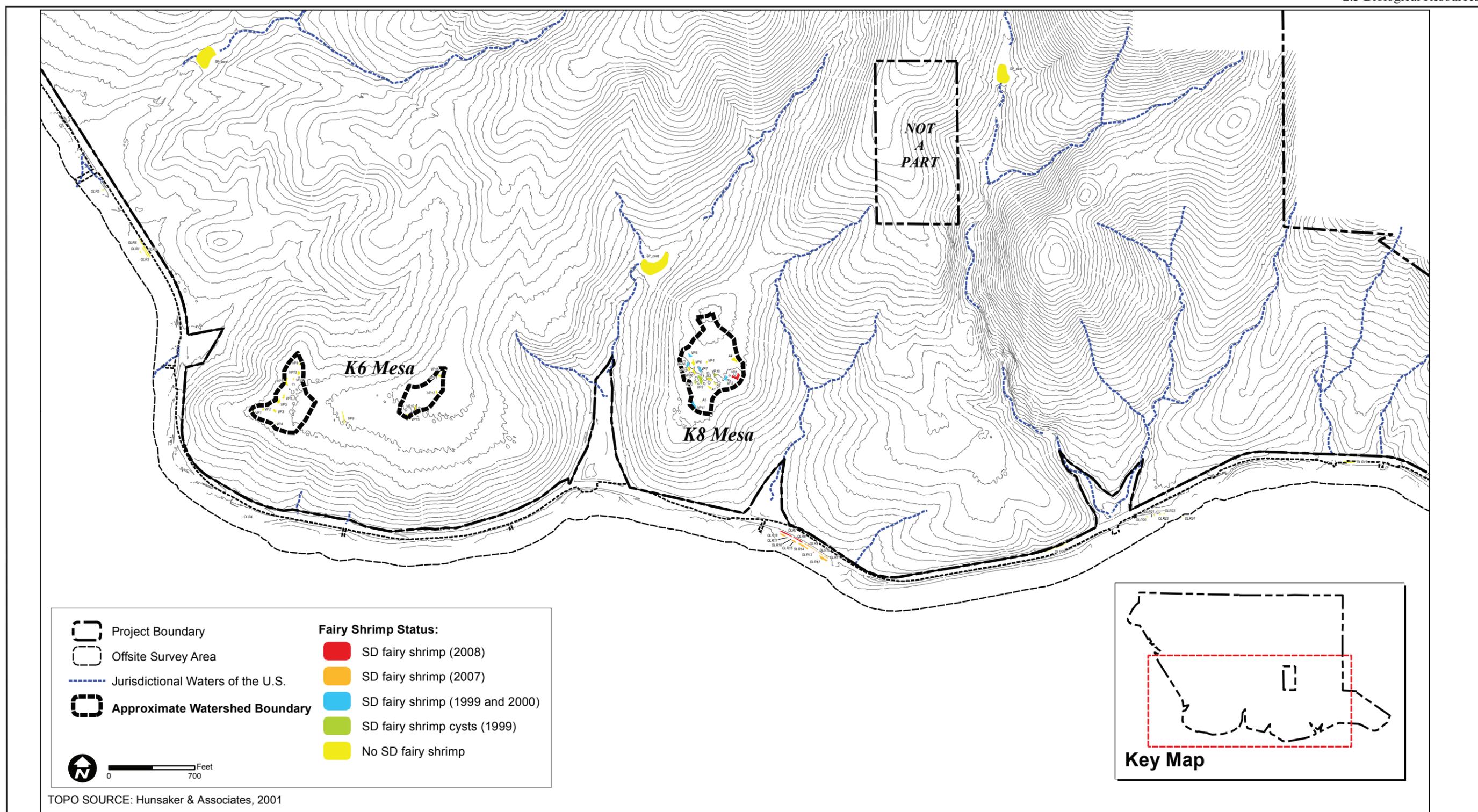
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Source: DUDEK, 2014

**Figure 2.3-4
Jurisdictional Delineation Map**

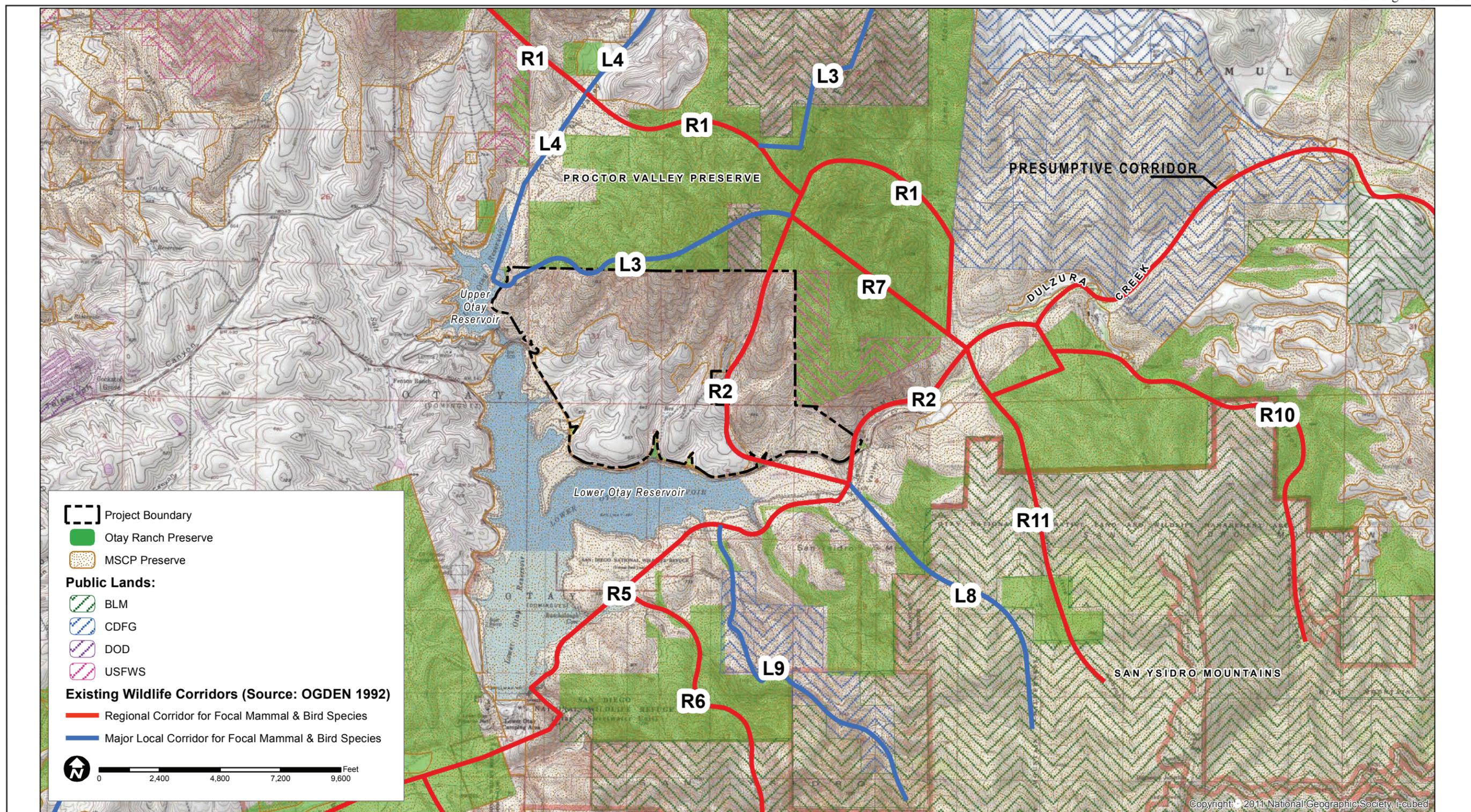
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Source: DUDEK, 2014

**Figure 2.3-5
Seasonal Basins Map**

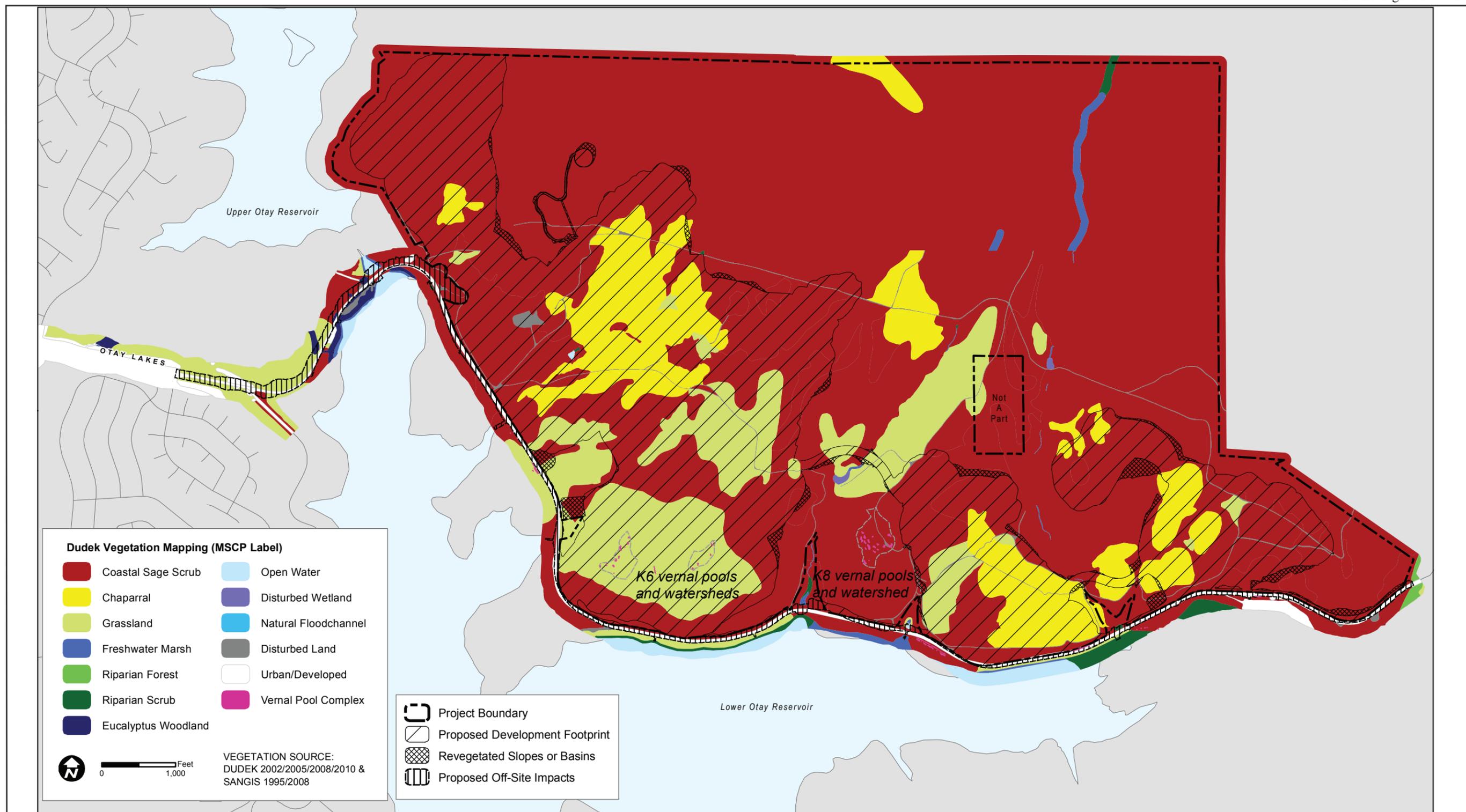
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Source: DUDEK, 2014

Figure 2.3-6
Existing Habitat Linkages/Movement Corridors

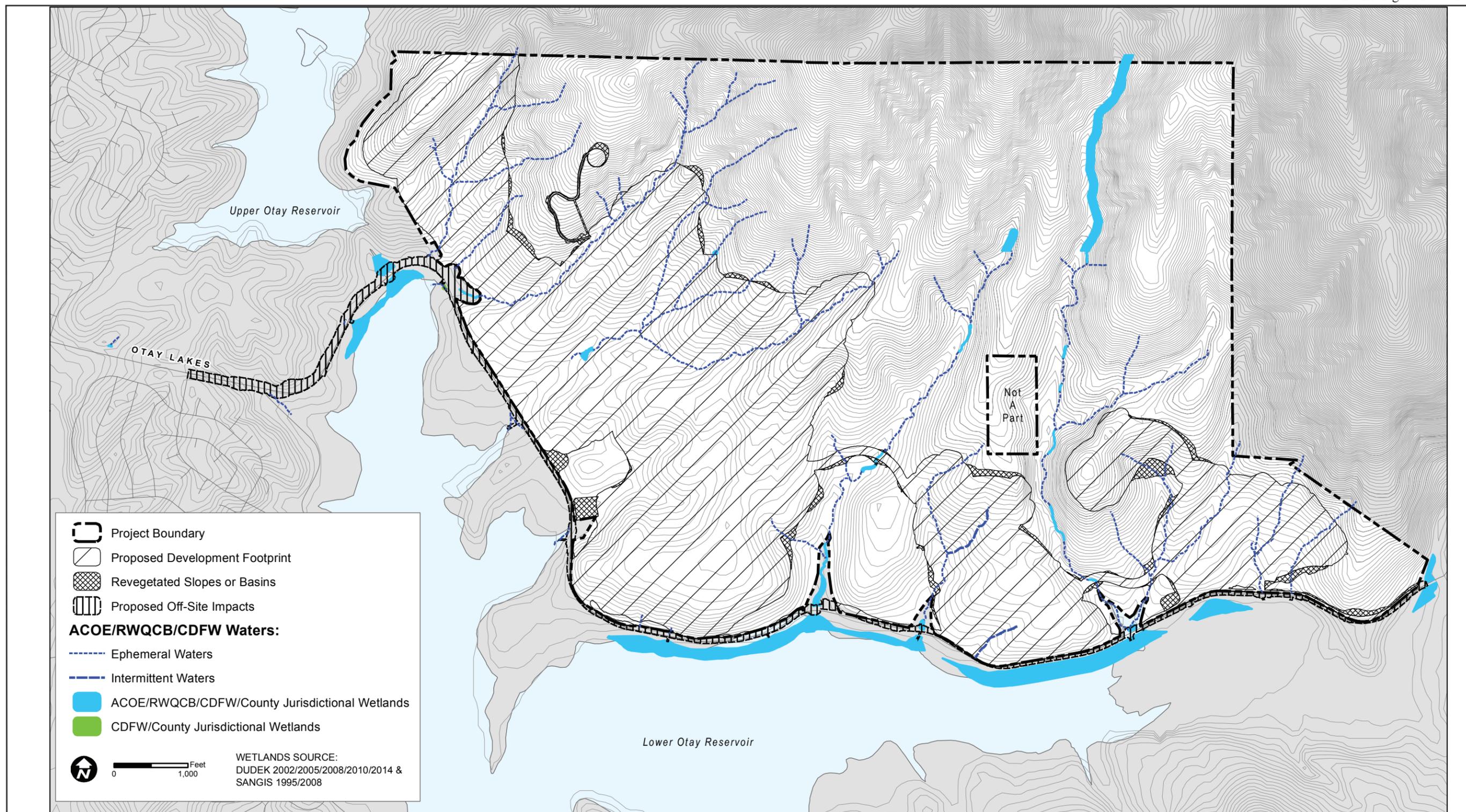
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Source: DUDEK, 2014

Figure 2.3-7
Vegetation Map with Proposed Development Footprint

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Source: DUDEK, 2014

Figure 2.3-8
Jurisdictional Delineation Map with Proposed Development Footprint

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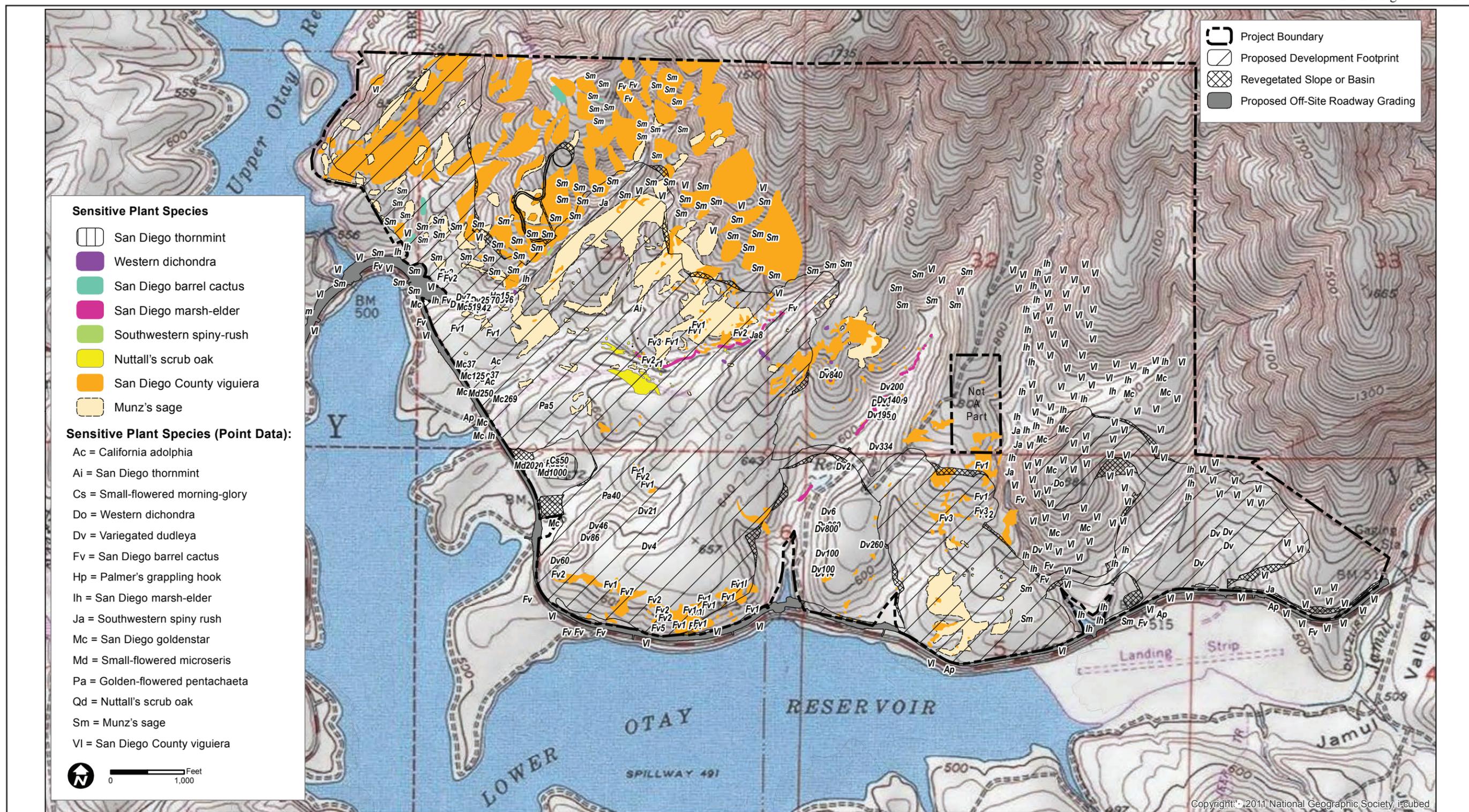
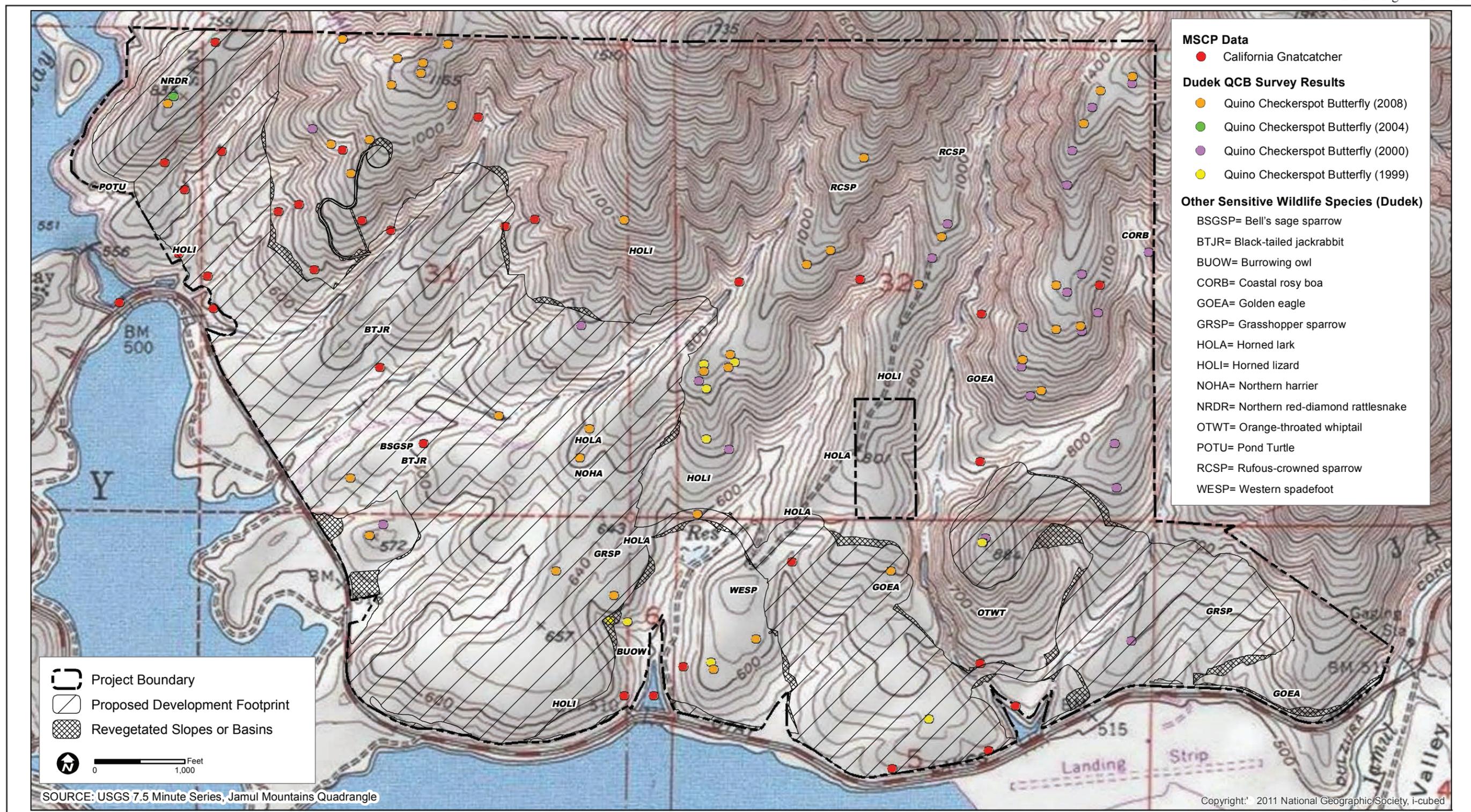


Figure 2.3-9
Sensitive Plant Species Map with Proposed Development Footprint

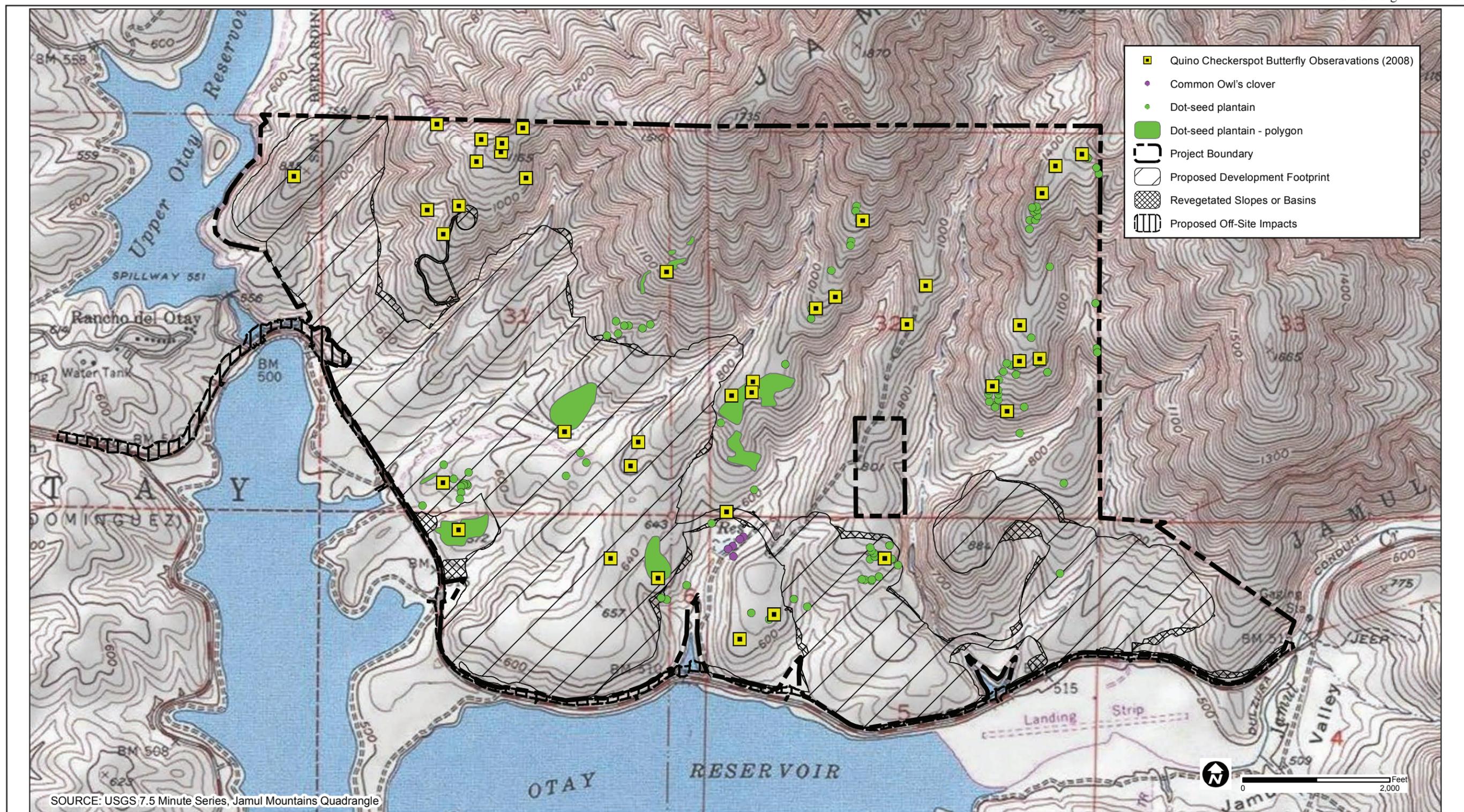
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Source: DUDEK, 2014

Figure 2.3-10
Sensitive Wildlife Species Map with Proposed Development Footprint

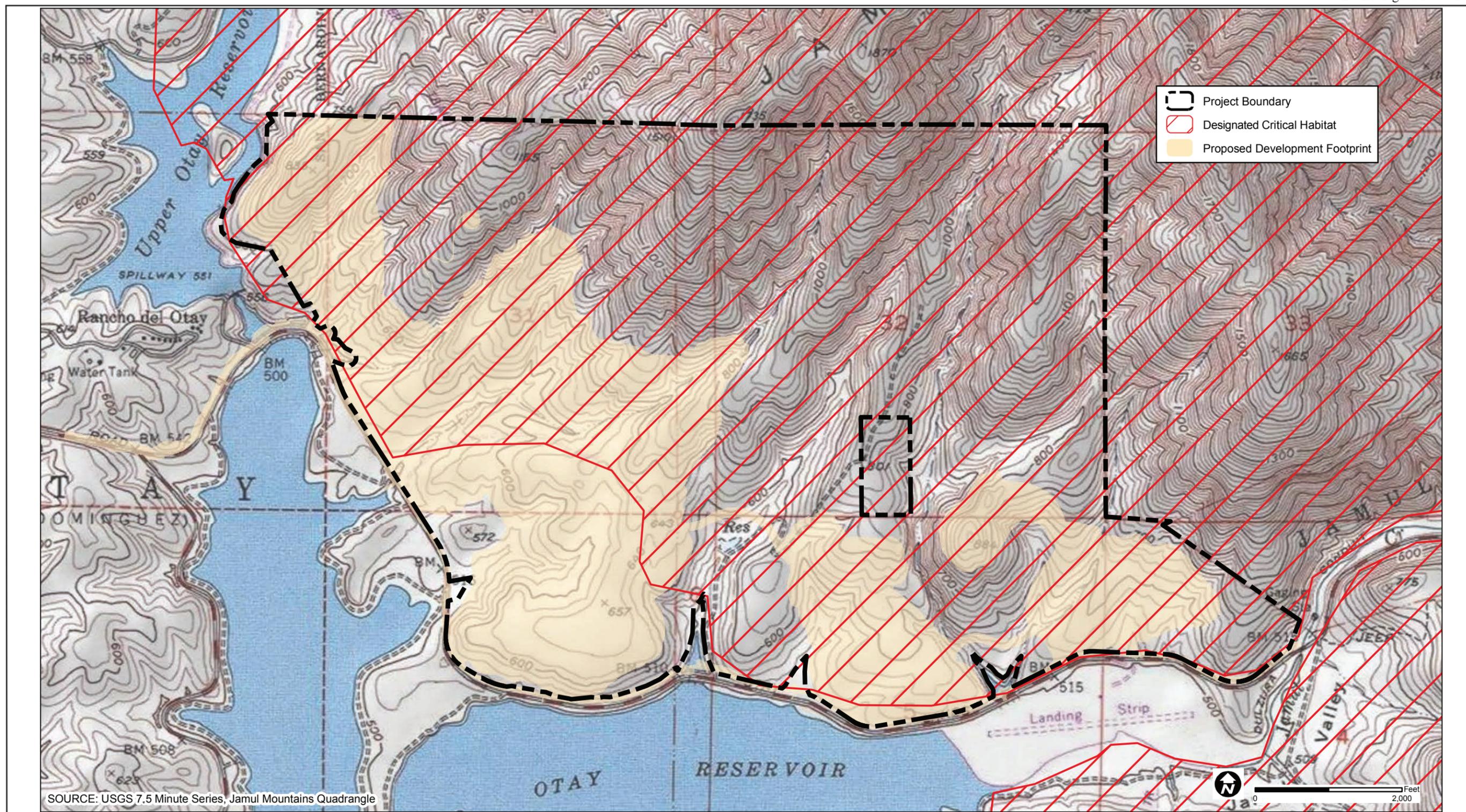
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Source: DUDEK, 2014

Figure 2.3-11
Quino Checkerspot Butterfly Observations and Host Plant Locations

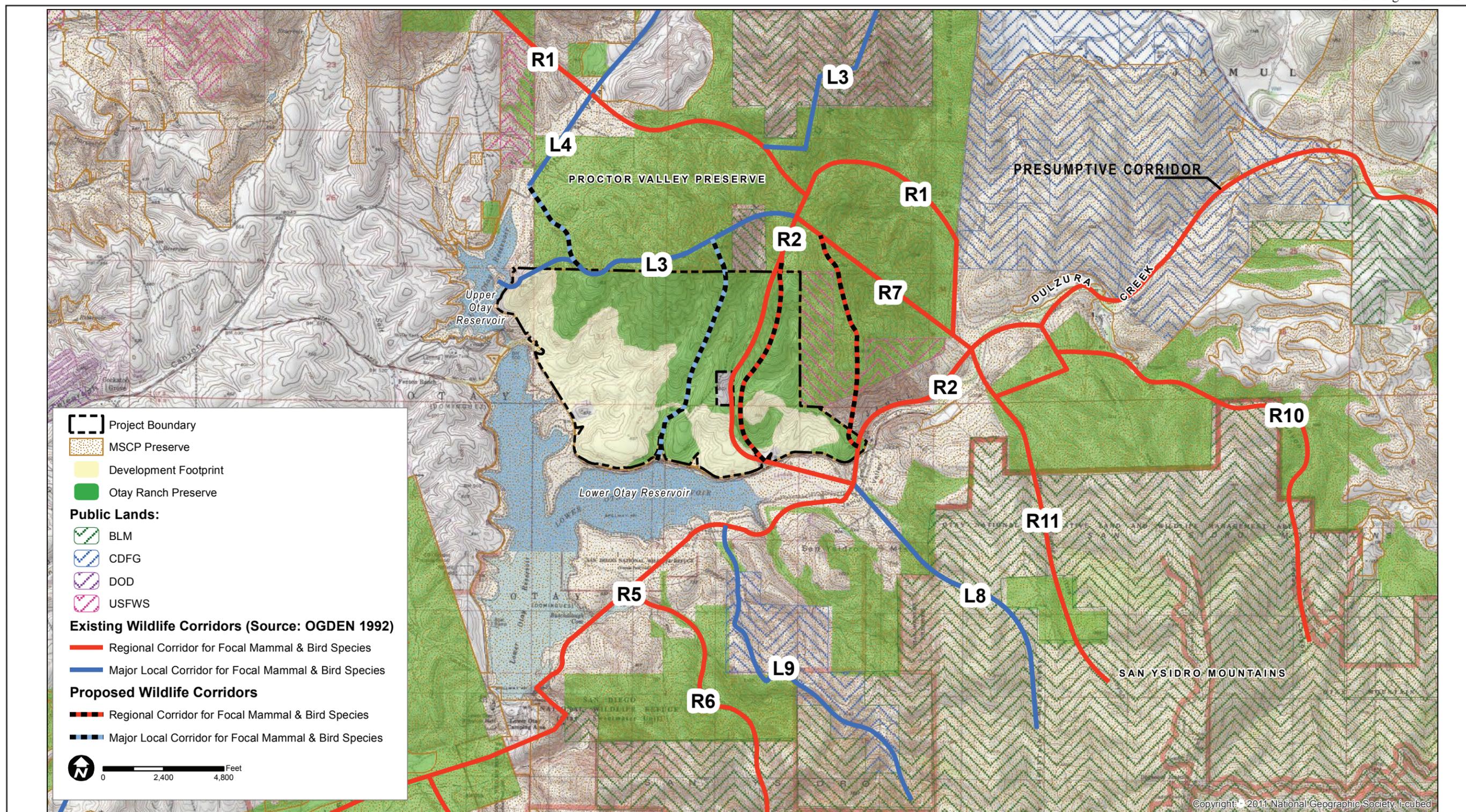
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Source: DUDEK, 2014

Figure 2.3-12
Quino Checkerspot Butterfly Designated Critical Habitat

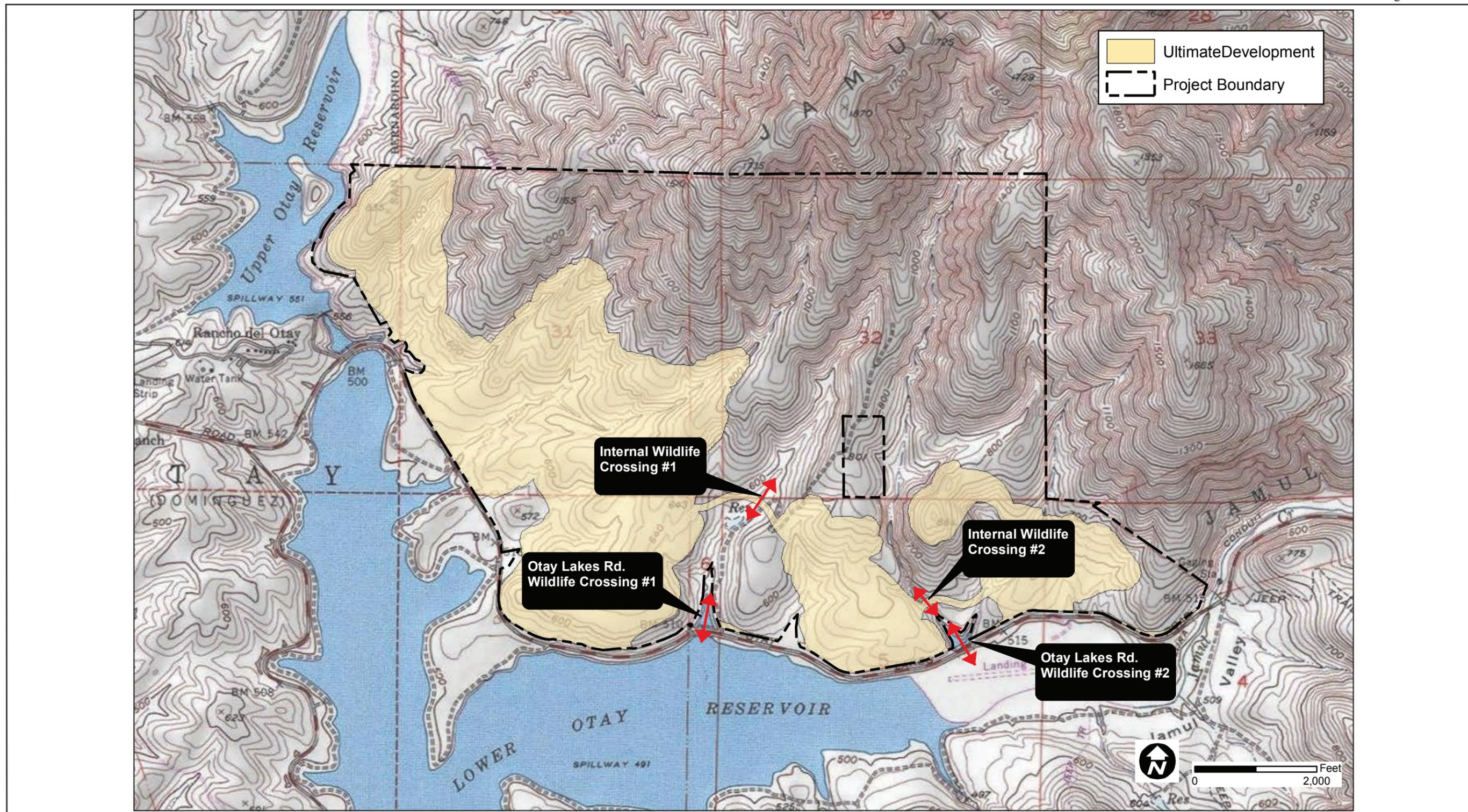
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Source: DUDEK, 2014

Figure 2.3-13
Proposed Habitat Linkages/Movement Corridors

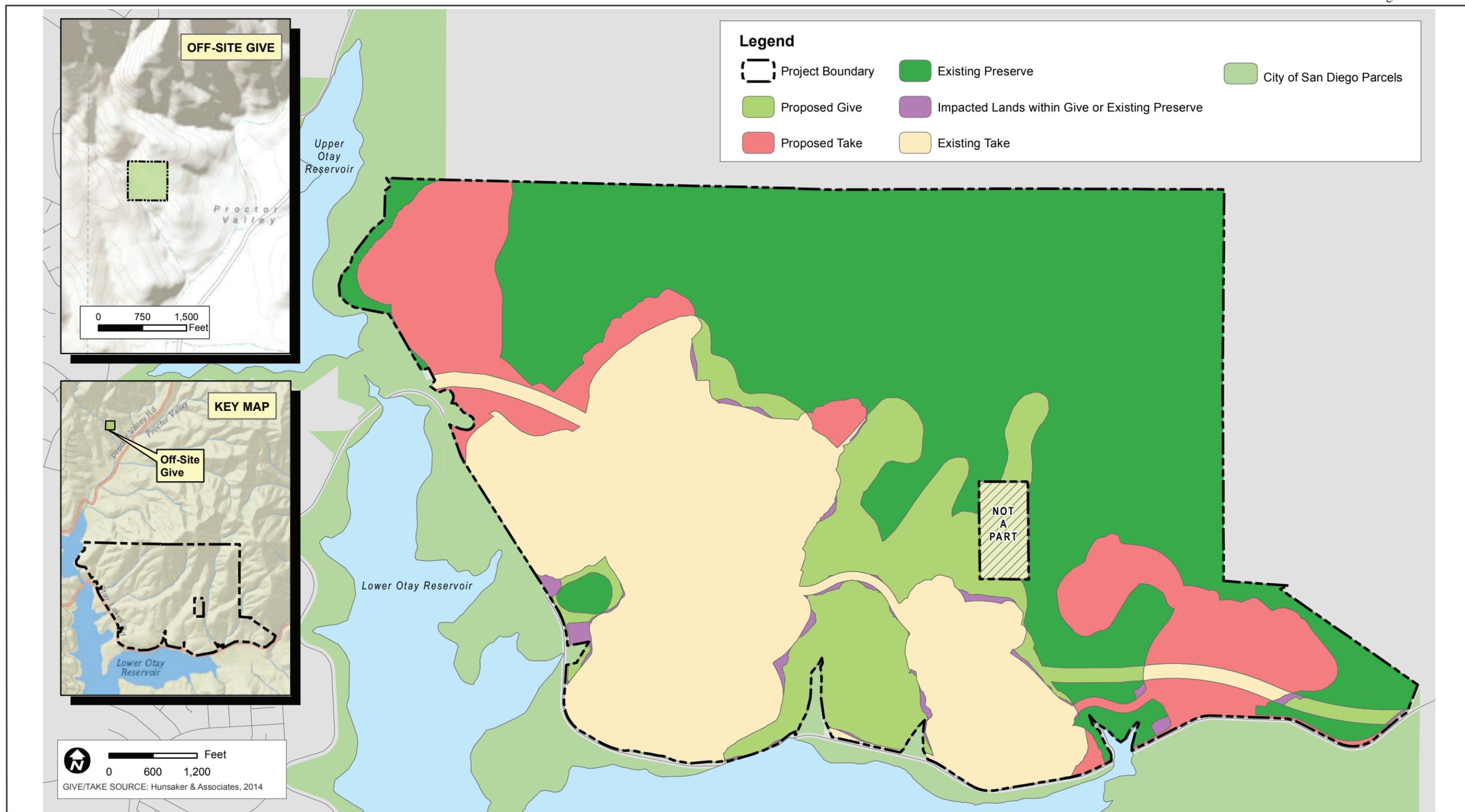
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Source: DUDEK, 2014

Figure 2.3-14
Wildlife Crossing Locations

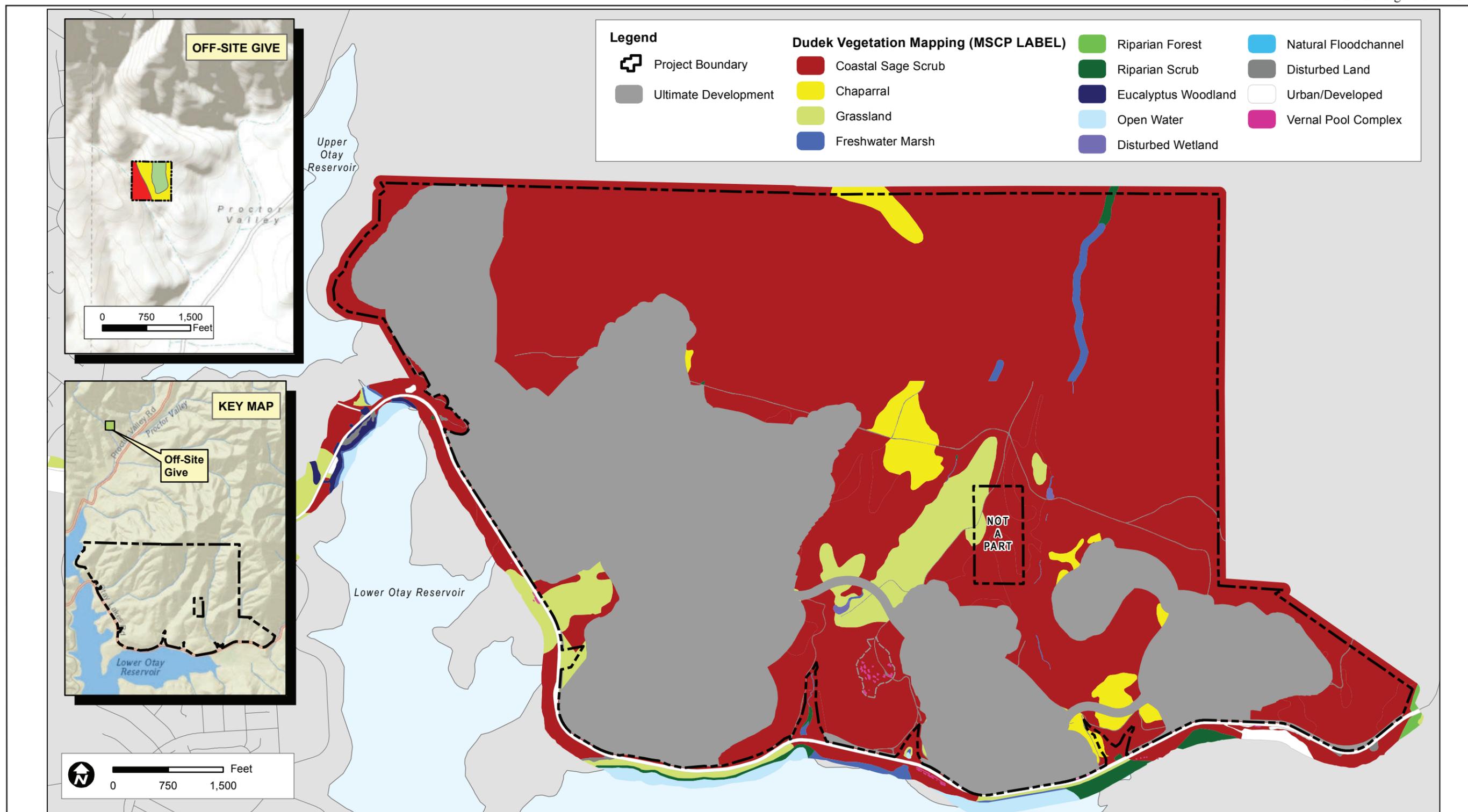
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Source: DUDEK, 2014

Figure 2.3-15
Proposed Boundary Adjustment Give/Take Areas

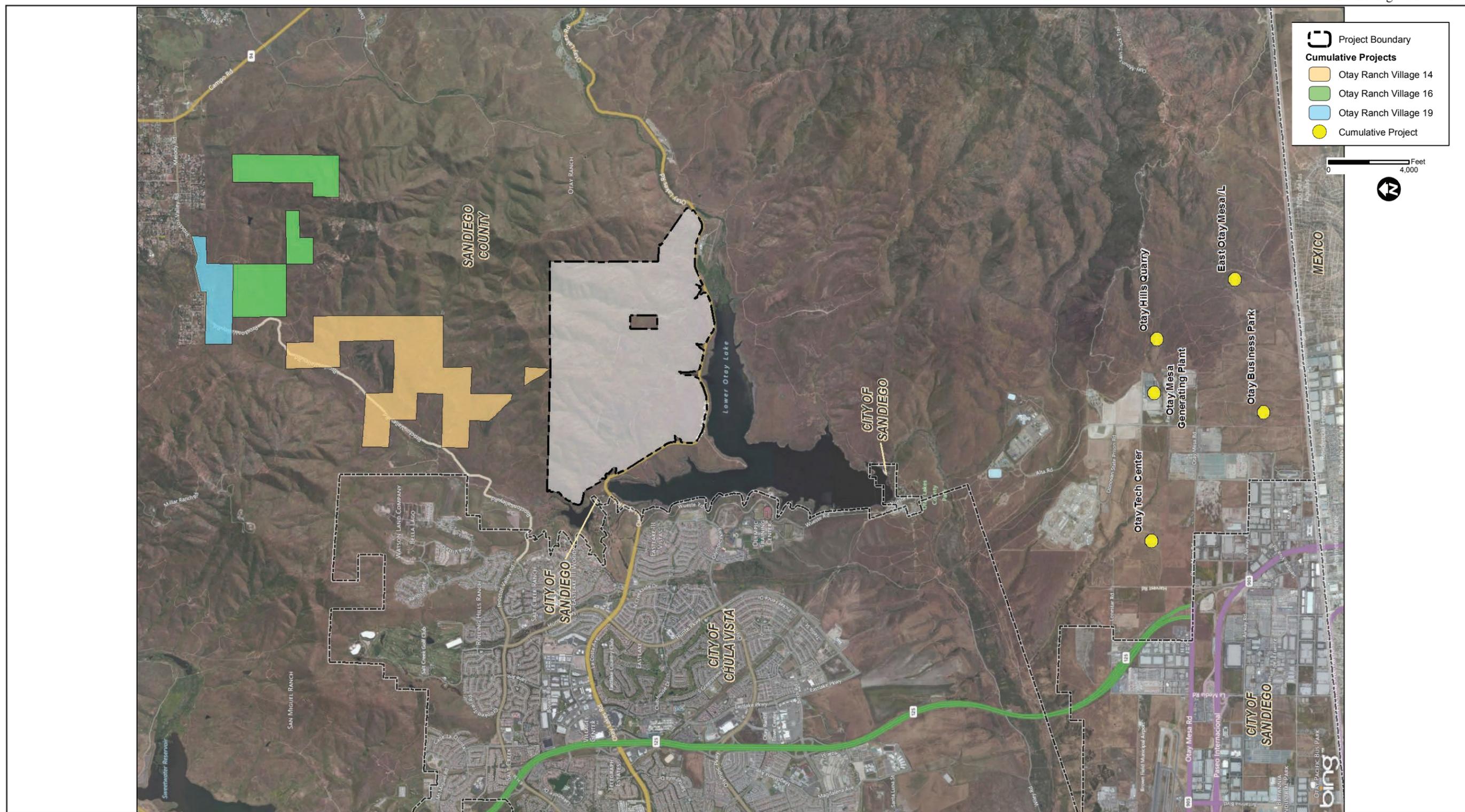
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Source: DUDEK, 2014

Figure 2.3-16
Ultimate Preserve Vegetation

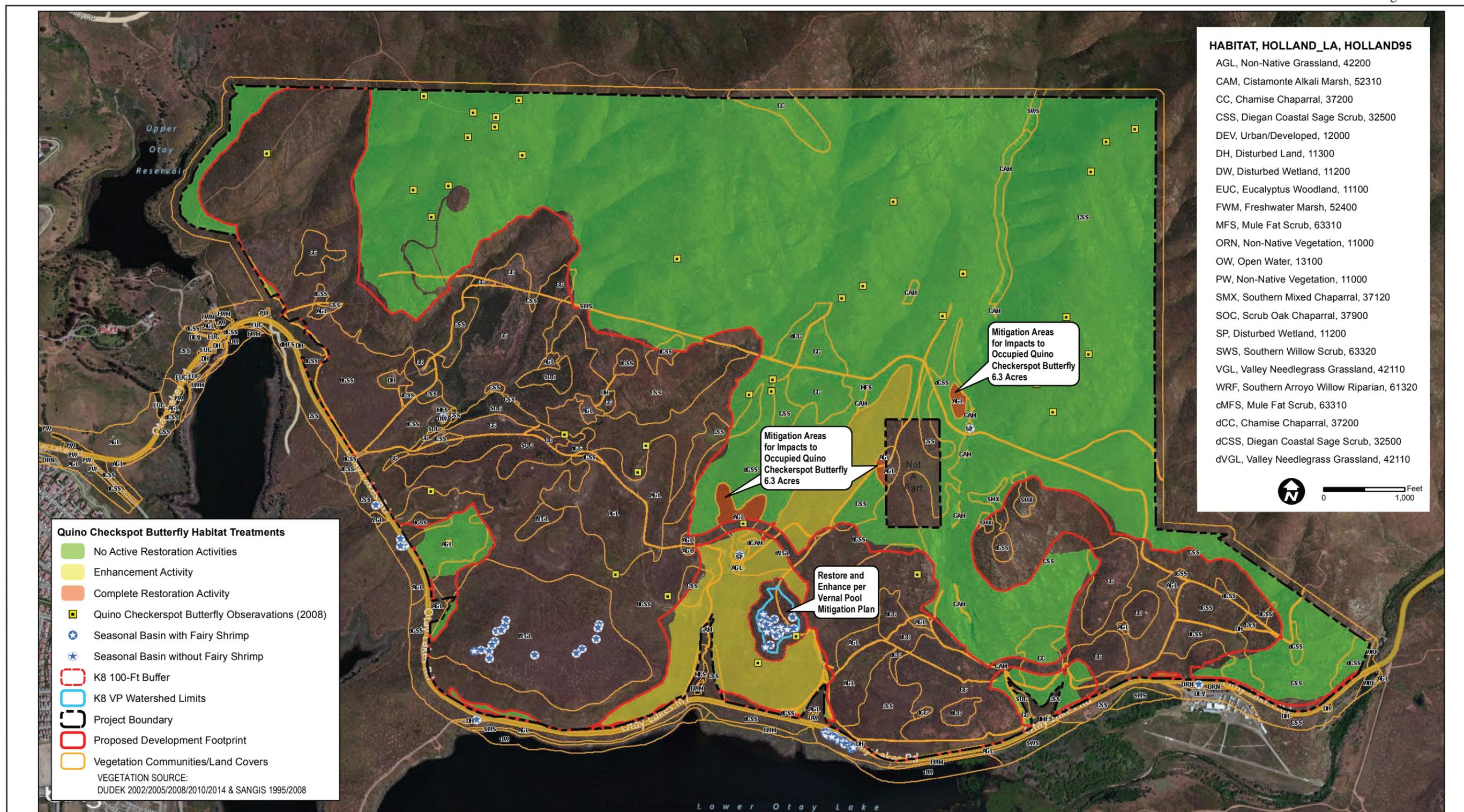
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Source: DUDEK, 2014

Figure 2.3-17
Location of Cumulative Projects

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Source: DUDEK, 2014

Figure 2.3-18
Proposed Habitat Treatment Areas for Quino Checkerspot Butterfly Mitigation

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