



Biological Resources  
Report for the  
Otay Mesa Community  
Plan Update,  
City of San Diego  
Project No. 30330/304032  
SCH No. 2004651076

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### ATTACHMENTS

1:	Otay Mesa Community Plan Area on City 800' Map
2:	Literature Review

# Acronyms

ADD	Assistant Deputy Director
AMSL	above mean sea level
CCC	California Coastal Commission
CDFW	California Department of Fish and Wildlife (formerly California Department of Fish and Game)
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Data Base
CNPS	California Native Plant Society
CPU	Community Plan Update
EAS	Environmental Analysis Section
ESL	Environmentally Sensitive Lands
FESA	Federal Endangered Species Act
HCP	Habitat Conservation Plan
I-805	Interstate 805
IA	Implementing Agreement
ITP	Incidental Take Permit
PEIR	Program Environmental Impact Report
MBTA	Migratory Bird Treaty Act
MHPA	Multiple Habitat Planning Area
MMC	Mitigation Monitoring Coordination
MMRP	Mitigation Monitoring and Reporting Program
MSCP	Multiple Species Conservation Program
OHWM	Ordinary High Water Mark
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SanGIS	San Diego Geographic Information Source
SR-905	State Route 905
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service

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# 1.0 Introduction

The Otay Mesa Community Plan Update (CPU) area encompasses approximately 9,300 acres in the city of San Diego, southwest San Diego County (Figures 1 and 2). The area is bounded by the Otay River Valley and the city of Chula Vista to the north, the United States–Mexico border to the south, Interstate 805 (I-805) to the west, and unincorporated San Diego County to the east (Figure 3 and Attachment 1). The proposed plan designates 2,528 acres as Industrial; 1,125 as Institutional; 802 acres as Residential; 560 acres as “Village Areas” (including residential and commercial mixed-use) 2,833 acres as Open Space; 154 acres as Parks; 299 acres as Commercial, and 1,023 acres as right-of-way.

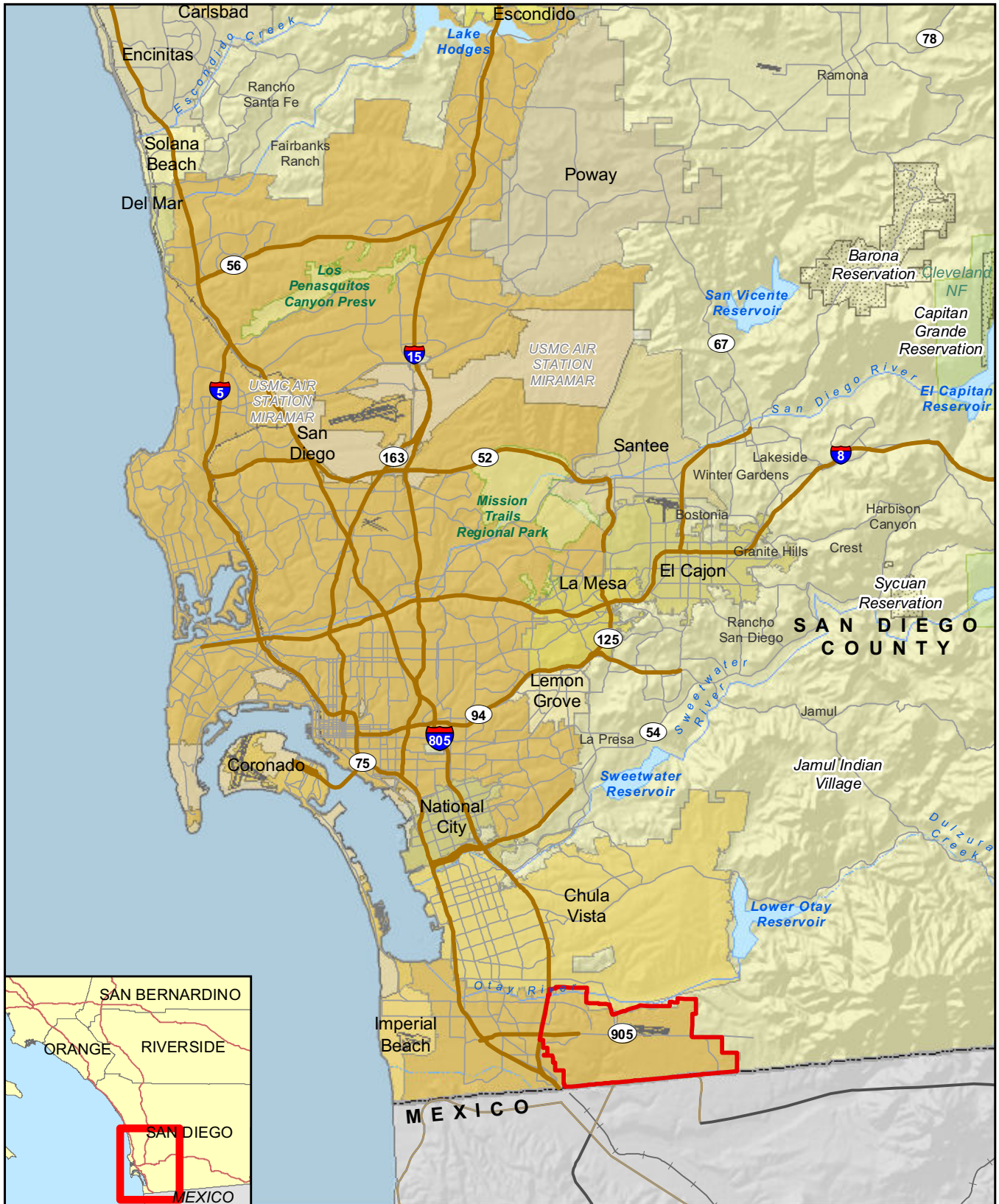
The City of San Diego (City) is proceeding with the first comprehensive update of the Otay Mesa Community Plan since 1981. The intent of the update is to establish a framework for future development on Otay Mesa. The update includes modifications to the various elements of the plan to reflect land use. The CPU strives to enhance and create villages, activity centers, and industrial/employment centers that are planned along major transportation corridors, while supporting international trade functions of the Otay Mesa Port of Entry, taking into consideration surrounding regional and bi-national planning activities and trends affecting the CPU. Major land use revisions focus on re-designating land uses to increase the number of allowed residential units, while achieving a more balanced community through integration of housing and appropriate employment lands. New land use designations are proposed to allow the establishment of technology centers along with mixed commercial and residential village areas. Modified industrial land use designations are also included to facilitate the diversification of the industry profile in the CPU.

A comparison of land use categories for the No Project/Adopted Community Plan Alternative with the proposed CPU is presented in Table 1.

**TABLE 1  
CPU PROJECTED BUILDOUT**

Land Use Categories	Adopted Community Plan (No Project Alternative)* (acres)	Proposed CPU (acres)
Residential	1,269	802
Commercial	452	299
Village Centers	0	560
Industrial	2,839	2,528
Institutional	1,027	1,125
Parks	64	154
Open Space	2,570	2,833
Right-of-Way	1,098	1,023
<b>TOTAL</b>	<b>9,319</b>	<b>9,325</b>

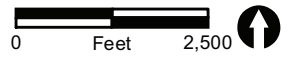
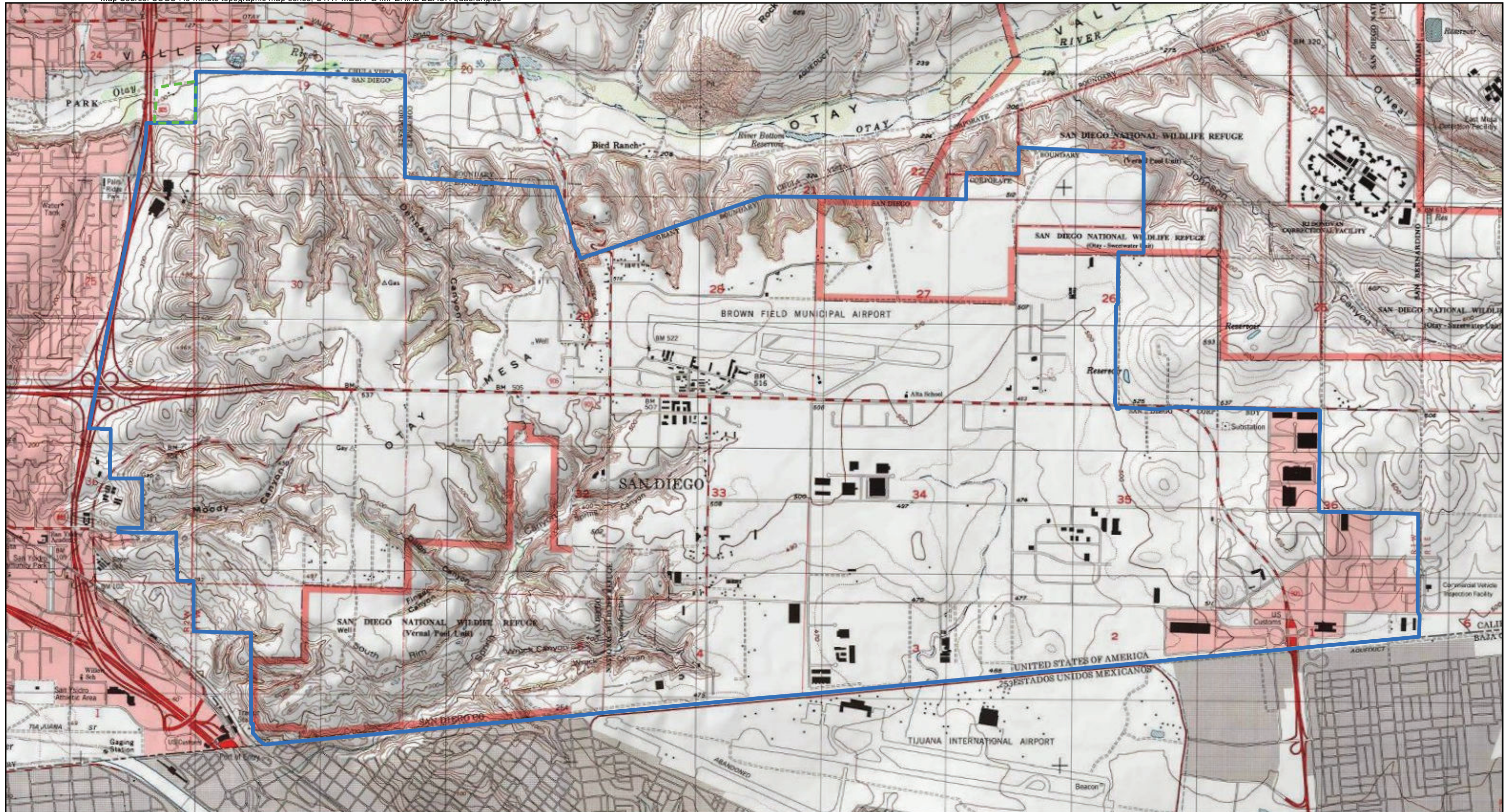
\*SOURCE: Otay Mesa Draft Community Plan, April 2011.



Otoy Mesa Community Plan Boundary

**FIGURE 1**  
Regional Location of  
Otoy Mesa Community Plan Area







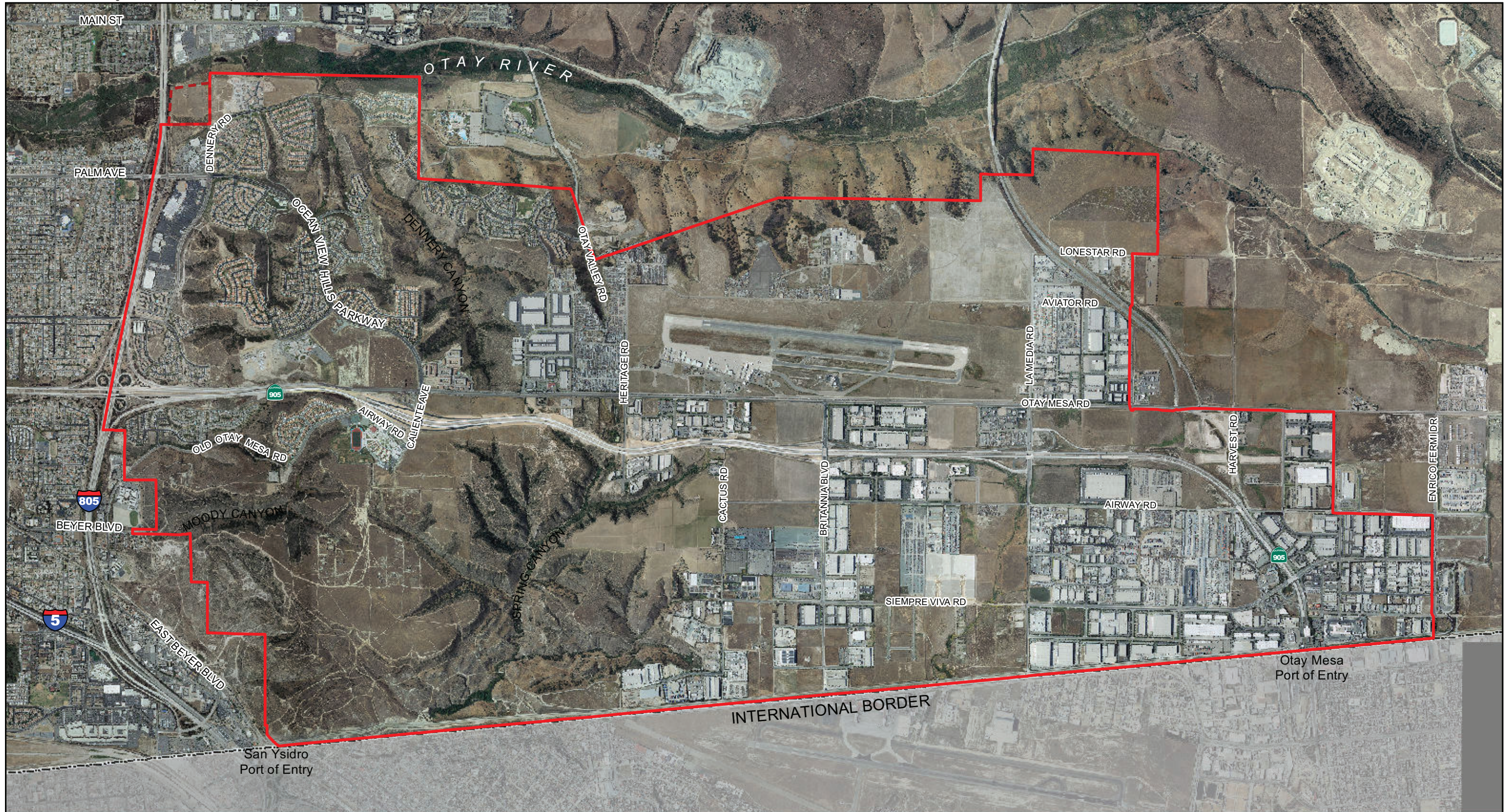

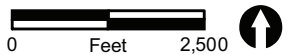
-  Otay Mesa Community Plan Boundary
-  Not A Part

FIGURE 2  
Otay Mesa Community Plan Area Location on USGS Map

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 Otay Mesa Community Plan Boundary  
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This document provides information pertaining to the existing biological resources in the CPU area and anticipated impacts to sensitive vegetation communities and species associated with buildout of the community plan. This information will be used in the development of the CPU and associated California Environmental Quality Act (CEQA) documents.

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## **2.0 Methods**

### **2.1 Literature Review**

RECON biologists conducted reviews of existing literature relevant to the biological resources known from the CPU area. Literature reviewed included, but was not limited to, the documents listed in Attachment 2. Future projects implemented as part of the CPU land use plan would require subsequent environmental review, including the requirement for project-specific biology surveys and reports.

### **2.2 Botanical Resources**

#### **2.2.1 Vegetation Communities**

The base vegetation community mapping is taken primarily from the San Diego Association of Governments (SANDAG 1995) digital file for the Multiple Species Conservation Program (MSCP). This vegetation mapping was updated using information from an aerial photograph of the area (SanGIS 2012). Updates to the vegetation map included areas that were mapped as native vegetation or agricultural, but showed as developed on the 2012 aerial photo.

Vegetation community classifications follow Holland (1986) and Oberbauer (1996). Assessments of the sensitivity of habitats are based primarily on the California Native Plant Society (CNPS; 2012), the California Natural Diversity Data Base (CNDDDB; State of California 2012a), City of San Diego (1997 and 2012), U.S. Fish and Wildlife Service (USFWS; 2002a), and Holland (1986).

#### **2.2.2 Sensitive Plants**

The mapped locations of sensitive plant species are from the CNDDDB (State of California 2012a) and other biological resource documents reviewed from the CPU area (see Attachment 2). Nomenclature for plant species follows Hickman (1993), and Jepson (2009). Assessments of the sensitivity of species are based primarily on CNPS (2012), State of California (2012b), City of San Diego (1997 and 2012), and USFWS (2002a).

## **2.3 Sensitive Wildlife**

The mapped locations of sensitive wildlife species are from the CNDDDB (State of California 2012a) and the other biological resource documents reviewed from the CPU area (see Attachment 2). Zoological nomenclature for birds is in accordance with the American Ornithologists' Union Checklist (1998) and Unitt (2004); for mammals, Jones et al. (1997) and Hall (1981); and for amphibians and reptiles, Crother (2001) and Crother et al. (2003). Assessments of the sensitivity of species are based primarily on State of California (2011a, 2011b), City of San Diego (1997 and 2012), and USFWS (2002a).



## **3.0 Existing Conditions**

### **3.1 Site Description**

#### **3.1.1 Topography**

Otay Mesa has varying elevation from approximately 450 feet above mean sea level (AMSL) feet to more than 600 feet AMSL (see Figure 2). The western two-thirds of the study area is a flat elevated mesa bounded by steep cliffs. The eastern one-third is characterized by low, gently rolling hills that increase in elevation gradually to the mountainous terrain of the San Ysidro Mountains to the east. On the north, the moderate slopes of the Otay River Valley become steep bluffs near the mesa, with several major canyons such as O'Neal, Johnson, and Denney that bisect the area. To the west, a terrace rises steeply from I-805 to the mesa, with Moody Canyon and Spring Canyon as the major drainage systems of the area.

#### **3.1.2 Land Use**

Current land use on Otay Mesa is a mixture of residential development of various densities, industrial and commercial areas, parks, and undeveloped lands. Some of the undeveloped lands are agricultural areas while others are designated open space areas set aside to preserve sensitive vegetation communities, wetlands, and habitat for sensitive plant and wildlife species.

#### **3.1.3 Soils**

The U.S. Department of Agriculture (USDA; 1973) mapped the following soil series in the CPU area: Diablo clay, gravel pit, Huerhuero loam, Huehuero-Urban land complex, Linne clay loam, mine and quarry, Olivenhain cobbly loam, Riverwash, Salinas clay loam, Salinas clay, and Stockpen gravelly clay loam. Most of the eastern portion of the mesa is covered by Diablo series clays, a dark gray soil derived from sandstone and shale. The western half of the mesa is covered by the Stockpen series of gravelly clay loams. Smaller portions of the mesa are covered with Salinas series clays and the previously mentioned soils, all of its horizons are clayey. The Huerhuero loams are different in that the top foot of the soils is a loam. These soils are characteristic of the flat and gently rolling mesa lands within the CPU area.

The canyon slopes, immediately to the north and west of the mesa, are covered with Olivenhain series cobbly loams. This soil has a topsoil of cobbly loam and a subsoil of very cobbly clay. Farther west, the canyons have Linne series clay loams. To the north,

the Otay River Valley has Riverwash soils (sandy, gravelly, or cobbly material) along the floodway (City of San Diego 1981).

## 3.2 Botanical Resources

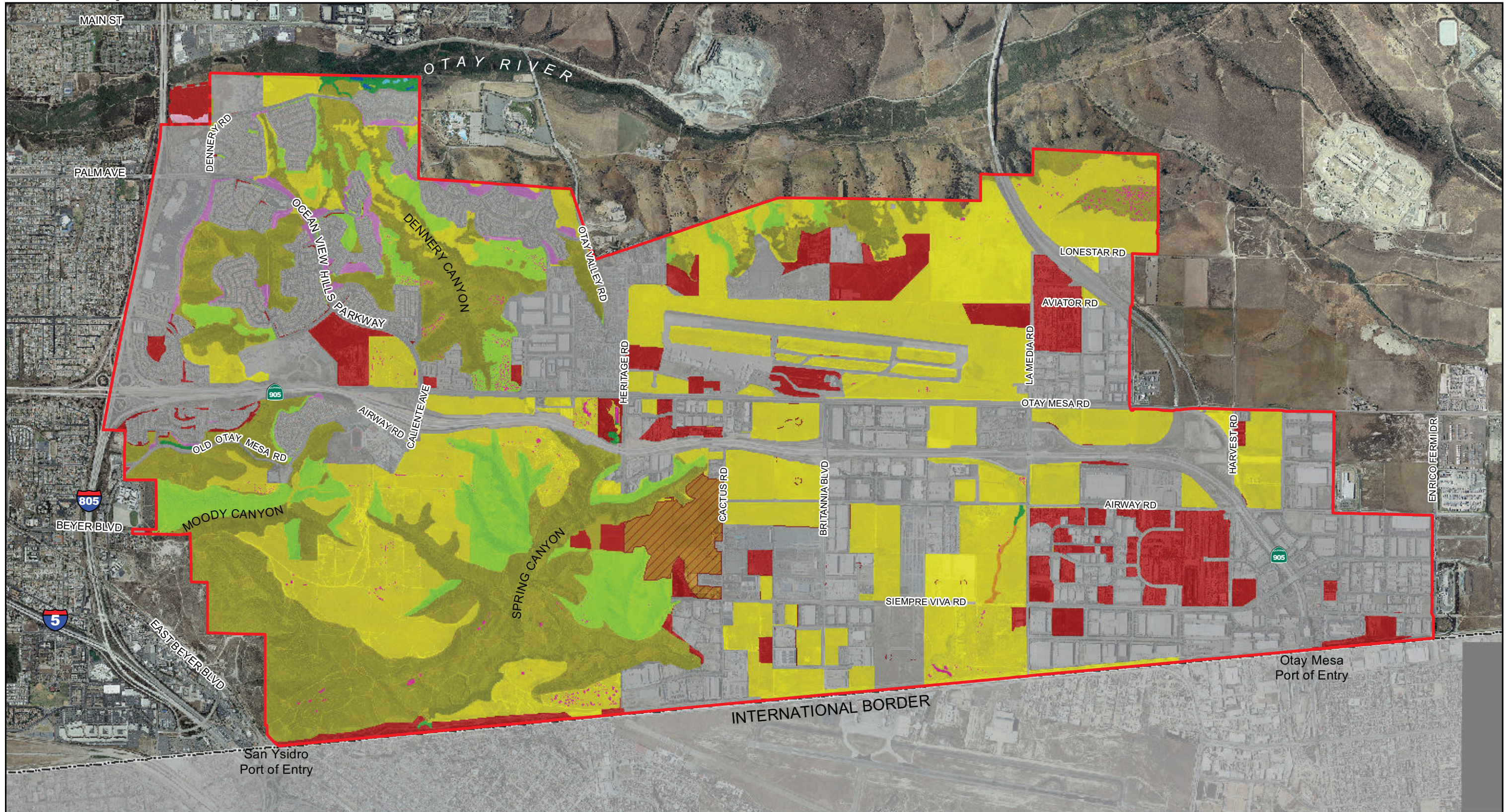
There are 15 vegetation communities and land cover types present in the CPU area: urban/developed, non-native grassland, Diegan coastal sage scrub, disturbed, maritime succulent scrub, agriculture, non-native vegetation, riparian, vernal pool, basin with fairy shrimp, mule fat scrub, southern mixed chaparral, freshwater marsh, eucalyptus woodland, and alkali seep. The approximate acreages of these vegetation communities and land cover types are shown in Table 2. Vegetation communities and land cover types mapped within the CPU area are shown on Figure 4 and described below.

**TABLE 2  
VEGETATION COMMUNITIES AND LAND COVER TYPES**

Vegetation Community/Land Cover Type	CPU Area (acres)
Urban/developed	3,853.9
Non-native grassland	2,429.4
Diegan coastal sage scrub	1,619.0
Disturbed land	673.4
Maritime succulent scrub	540.9
Agriculture	113.2
Non-native vegetation	68.3
Riparian	23.97
Vernal pool	12.34
Basin with fairy shrimp	12.24
Mule fat scrub	5.17
Southern mixed chaparral	4.6
Freshwater marsh	1.06
Eucalyptus woodland	1.0
Alkali seep	0.53
<b>TOTAL</b>	<b>9,349.08</b>

### 3.2.1 Wetland Vegetation Communities

Wetland vegetation communities are dominated by plant species adapted to soils that have periods of prolonged saturation. The CPU area has five wetland vegetation communities mapped within the limits and these five vegetation communities are described below. Wetland vegetation communities are considered sensitive by the City



Otay Mesa Community Plan Boundary  
 Not A Part

**Vegetation Communities and Land Cover Types**

- Alkali Seep
- Coastal and Valley Freshwater Marsh
- Diegan Coastal Sage Scrub
- Eucalyptus Woodland

- Maritime Succulent Scrub
- Mule Fat Scrub
- Non-native Grassland
- Non-native Vegetation
- Riparian

- Southern Mixed Chaparral
- Vernal Pool
- Agriculture
- Disturbed Land
- Urban/Developed



**FIGURE 4**  
Existing Vegetation Communities and Land Cover Types

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of San Diego and resource agencies. These communities are regulated by the City and Regional Water Quality Control Board (RWQCB) and some are regulated by the U.S. Army Corps of Engineers (USACE), USFWS, and the California Department of Fish and Wildlife (CDFW).

### **3.2.1.1 Riparian (23.97 acres)**

Riparian vegetation consists of riparian scrub, riparian woodland, and/or riparian forest within the CPU area. These communities vary from open to dense and are typically dominated by broad-leafed, winter deciduous trees and/or shrubs. These communities may contain an understory consisting of sub-shrubs or herbaceous species, although denser stands may prevent the development of understory vegetation. Tree species may include willows (*Salix* spp.), Fremont cottonwoods (*Populus fremontii*) and/or western sycamores (*Platanus racemosa*). Scrubs are generally dominated by riparian shrubs such as mule fat (*Baccharis salicifolia*). Riparian vegetation as mapped contains areas of riparian vegetation considered disturbed. Disturbed riparian vegetation includes areas that have been impacted from human encroachment (e.g., homeless encampments or other trespasses), or by the invasion of non-native plant species from adjacent areas (e.g., salt cedar [*Tamarix* spp.]). Riparian communities are typically found along major drainages, but also may occur in smaller drainages. Within the CPU area, small patches of riparian vegetation are found within the Otay River Valley, upper Dennery Canyon, and Spring Canyon.

### **3.2.1.2 Freshwater Marsh (1.06 acres)**

This community consists of perennial emergent monocots such as cattails (*Typha* spp.) and bulrush (*Scirpus* spp.). Freshwater marsh vegetation occurs in open bodies of fresh water with little current flow, such as ponds, and to a lesser extent around seeps and springs. The vegetation typically forms a closed canopy. Freshwater marshes occur in areas of permanent inundation by freshwater without active streamflow. Freshwater marsh communities, as with all wetland habitats, have been greatly reduced throughout their entire range and continue to decline as a result of urbanization.

Freshwater marsh areas include the unvegetated open water of ponds, lakes, and wide streams. These freshwater marsh areas are mapped within the northwest portion of the CPU area within the Otay River Valley.

### **3.2.1.3 Vernal Pool (12.34 acres) and Basins with Fairy Shrimp (12.24 acres)**

San Diego mesa claypan vernal pools are shallow, isolated, seasonal wetlands distinguished from other ephemeral wetlands in the region by characteristic plant and animal species. The micro-relief surrounding vernal pools typically consists of small

mima mounds or hummocks. San Diego mesa claypan vernal pools have a characteristic suite of plant and animal species. Plants in vernal pools may be aquatic or may germinate following the drying of the pool. Pool sizes range from very small to moderate (up to circa 700 square meters).

Vernal pools can be characterized as Hardpan or Claypan vernal pools which are distinguished by the soil type they occur on, the type of impervious subsoil layer, and vegetation. Claypan vernal pools are primarily found on Otay Mesa on Stockpen soils, but are also located in other areas of San Diego County and into Baja California. Hardpan vernal pools are primarily found north of Otay Mesa (Holland 1986).

Basins with fairy shrimp is a subset of vernal pools used to distinguish the presence of fairy shrimp. Some of these basins may be vernal pools while others are simply road ruts in which fairy shrimp happen to occur.

Approximately 1,266 vernal pools are located within the CPU area based on data compiled by the City of San Diego. Of this total, 522 are basins with fairy shrimp. These vernal pools are located on mesas in the northeastern, central-western, and southwestern portions of the CPU area. In addition, vernal pools have been mapped west of La Media Road near the International Border. The vernal pools within the CPU area are a mixture of natural and created basins, most of which are found within preserved open space areas. Vernal pool creation/restoration and enhancement has been successful in Otay Mesa as there are multiple vernal pool preserve areas located within the CPU area. The largest of these preserves is the 45-acre Dennery Canyon vernal pool preserve east of Ocean View Hills Parkway.

Otay Mesa vernal pools have historically been impacted by non-native weeds, grazing, and off-road-vehicle activity. Over the years, habitat changes caused by disturbance, including the resulting weed invasion, have diminished the suitable habitat available for ground nesting pollinators. Even though various insects have been observed visiting local vernal pool plant species, studies to determine if any of these insects are effective pollinators are lacking. Therefore referring to the visiting insects as potential pollinators is currently the best terminology to use for these observations. Visiting insects observed (either photographed or collected) on vernal pool plant species' flowers as part of vernal pool restoration monitoring efforts on the Otay Mesa include flies in the families of Sarcophagidae (flesh flies) and Calliphoridae (blow flies), various Hymenoptera including small bees and wasps, Syrphidae (hover flies) and other tiny bees, wasps, and flies, including bee flies, larger bumblebees, and sphinx moths (RECON 2005).

### **3.2.1.4 Mule Fat Scrub (5.17 acres)**

Mule fat scrub is an early seral riparian scrub community dominated by mule fat and maintained by frequent flooding. Often this community is distributed along ephemeral streams. In the CPU area, mule fat scrub occurs in a drainage west of La Media Road.

### **3.2.1.5 Alkali Seep (0.53 acre)**

Alkali seep typically consists of low-growing perennial herbs in permanently moist or wet alkaline seeps as part of narrow drainages or springs. This vegetation community usually consists of relatively few species and forms complete cover. In the CPU area, alkali seep occurs in the Otay River Valley.

## **3.2.2 Upland Communities**

Upland vegetation communities do not support wetland species. These native vegetation types occur on the drier areas of the mesa, slopes, and canyons in the CPU area. Four vegetation communities are in this category as described below.

### **3.2.2.1 Non-native Grassland (2,429.4 acres)**

Non-native grassland is characterized by a dense to sparse cover of annual grasses, which may include numerous native wildflowers, particularly in years of high rainfall. Non-native grasslands contain species including, but not limited to, bromes, wild oats, ryegrasses, and fescues. Typically, this community includes at least 50 percent cover of the entire herbaceous layer attributable to annual non-native grass species, although other native and non-native plant species may be intermixed (City of San Diego 2012).

These annuals germinate with the onset of the rainy season and set seeds in the late winter or spring. With a few exceptions, the plants of non-native grasslands are dead through the summer-fall dry season. Non-native grassland is typically found on fine-textured, usually clay, soils, that range from being moist or waterlogged in the winter to being very dry during the summer and fall. This community is found in valleys and foothills throughout much of California at elevations below 3,000 to 4,000 feet (Holland 1986). Non-native grassland can be found dispersed throughout the CPU area.

### **3.2.2.2 Diegan Coastal Sage Scrub (1,619.0 acres)**

Diegan coastal sage scrub is the southern form of coastal sage scrub comprised of low-growing, aromatic, drought-deciduous soft-woody shrubs that have an average height of approximately three to four feet. Diegan coastal sage scrub is typically dominated by facultatively drought deciduous species such as California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), laurel sumac (*Malosma laurina*), and black sage (*Salvia mellifera*).

This community is typically found on low moisture-availability sites with steep, xeric slopes or clay rich soils that are slow to release stored water. These sites often include drier south- and west-facing slopes and occasionally north-facing slopes, where the community can act as a successional phase of chaparral. Diegan coastal sage scrub

transitions to several types of chaparrals at higher elevation, or in drier more inland areas to Riversidean sage scrub. Diegan coastal sage scrub is found in coastal areas from Los Angeles County south into Baja California (Holland 1986).

Some coastal sage scrub areas in the CPU contain another co-dominant species, San Diego bur-sage (*Ambrosia chenopodiifolia*). Other coastal sage scrub areas in the CPU area have a greater percentage of non-native grassland species such as bromes (*Bromus* spp.), wild oats (*Avena* spp.), ryegrasses (*Lolium* spp.), and fescues (*Vulpia* spp.). Coastal sage scrub is found primarily in the northern and western portions of the CPU area both in large acreages and in smaller, more isolated patches.

### **3.2.2.3 Maritime Succulent Scrub (540.9 acres)**

Maritime succulent scrub is a low (two to three feet high), open (25–75 percent cover) vegetation community dominated by drought deciduous, somewhat woody soft-leaved shrubs with a rich mixture of stem and leaf succulents (e.g., cacti). The proportion of cacti in this community is typically highest in inland areas. Ground cover is more or less devoid of vegetation between shrubs. Growth and flowering are concentrated in the spring. Maritime succulent scrub occurs on thin, rocky, or sandy soils, often on steep slopes of coastal headlands and bluffs. This type of succulent scrub transitions to southern coastal bluff scrub on more exposed headlands and bluffs and with coastal sage scrub on better developed, moister soils away from the immediate coast (Holland 1986). This vegetation community is found in the western half of the CPU area.

Maritime succulent scrub occurs along the slopes of canyons (e.g., Moody Canyon, Dennery Canyon, Spring Canyon) on the western half of the CPU area and along the north–central CPU boundary to the north of Brown Field (see Figure 4). Some areas of maritime succulent scrub are disturbed and contain an abundance of exotic invasive plant species. Disturbed maritime succulent scrub can be found within the southwestern portion of the CPU area within Spring Canyon.

### **3.2.2.4 Southern Mixed Chaparral (4.6 acres)**

Southern mixed chaparral is a plant community typically dominated by broad-leaved sclerophyllous shrubs or small trees that typically range in height range from 4 to 10 feet tall. Southern mixed chaparral is typically dominated by blue-colored lilacs including Ramona lilac (*Ceanothus tomentosus* var. *olivaceus*), chaparral whitethorn (*C. leucodermis*), and hairy ceanothus (*C. oliganthus*) and may include manzanita (*Arctostaphylos* spp.), toyon (*Heteromeles arbutifolia*), sugar bush (*Rhus ovata*), and mission manzanita (*Xylococcus bicolor*) (Holland 1986). Southern mixed chaparral typically is found in coastal foothills of San Diego County at elevations below 3,000 feet. It usually occupies canyon slopes or ravines where mesic conditions are present. The vegetation is usually dense, with little or no understory cover, but may include patches of



bare soil. Many species in this community are adapted to repeated fires by their ability to stump sprout. This vegetation community is found along the northwestern edge of the CPU area in the Otay River Valley.

### **3.2.3 Other Land Cover Types**

Three other land cover types are present within the CPU area. All result from some sort of development, encroachment, or other human disturbance.

#### **3.2.3.1 Urban/Developed (3,853.9 acres)**

Areas mapped as developed include locations with residential housing, commercial, and industrial land uses. Urban/developed includes ornamental areas that have been landscaped with non-native species and are actively maintained.

#### **3.2.3.2 Disturbed Land (673.4 acres)**

Disturbed land includes undeveloped areas modified by activities such as grading, scraping, or off-road vehicle use. Areas mapped as disturbed are scattered throughout the CPU area, primarily in the western and the northern portion. A large portion of the southwestern corner of the CPU area, particularly within and surrounding Spring Canyon, was identified in the MSCP mapping as disturbed. However, these areas likely support some native and non-native vegetation and would require that a site-specific biological survey be conducted during the project-specific analysis to determine if any native or non-native habitats exist on-site. In addition, some of these disturbed lands may or do support burrowing owls (*Athene cunicularia hypugaea*), which would require site-specific protocol surveys.

#### **3.2.3.3 Agriculture (113.2 acres)**

This land cover type includes all agricultural land (both active and inactive). Agricultural activities are present primarily within the southern half of the CPU area, with several patches along the northern boundary of the CPU area.

#### **3.2.3.4 Non-native Vegetation (68.3 acres)**

Non-native vegetation consists of non-native plant species, including ornamental and/or invasive species. This land cover type occurs primarily in the northeastern portion of the CPU. However, this area likely supports some native vegetation and would need to be verified during the project-specific analysis to determine if any native or non-native habitats exist on-site.

### **3.2.3.5 Eucalyptus Woodland (1 acre)**

Eucalyptus woodland is comprised of stands of eucalyptus trees (*Eucalyptus* spp.). These trees are not native to the area and are considered invasive species because of their rapid growth rate, broad cover, and allelopathic chemicals contained in their leaf litter that prevents understory species from growing. Once established, eucalyptus groves often form dense canopies that displace native habitats over time (Holland 1986). Eucalyptus woodland was mapped along the future Beyer Boulevard extension along the western edge of the CPU area and along the northern edge of the CPU area west of State Route 125.

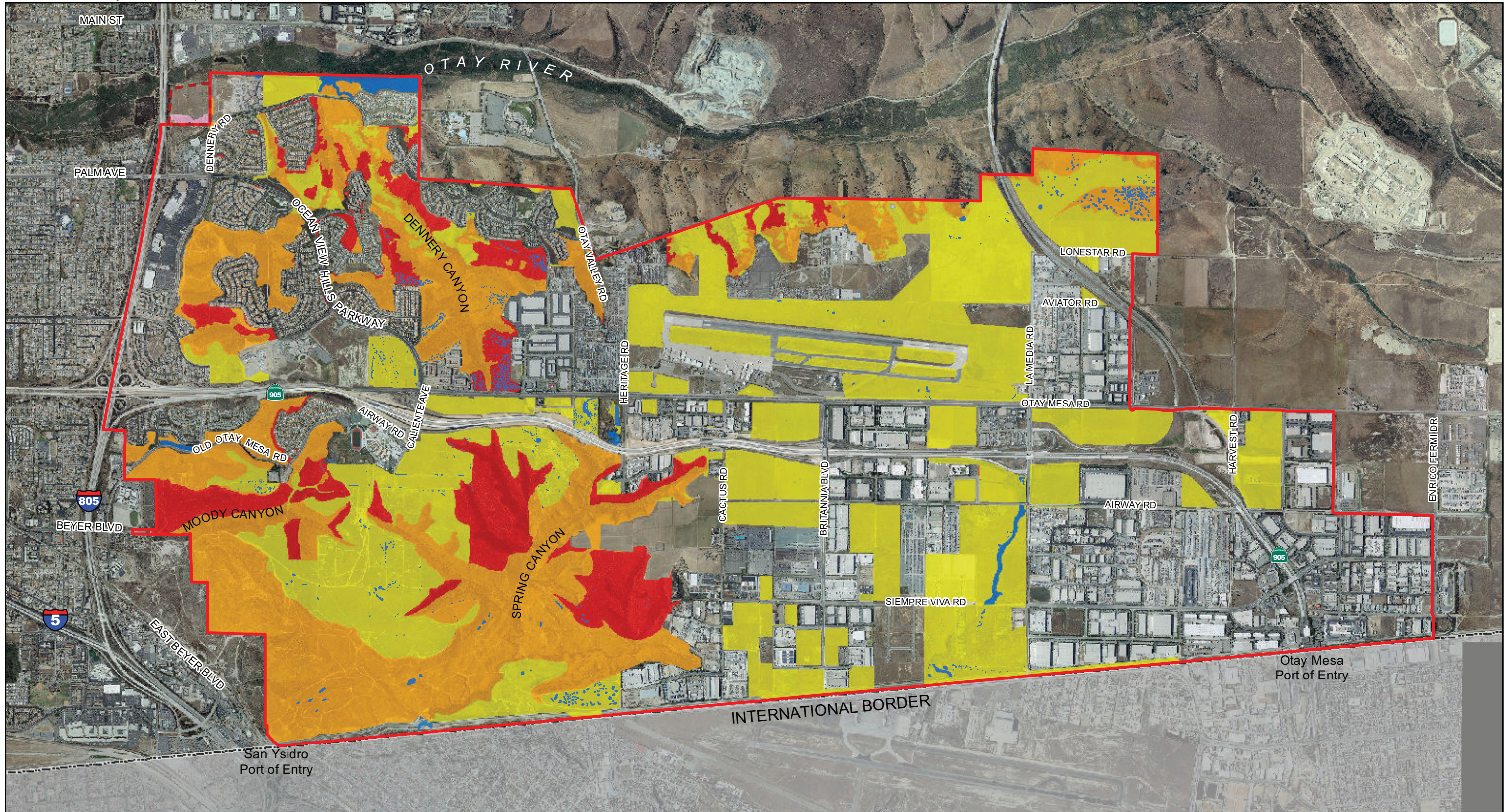
## **3.3 Sensitive Biological Resources**

For purposes of this report, a species is considered sensitive if it: (1) is listed by state or federal agencies as threatened or endangered or are candidates or proposed for such listing; (2) is considered rare, endangered, or threatened by the State of California and/or listed in the CNDDDB (State of California 2012a, 2012b, 2011a, 2011b); (3) is a narrow endemic or covered species in the City of San Diego Multiple Species Conservation Program Subarea Plan (City of San Diego 1997); (4) has a CNPS Rare Plant Ranking of 1B or 2 on the CNPS *Inventory of Rare and Endangered Vascular Plants of California* (2012); or (5) is considered rare, sensitive, or noteworthy by local conservation organizations or specialists. Noteworthy plant species are considered to be those that have a CNPS Rare Plant Ranking of 3 and 4 on the CNPS *Inventory*. Sensitive habitat types are those identified by the CNDDDB (State of California 2012a) and Holland (1986). Assessments for the potential occurrence of sensitive or noteworthy species are based upon known ranges and habitat preferences for the species and species occurrence records from the CNDDDB.

Under the MSCP, upland vegetation communities have been divided into four tiers of sensitivity. Upland vegetation communities that are classified as Tier I (rare uplands), Tier II (uncommon uplands), or Tier III (common uplands) are considered sensitive by the City. Tier IV (other uplands) vegetation communities are not considered sensitive.

### **3.3.1 Sensitive Vegetation Communities**

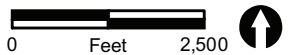
Sensitive vegetation communities are those communities that are of highly limited distribution. These communities may also support concentrations of sensitive plant or wildlife species. Upland communities within the MSCP are divided into four tiers of sensitivity based on rarity and ecological importance (City of San Diego 2012). Tier I is the most sensitive and Tier IV is the least sensitivity. The sensitive vegetation community MSCP Tiers present in the CPU area are shown on Figure 5 and summarized below.



Otay Mesa Community Plan Boundary  
 Not A Part

**Vegetation Classification**

- Tier I Uplands
- Tier II Uplands
- Tier IIIA Uplands
- Tier IIIB Uplands
- Wetlands



**FIGURE 5**  
Sensitive Vegetation Communities

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Maritime succulent scrub is an MSCP Tier I habitat within the CPU area. Tier I is mapped primarily in the northern and western portions of the CPU area, along Dennery Canyon, Moody Canyon, Spring Canyon, and the Otay River Valley.

Diegan coastal sage scrub, in pristine or disturbed condition, is considered sensitive by federal and state resource agencies due to the scarcity of this vegetation community and the number of sensitive species associated with it. This vegetation community is categorized as a Tier II vegetation community. Tier II vegetation is mapped primarily in the western and northern portions of the CPU area, along Dennery Canyon, Moody Canyon, Spring Canyon, and the Otay River Valley.

Southern mixed chaparral is categorized as a Tier IIIA vegetation community. Tier IIIA communities, although common, are considered sensitive as they may support a variety of rare plant and animal species. Tier IIIA is mapped only in the northwestern portion of the CPU area, in the Otay River Valley.

Non-native grassland is classified as a Tier IIIB community. Tier IIIB habitat is considered less valuable than native habitat, but still provides foraging habitat for many species, particularly raptors, and may support a variety of rare plant and animal species. Tier IIIB is found in the northeastern portion and scattered in patches elsewhere in the CPU area.

All wetland vegetation communities, including vernal pools, are considered sensitive by the City of San Diego and resource agencies. These communities are regulated by the City, USFWS, and RWQCB and some are regulated by USACE and CDFW. Case-by-case analysis would be needed to determine what agencies (City, USFWS, RWQCB, USACE, or CDFW) might have regulatory authority on any wetland resources proposed to be impacted.

### **3.3.2 Sensitive Plant Species**

The sensitive plant species below are known from the CPU area based on information obtained from the literature review. Sources include, but are not limited to, the CNDDDB, (State of California 2012a), and the reports listed in Attachment 2. Precise locations of sensitive plant species would be identified through on-site reconnaissance and project-level analysis in conjunction with proposed future development. Table 3 lists the sensitive plant species observed in the CPU area.

#### **3.3.2.1 Listed and MSCP-Covered Species**

**San Diego thornmint (*Acanthomintha ilicifolia*).** San Diego thornmint is federally listed as threatened and state listed as endangered (State of California 2012a). It is considered a narrow endemic under the MSCP and has a CNPS Rare Plant Ranking of

1B.1 (rare, threatened, or endangered in California and elsewhere; seriously endangered in California) (City of San Diego 1997; CNPS 2012). This annual herb in the mint family (Lamiaceae) flowers from April through June. It is known to occur at elevations between 30 and 3,200 feet in San Diego County and in northern Baja California. Preferred habitat is friable or cracked clay soil in grassy openings within chaparral and coastal scrub (Reiser 2001). Information regarding the occurrence of this species is from the CNDDDB (State of California 2012a).

**San Diego ambrosia (*Ambrosia pumila*).** San Diego ambrosia is federally listed as endangered (State of California 2012b). It is considered a narrow endemic species under the MSCP and has a CNPS Rare Plant Ranking of 1B.1 (rare, threatened, or endangered in California and elsewhere; seriously endangered in California) (City of San Diego 1997; CNPS 2012). This perennial herb in the sunflower family (Asteraceae) emerges from rhizomes in spring and flowers from June to September. It is found at elevations below 500 feet in western Riverside and San Diego counties, and in northern Baja California. It may occur in disturbed areas in chaparral, coastal scrub, grassland, or vernal pool communities (CNPS 2012). Potential habitat in San Diego County is along creek beds, seasonally dry drainages, and floodplains along the edge of willow woodland, in Riverwash or sandy alluvial soils (Reiser 2001), from the San Luis Rey River south to the Sweetwater River (Beauchamp 1986). Information regarding the occurrence of this species is from the CNDDDB (State of California 2012a).

**San Diego goldenstar (*Bloomeria [=Muilla] clevelandii*).** San Diego goldenstar is a covered species under the MSCP and has a CNPS Rare Plant Ranking of 2.1 (rare, threatened, or endangered in California, but more common elsewhere; seriously endangered in California) (City of San Diego 1997; CNPS 2012). San Diego goldenstar is a bulbiferous herb of the Brodiaea family (Themidaceae). This species is found only in southwestern San Diego County and northern Baja California, Mexico, where it occurs on clay soils in coastal sage scrub, chaparral, and grassland habitats (Munz 1974). It is a perennial bulb threatened by loss, degradation, and conversion of habitat. Information regarding the occurrence of this species is from the CNDDDB (State of California 2012a) and PBS&J (2004).

**Orcutt's brodiaea (*Brodiaea orcuttii*).** Orcutt's brodiaea is covered under the MSCP and has a CNPS Rare Plant Ranking of 1B.1 (rare, threatened, or endangered in California and elsewhere; seriously endangered in California) (City of San Diego 1997; CNPS 2012). This bulbiferous perennial in the lily family (Liliaceae) flowers from April through July. Its range is limited to San Diego, Riverside, and Orange Counties and Baja California, Mexico at elevations up to 5500 feet (Munz 1974). Typically it is found in chaparral and lower montane coniferous forest communities, particularly areas with vernal moist grasslands, mima mounds, or at the edge of vernal pools or streams (Reiser 2001). It is known to occur in clay, and sometimes serpentine, soils including Stockpen gravelly loam on Otay Mesa and Redding gravelly loam on Mira Mesa (Reiser

**TABLE 3**  
**SENSITIVE PLANT SPECIES KNOWN OR WITH THE POTENTIAL TO OCCUR IN THE CPU AREA**

Species	State/ Federal Status	CNPS Rare Plant Ranking	City of San Diego	Habitat/Blooming Period
<b>ANGIOSPERMS: DICOTS</b>				
<b>AMARANTHACEAE</b>	<b>AMARANTH FAMILY</b>			
<i>Atriplex pacifica</i> south coast saltscale	--	1B.2	-	Annual herb; coastal bluff scrub, coastal dunes, coastal sage scrub, playas; blooms Mar.–Oct.; elevation less than 500 feet.
<b>APIACEAE</b>	<b>CARROT FAMILY</b>			
<i>Eryngium aristulatum</i> var. <i>parishii</i> San Diego button-celery	CE/FE	1B.1	1	Annual/perennial herb; vernal pools, mesic areas of coastal sage scrub and grasslands, blooms April–June; elevation less than 2,000 feet.
<b>ASTERACEAE</b>	<b>SUNFLOWER FAMILY</b>			
<i>Ambrosia chenopodiifolia</i> San Diego bur-sage	--	2.1	-	Shrub; coastal sage scrub, cobbly loam soils; blooms April–June; elevation 150–500 feet. Approximately 10 occurrences known in San Diego. Additional populations in Baja California, Mexico.
<i>Ambrosia pumila</i> San Diego ambrosia	-/FE	1B.1	NE, MSCP	Perennial herb; chaparral, coastal sage scrub, valley and foothill grassland, creek beds, vernal pools, often in disturbed areas; blooms May–Sept.; elevation less than 1,400 feet. Many occurrences extirpated in San Diego County.
<i>Bahiopsis</i> [= <i>Viguiera</i> ] <i>laciniata</i> San Diego County viguiera	--	4.2	-	Shrub; chaparral, coastal sage scrub; blooms Feb.–June; elevation less than 2,500 feet.
<i>Deinandra</i> [= <i>Hemizonia</i> ] <i>conjugens</i> Otay tarplant	CE/FT	1B.1	NE, MSCP	Annual herb; coastal sage scrub, valley and foothill grassland, clay soils; blooms May–June, elevation less than 1,000 feet.
<i>Isocoma menziesii</i> var. <i>menziesii</i> [=var. <i>decumbens</i> ] Decumbent goldenbush	--	1B.2	-	Shrub; chaparral, coastal sage scrub, sandy soils, often in disturbed areas; blooms April–Nov.; elevation less than 500 feet.
<b>CACTACEAE</b>	<b>CACTUS FAMILY</b>			
<i>Bergerocactus emoryi</i> Golden-spined cereus	--	2.2	-	Succulent; closed-cone coniferous forest, chaparral, coastal sage scrub, sandy; blooms May–June; elevation less than 1,300 feet.
<i>Cylindropuntia</i> [= <i>Opuntia</i> ] <i>californica</i> var. <i>californica</i> Snake cholla	--	1B.1	NE, MSCP	Succulent shrub; chaparral, coastal sage scrub; blooms April–May; elevation 100–500 feet.
<i>Ferocactus viridescens</i> San Diego barrel cactus	--	2.1	MSCP	Succulent; chaparral, coastal sage scrub, valley and foothill grassland, vernal pools; blooms May–June; elevation less than 1,500 feet.

**TABLE 3**  
**SENSITIVE PLANT SPECIES KNOWN OR WITH THE POTENTIAL TO OCCUR IN THE CPU AREA**  
**(continued)**

Species	State/ Federal Status	CNPS Rare Plant Ranking	City of San Diego	Habitat/Blooming Period
<b>CRASSULACEAE</b>	<b>STONECROP FAMILY</b>			
<i>Dudleya variegata</i> Variegated dudleya	--	1B.2	NE, MSCP	Perennial herb; openings in chaparral, coastal sage scrub, grasslands, vernal pools; blooms May–June; elevation less than 2,000 feet.
<b>EUPHORBIACEAE</b>	<b>SPURGE FAMILY</b>			
<i>Euphorbia misera</i> Cliff spurge	--	2.2	–	Shrub; coastal sage scrub, maritime succulent scrub, coastal bluff scrub; blooms Dec.–Aug.; elevation less than 2,000 feet.
<b>FAGACEAE</b>	<b>OAK FAMILY</b>			
<i>Quercus dumosa</i> Nuttall's scrub oak	--	1B.1	–	Evergreen shrub; closed-cone coniferous forest, coastal chaparral, coastal sage scrub, sandy and clay loam soils; blooms Feb.–March; elevation less than 1,300 feet.
<b>LAMIACEAE</b>	<b>MINT FAMILY</b>			
<i>Acanthomintha ilicifolia</i> San Diego thornmint	CE/FT	1B.1	NE, MSCP	Annual herb; chaparral, coastal sage scrub, and grasslands on friable or broken clay soils; blooms April–June; elevation less than 3,100 feet.
<i>Pogogyne nudiuscula</i> Otay mesa mint	CE/FE	1B.1	1	Annual herb; vernal pools; blooms May–July; elevation 300–800 feet. Known from six occurrences in Otay Mesa.
<b>POLEMONIACEAE</b>	<b>PHLOX FAMILY</b>			
<i>Navarretia fossalis</i> Spreading navarretia	--/FT	1B.1	1	Annual herb; vernal pools, marshes and swamps, chenopod scrub; blooms April–June; elevation 100–4,300 feet.
<b>RANUNCULACEAE</b>	<b>BUTTERCUP FAMILY</b>			
<i>Myosurus minimus</i> ssp. <i>apus</i> Little mousetail	--	3.1	–	Annual herb; vernal pools, perennial grasslands; blooms March–June; elevation 70–2,100 feet.
<b>RHAMNACEAE</b>	<b>BUCKTHORN FAMILY</b>			
<i>Adolphia californica</i> California adolphia	--	2.1	–	Deciduous shrub; Diegan coastal sage scrub and chaparral; clay soils; blooms Dec.–May; elevation 100–1,000 feet.
<b>ROSACEAE</b>	<b>ROSE FAMILY</b>			
<i>Rosa minutifolia</i> Small-leaved rose	CE/--	2.1	MSCP	Shrub; coastal sage scrub; blooms Jan.–June; elevation 500–550 feet. Known in California from only one occurrence on Otay Mesa, this occurrence now part of a translocation program on Otay Mesa.
<b>SCROPHULARIACEAE</b>	<b>FIGWORT FAMILY</b>			
<i>Cordylanthus orcuttianus</i> Orcutt's bird's-beak	--	2.1	MSCP	Annual herb; coastal sage scrub; blooms March–Sept.; elevation less than 1,200 feet.



**TABLE 3**  
**SENSITIVE PLANT SPECIES KNOWN OR WITH THE POTENTIAL TO OCCUR IN THE CPU AREA**  
**(continued)**

Species	State/ Federal Status	CNPS Rare Plant Ranking	City of San Diego	Habitat/Blooming Period
<b>ANGIOSPERMS: MONOCOTS</b>				
<b>POACEAE</b>	<b>GRASS FAMILY</b>			
<i>Orcuttia californica</i> California Orcutt grass	CE/FE	1B.1	<sup>1</sup>	Annual herb; vernal pools; blooms April–August; elevation 50–2,200 feet.
<b>THEMIDACEAE</b>				
<i>Bloomeria [=Muilla] clevelandii</i> San Diego goldenstar	–/–	2.1	MSCP	Perennial herb (bulbiferous); chaparral, coastal sage scrub, valley and foothill grassland, vernal pools, clay soils; blooms May; elevation 170–1,500 feet.
<i>Brodiaea orcuttii</i> Orcutt’s brodiaea	–/–	1B.1	MSCP	Perennial herb (bulbiferous); closed cone coniferous forest, chaparral, meadows and seeps, valley and foothill grassland, vernal pools, mesic, clay soil; blooms May–July; elevation less than 5,300 feet.

<sup>1</sup>The City of San Diego relinquished take authority for the seven vernal pool species under the Brewster decision, including San Diego button celery, Otay mesa mint, spreading navarretia, and California Orcutt grass.

**FEDERAL CANDIDATES AND LISTED PLANTS**

FE = Federally listed endangered  
 FT = Federally listed threatened

**STATE LISTED PLANTS**

CE = State listed endangered

**CITY OF SAN DIEGO**

NE = Narrow endemic  
 MSCP = Multiple Species Conservation Program covered species

**CALIFORNIA NATIVE PLANT SOCIETY RARE PLANT RANKINGS**

- 1B = Species rare, threatened, or endangered in California and elsewhere. These species are eligible for state listing.
- 2 = Species rare, threatened, or endangered in California but more common elsewhere. These species are eligible for state listing.
- 3 = Species for which more information is needed. Distribution, endangerment, and/or taxonomic information is needed.
- 4 = A watch list of species of limited distribution. These species need to be monitored for changes in the status of their populations.
- .1 = Species seriously threatened in California (over 80% of occurrences threatened; high degree and immediacy of threat)
- .2 = Species fairly threatened in California (20-80% occurrences threatened; moderate degree and immediacy of threat)
- .3 = Species not very threatened in California (<20% of occurrences threatened; low degree and immediacy of threat or no current threats known)

2001). This species is known to occur within one mile of the CPU area and is likely to occur on-site (State of California 2012a). Information regarding the occurrence of this species is from the CNDDDB (State of California 2012a).

**Snake cholla (*Cylindropuntia* [=*Opuntia*] *californica* var. *californica*).** Snake cholla is considered a narrow endemic species under the MSCP and has a CNPS Rare Plant Ranking of 1B.1 (rare, threatened, or endangered in California and elsewhere; seriously endangered in California) (City of San Diego 1997; CNPS 2012). It is a generally prostrate cactus (Cactaceae family) that may grow up to 9 feet and blooms with yellow or green-yellow flowers in April and May. This variety grows only in southern San Diego County and Baja California, with the northernmost known location in Florida Canyon in Balboa Park (Reiser 2001). Snake cholla occurs in coastal sage scrub and chaparral habitats between 100 and 500 feet elevation (CNPS 2012), most often on dry hillsides. It is associated with Huerhuero loam, Gaviota fine sandy loam, and Redding cobbly loam soils (Reiser 2001). This variety can be distinguished from *C. californica* var. *parkeri* by its range, prostrate form and shorter tubercle and longer central spine (Reiser 2001). Information regarding the occurrence of this species is from the CNDDDB (State of California 2012a) and PBS&J (2004).

**Otay tarplant (*Deinandra* [=*Hemizonia*] *conjugens*).** Otay tarplant is listed as a California endangered species and a federally threatened species (State of California 2012b). It is considered a narrow endemic species under the MCSP and has a CNPS Rare Plant Ranking of 1B.1 (rare, threatened, or endangered in California and elsewhere; seriously endangered in California) (City of San Diego 1997; CNPS 2012). This small, aromatic annual herb in the sunflower family (Asteraceae) produces mostly solitary yellow flowerheads in May and June (Munz 1974, CNPS 2012). It ranges from southwestern San Diego County into Baja California, in open coastal sage scrub and grassland habitats below 1000 feet (CNPS 2012). It typically occurs in herbaceous plant communities on slopes and mesas with expansive clay soils, and may occur in non-native grasslands and fallow agricultural fields where clay soils are present (Reiser 2001). It can be distinguished from the common golden tarplant (*H. fasciculata*) by its flowers, which have eight to ten rays and 13 to 21 disks (Hickman 1993). Otay tarplant is considered to be declining. Residential and commercial development and highway construction have led to this decline (CNPS 2012). Information regarding the occurrence of this species is from the CNDDDB (State of California 2012a), Alden (2012), RECON (2004), and City of San Diego (2003).

**Orcutt's bird's-beak (*Dicranostegia* [=*Cordylanthus*] *orcuttianus*).** Orcutt's bird's-beak is covered under the MSCP and has a CNPS Rare Plant Ranking of 2.1 (Rare, threatened, or endangered in California, but more common elsewhere; seriously endangered in California) (City of San Diego 1997, CNPS 2012). This semi-parasitic annual in the broomrape family (Orobanchaceae) flowers from March to July. Its range extends from southern San Diego County into Baja California. Its habitat is coastal scrub

below 1,000 feet elevation (Hickman 1993, CNPS 2012), although Reiser (2001) considers seasonally dry drainages and upland adjacent to riparian habitat as its preferred habitat. The largest United States population is located in the Otay River drainage. Information regarding the occurrence of this species is from the CNDDDB (State of California 2012a).

**Variegated dudleya (*Dudleya variegata*)** Variegated dudleya is considered a narrow endemic species under the MSCP and has a CNPS Rare Plant Ranking of 1B.2 (rare, threatened, or endangered in California and elsewhere; fairly endangered in California) (City of San Diego 1997, CNPS 2012). This small succulent perennial in the stonecrop family (Crassulaceae) emerges from a corm in spring and produces yellow flowers in May and June. Its range extends from southwestern San Diego County to Baja California. It occurs in coastal sage scrub, grassland and chaparral habitats below 500 feet. It usually grows in stony places lacking shrub cover, on isolated rocky substrate in grasslands, and on mima mounds near vernal pools. It often occurs on gravelly loam soils (Reiser 2001). Although the largest populations are known from Otay Mesa, it has been reported as far north as Black Mountain Road (State of California 2012a). This species can be distinguished from many-stemmed dudleya (*D. multicaulis*) by its spoon-shaped, rather than linear, leaves and from Blochman's dudleya (*D. blochmaniae* ssp. *blochmaniae*) by its yellow, rather than white flowers. Information regarding the occurrence of this species is from the CNDDDB (State of California 2012a), Alden (2012), and PBS&J (2004).

**San Diego button-celery (*Eryngium aristulatum* var. *parishii*)**. San Diego button-celery is federally and state listed as endangered (State of California 2012b). It has a CNPS Rare Plant Ranking of 1B.1 (rare, threatened, or endangered in California and elsewhere; seriously endangered in California) (CNPS 2012). San Diego button-celery is a low-growing emergent aquatic in the carrot family (Apiaceae) that can be either an annual or perennial plant, with heads of greenish flowers between March and July. San Diego button-celery is limited to vernal pools in coastal sage scrub and grassland habitats. Its current range extends from Marine Corps Base Camp Pendleton in northern San Diego County through San Diego County into Baja California. The appearance of the plant can differ from an erect plant with bright green leaves emerging from shallow pools in the spring to a spiny, prostrate, gray-green plant during flowering and fruiting. San Diego button-celery is considered to be declining due to loss or conversion of habitat. More than half of the 80 known occurrences of this species have been extirpated (CNPS 2012). Information regarding the occurrence of this species is from the AECOM (2012), Alden (2012), and PBS&J (2004).

**San Diego barrel cactus (*Ferocactus viridescens*)**. San Diego barrel cactus is a covered species under the MSCP and has a CNPS Rare Plant Ranking of 2.1 (rare, threatened, or endangered in California, but more common elsewhere; seriously endangered in California) (City of San Diego 1997, CNPS 2012). This globular succulent

in the cactus family (Cactaceae) grows to one foot tall and flowers in May and June. It is found only in coastal San Diego County and Baja California, Mexico. Although found as far north as Oceanside coastally and Poway inland, the largest populations of San Diego barrel cactus occur in Otay Mesa and Otay Valley, Point Loma, and Marine Corps Air Station Miramar (Reiser 2001). This species occurs in sandy and rocky areas in coastal sage scrub and grassland habitats below 500 feet elevation (Hickman 1993; Munz 1974). It is the only barrel cactus found in coastal areas. Information regarding the occurrence of this species is from the CNDDDB (State of California 2012a) and PBS&J (2004).

**Spreading navarretia (*Navarretia fossalis*).** Spreading navarretia is federally listed as threatened (State of California 2012b). It has a CNPS Rare Plant Ranking of 1B.1 (rare, threatened, or endangered in California and elsewhere; seriously endangered in California) (CNPS 2012). This low-growing annual herb in the phlox family (Polemoniaceae) grows about five inches tall and flowers from April to June. Its range includes northwestern Los Angeles County, western Riverside County, coastal San Diego County, and northwestern Baja California (USFWS 1998); it is presumed extirpated from San Luis Obispo County (CNPS 2012). This species occurs in vernal pools and ditches below 4,300 feet (Hickman 1993). Numbers of prostrate navarretia increase during wet years, and this species is seldom noted in shallow vernal pools. Two other species of navarretia occur in similar habitats: *N. intertexta* has ovate, rather than linear, corolla lobes and *N. prostrata* is prostrate, with its bluish flowers almost buried in its basal leaves. Information regarding the occurrence of this species is from the CNDDDB (State of California 2012a), AECOM (2012), PBS&J (2004), and City of San Diego (2003).

**California Orcutt grass (*Orcuttia californica* var. *orcuttia*).** California Orcutt grass is a state and federally endangered species (State of California 2012b). It has a CNPS Rare Plant Ranking of 1B.1 (rare, threatened, or endangered in California and elsewhere; seriously endangered in California) (CNPS 2012). This prostrate, sticky, bright green annual grass (Poaceae family) grows about four inches tall and flowers in May and June (USFWS 1993). Populations are known from Ventura, Los Angeles, Riverside, and San Diego Counties, and Baja California. This species is known to occur within eight pool complexes in Otay Mesa. (AECOM 2012). California Orcutt grass grows in vernal pools below 2,100 feet elevation, preferring deeper pools (USFWS 1993). Information regarding the occurrence of this species is from the AECOM (2012), CNDDDB (State of California 2012a) and PBS&J (2004).

**Otay mesa mint (*Pogogyne nudiuscula*).** Otay mesa mint is state and federally listed as endangered (State of California 2012b). It has a CNPS Rare Plant Ranking of 1B.1 (rare, threatened, or endangered in California and elsewhere; seriously endangered in California) (City of San Diego 1997, CNPS 2012). This aromatic annual herb in the mint family (Lamiaceae) may grow one foot tall and produces bright purple flowers in May

and June (Munz 1974). Historical populations were believed to occur at 10 locations in San Diego County, including University Heights, Balboa Park, and Mission Valley. However, it was later determined that these populations were San Diego mesa mint. Currently, Otay mesa mint is known to occur in 398 vernal pools in seven vernal pool complexes in Otay Mesa (Cavallaro et al. 2012). Otay mesa mint occurs in vernal pools in grassland and chamise chaparral habitat with mima mound topography, usually on Stockpen gravelly clay loam soil. Otay mesa mint can be distinguished from the related San Diego mesa mint by its straighter, stouter stems, lack of hairs (generally) and wider (4 to 8 inches) inflorescence (Hickman 1993). Otay mesa mint is considered to be declining due to urbanization, livestock grazing, agricultural conversion, vehicles, invasive species, and trash dumping (CNPS 2012). Information regarding the occurrence of this species is from AECOM (2012), Alden (2012), PBS&J (2004), and City of San Diego (2003).

**Small-leaved rose (*Rosa minutifolia*).** Small-leaved rose is state listed as endangered (State of California 2012b). It is covered under the MSCP and has a CNPS Rare Plant Ranking of 2.1 (rare, threatened, or endangered in California, but more common elsewhere; seriously endangered in California) (City of San Diego 1997, CNPS 2012). This dense, thorny shrub in the rose family (Rosaceae) grows one to three feet tall and produces pinkish flowers from January to June (Hickman 1993, Wiggins 1980). Small-leaved rose is found in Baja California and San Diego County. Its range is mostly in Baja California, from near Ensenada south and east to Misión de San Fernando, with a single disjunct occurrence on Otay Mesa. These plants were removed to allow construction of a residential development and cuttings were taken and transplanted into a nearby reserve (Reiser 2001). The habitat of small-leaved rose is generally chaparral below 500 feet elevation (Hickman 1993) on mesas, hillsides and arroyos within a few miles of the coast (Wiggins 1980), but the United States population had been found on the edge of north-facing Diegan coastal sage scrub (Reiser 2001). Small-leaved rose can be distinguished from all other members of the genus *Rosa* by its leaflets, which are less than 0.4 inches long and have toothed edges that extend halfway to the leaflet base (Hickman 1993). Information regarding the occurrence of this species is from the CNDDDB (State of California 2012a).

### 3.3.2.2 Other Sensitive Species

**California adolphia (*Adolphia californica*).** California adolphia has a CNPS Rare Plant Ranking of 2.1 (rare, threatened, or endangered in California, but more common elsewhere; seriously endangered in California) (CNPS 2012). This small shrub in the buckthorn family (Rhamnaceae) flowers from December to April and loses its leaves in late summer and fall. Its spiny stems are identifiable at close range year-round, however. This species generally occurs in Diegan coastal sage scrub, near the edge of chaparral, particularly in dry canyons or washes. It is associated with San Miguel and Friant soils (Reiser 2001). Its range is limited to San Diego County and northern Baja

California, Mexico at elevations below 1,000 feet. In San Diego County, it is found from the Carlsbad area south into the Proctor Valley and the Otay area (Beauchamp 1986). Information regarding the occurrence of this species is from the CNDDDB (State of California 2012a) and PBS&J (2004).

**San Diego bur-sage (*Ambrosia chenopodiifolia*).** San Diego bur-sage has a CNPS Rare Plant Ranking of 2.1 (rare, threatened, or endangered in California, but more common elsewhere; seriously endangered in California) (CNPS 2012). This perennial shrub in the sunflower family (Asteraceae) has hairy grayish leaves and flowers from April to June. Its range is restricted to extreme southern San Diego County, near Otay Mesa, and northern Baja California, Mexico. It is generally found in dry, fairly open, Diegan coastal sage scrub vegetation below 600 feet elevation, where it often grows in association with low-growing California sagebrush and black sage (*Salvia mellifera*). It has been found on Olivenhain cobbly loam soil (Reiser 2001). Information regarding the occurrence of this species is from the Alden (2012), CNDDDB (State of California 2012a) and PBS&J (2004).

**South coast saltbush (*Atriplex pacifica*).** South coast saltbush has a CNPS Rare Plant Ranking of 1B.2 (rare, threatened, or endangered in California and elsewhere; fairly endangered in California) (CNPS 2012). This annual herb in the goosefoot family (Chenopodiaceae) flowers from March through October. Typically it is found in open Diegan coastal sage scrub dominated by California sagebrush and may occur in mildly disturbed areas (Reiser 2001). It ranges from Orange County to Sonora, Mexico, with known occurrences on San Clemente and Santa Catalina islands. Information regarding the occurrence of this species is from Reiser (2001).

**San Diego County viguiera (*Bahiopsis [=Viguiera] laciniata*).** San Diego County viguiera has a CNPS Rare Plant Ranking of 4.2 (uncommon in California; fairly endangered in California) (CNPS 2012). San Diego County viguiera is a shrub in the Composite Family (Asteraceae) that is restricted to San Diego County and northern Baja California and Sonora, Mexico. This shrub may reach five feet in height and flowers between February and June. It is a dominant shrub in coastal sage scrub in inland southern San Diego County, and is known from hundreds of locations. It may also occur in chaparral below 2,500 feet. Information regarding the occurrence of this species is from Alden (2012) and PBS&J (2004).

**Golden-spined cereus (*Bergerocactus emoryi*).** Golden-spined cereus has a CNPS Rare Plant Ranking of 2.2 (Rare, threatened, or endangered in California, but more common elsewhere; fairly endangered in California) (CNPS 2012). This low-growing cactus (Cactaceae) has cylindrical stems and flowers in May and June. Its distribution extends from San Clemente and Santa Catalina Islands into San Diego County and south to approximately El Rosario, Baja California, Mexico (Bensen 1969). In San Diego County it is limited to coastal sage and maritime succulent scrub habitats near the coast from Torrey Pines State Park south to the Mexican border (Beauchamp 1986).

Information regarding the occurrence of this species is from the CNDDDB (State of California 2012a).

**Cliff spurge (*Euphorbia misera*).** Cliff spurge has a CNPS Rare Plant Ranking of 2.2 (rare, threatened, or endangered in California, but more common elsewhere; fairly endangered in California) (CNPS 2012). Cliff spurge is a shrub in the spurge family (Euphorbiaceae) that grows to about three feet tall and may flower from December to August. It is found coastally from Orange County south to Baja California and in the Channel Islands, with a disjunct population in the Sonoran desert near Whitewater, Riverside County. It typically occurs in coastal bluff scrub or maritime succulent scrub below 1,700 feet (CNPS 2012). The largest populations in San Diego County are found on Point Loma and Otay Mesa, with occurrences as far north as Carlsbad (Reiser 2001). Soil series associated with this species include Olivenhain cobbly loam and Gaviota fine sandy loam (Reiser 2001). This spiny, low-growing shrub with brittle branches is readily recognizable year-round. Information regarding the occurrence of this species is from the Alden (2012), CNDDDB (State of California 2012a) and PBS&J (2004).

**Decumbent goldenbush (*Isocoma menzezii* var. *decumbens*).** Decumbent goldenbush has a CNPS Rare Plant Ranking of 1B.2 (rare, threatened, or endangered in California and elsewhere; fairly endangered in California) (CNPS 2012). This shrub is a member of the Asteraceae family that blooms from April through November. It ranges from Orange County to Baja California, Mexico, with known occurrences on San Clemente and Santa Catalina islands. Decumbent goldenbush occurs in chaparral and coastal scrub habitats, often preferring sandy substrate and disturbed areas at elevations from 30 to 400 feet AMSL. Information regarding the occurrence of this species is from PBS&J (2004) and Alden (2012).

**Little mousetail (*Myosurus minimus* ssp. *apus*).** Little mousetail has a CNPS Rare Plant Ranking of 3.1 (Needs review; seriously endangered in California) (CNPS 2012). This tiny annual in the crowfoot family (Ranunculaceae) grows about two inches tall and flowers in April and May. This plant ranges from Oregon to Baja California, with populations known from Riverside, San Bernardino and San Diego Counties in southern California (CNPS 2012). The general habitat for little mousetail is limited to vernal pools and grasslands on alkaline soils at elevations below 2,100 feet. In San Diego County, little mousetail grows in the deeper parts of vernal pools, sprouting immediately after the surface water has evaporated (Reiser 2001). Little mousetail is not considered a separate variety by the Jepson Manual (Hickman 1993), but is included together with *M. m.* var. *filiformis*, which had formerly been distinguished by its longer fruiting spikes, that extended beyond the leaves (Munz 1974). Both varieties occur in vernal pools in San Diego County, with little mousetail reported from the southern part of the County (National City, Proctor Valley, and Otay Mesa) and var. *filiformis* occurring from east San Diego, Kearny Mesa, Ramona, and Corte Madera (Beauchamp 1986). Information

regarding the occurrence of this species is from the CNDDDB (State of California 2012a) and PBS&J (2004).

**Nuttall's scrub oak (*Quercus dumosa*).** Nuttall's scrub oak has a CNPS Rare Plant Ranking of 1B.1 (Rare, threatened, or endangered in California and elsewhere; seriously endangered in California) (CNPS 2012). This evergreen shrub in the oak family (Fagaceae) grows less than ten feet tall and blooms from February to April. This species is found near the coast in Santa Barbara, Orange, and San Diego Counties, and in Baja California, Mexico at elevations below 1,300 feet. It grows in chaparral, coastal sage scrub, and closed-cone coniferous forest habitats (CNPS 2012), preferring coastal chaparral with a relatively open canopy in flat areas, but growing in dense stands on north-facing slopes (Reiser 2001). In San Diego County it is known to grow as far inland as Camp Elliot and Otay Mesa (Reiser 2001), being replaced by the similar scrub oak (*Q. berberidifolia*) in higher, drier locations (Hickman 1993). Nuttall's scrub oaks can be distinguished from the scrub oak, with which it may hybridize, by its acorn, which is less than 0.4 inch wide, moderately tuberculed, with a thin cup (Hickman 1993), and by its leaves, which tend to be smaller, spinier, and more undulated (Reiser 2001) and have densely matted gray hairs (Roberts 1995). Information regarding the occurrence of this species is from the CNDDDB (State of California 2012a).

### 3.3.3 Sensitive Wildlife Species

The sensitive species below are known from the CPU area based on information obtained from the literature review. Sources include, but are not limited to, the CNDDDB (State of California 2012a) and the Draft Year 4 Annual Report for Denney Canyon Vernal Pool, Coastal Sage Scrub, and Mule Fat Scrub Restoration and Preservation Plan (RECON 2004), along with other sources listed in Attachment 2. Precise locations of sensitive wildlife species would be identified through on-site reconnaissance in conjunction with future projects. Table 4 lists the sensitive wildlife known to occur in the CPU area.

#### 3.1.3.1 Sensitive Invertebrates

**Quino checkerspot butterfly (*Euphydryas editha quino*).** The Quino checkerspot butterfly is federally listed as endangered (State of California 2011a). The Quino checkerspot butterfly's historic range includes the coastal plain and inland valleys of southern California from the Santa Monica Mountains south to northern Baja California. Currently, the species is known from southern San Diego County and southwestern Riverside County. Quino checkerspot butterflies occur at several locations on Otay Mesa and Jacumba in San Diego and near Murrieta and Temecula and eastward to Hemet and Anza in Riverside (USFWS 1997a). The distribution of Quino checkerspot butterflies is primarily defined by the distribution of its principal host plant, dot-seed plantain (*Plantago erecta*). Female Quino checkerspot butterflies have also been



**TABLE 4**  
**SENSITIVE WILDLIFE SPECIES KNOWN TO OCCUR IN THE CPU AREA**

Species	Status	Habitat/Comments
<b>INVERTEBRATES</b>		
ANOSTRACANS – Fairy Shrimp (Nomenclature from Eriksen and Belk 1999)		
San Diego fairy shrimp <i>Branchinecta sandiegonensis</i>	FE, <sup>1</sup> , MSCP, *	Vernal pools.
Riverside fairy shrimp <i>Streptocephalus woottoni</i>	FE, <sup>1</sup> , MSCP, *	Vernal pools, generally with a minimum depth of 30 centimeters.
NYMPHALIDAE – Brush-footed butterflies (Nomenclature from Mattoni 1990 and Opler and Wright 1999)		
Quino checkerspot butterfly <i>Euphydryas editha quino</i>	FE	Open, dry areas in foothills, mesas, lake margins. Larval host plant <i>Plantago erecta</i> . Adult emergence mid-January through April.
<b>AMPHIBIANS</b> (Nomenclature from Crother 2001 and Crother et al. 2003)		
PELOBATIDAE – Spadefoot Toads		
Western spadefoot <i>Spea hammondi</i>	CSC, *	Vernal pools, floodplains, and alkali flats within areas of open vegetation.
<b>REPTILES</b> (Nomenclature from Crother 2001 and Crother et al. 2003)		
TEIIDAE – Whiptail Lizards		
Belding's orange-throated whiptail <i>Aspidoscelis [=Cnemidophorus] hyperythra beldingi</i>	CSC, MSCP, *	Chaparral, coastal sage scrub with coarse sandy soils and scattered brush.
SCINCIDAE – Skinks		
Coronado skink <i>Eumeces skiltonianus interparietalis</i>	CSC	Grasslands, open woodlands and forest, broken chaparral. Rocky habitats near streams.
IGUANIDAE – Iguanid lizards		
San Diego horned lizard <i>Phrynosoma coronatum</i> (San Diego/blainvillii population)	CSC, MSCP	Chaparral, coastal sage scrub with fine, loose soil. Partially dependent on harvester ants for forage.
CROTALIDAE – Rattlesnakes		
Red diamond rattlesnake <i>Crotalus ruber</i>	CSC	Desert scrub and riparian, coastal sage scrub, open chaparral, grassland, and agricultural fields.
COLUBRIDAE – Colubrid Snakes		
Two-striped gartersnake <i>Thamnophis hammondi</i>	CSC, *	Permanent freshwater streams with rocky bottoms. Mesic areas.

**TABLE 4**  
**SENSITIVE WILDLIFE SPECIES KNOWN TO OCCUR IN THE CPU AREA**  
**(continued)**

Species	Status	Habitat/Comments
<b>BIRDS</b> (Nomenclature from American Ornithologists' Union 1998 and 2005 and Unitt 2004)		
ARDEIDAE – Herons and Bitterns		
Great egret (rookery site) <i>Ardea alba egretta</i>	*	Lagoons, bays, estuaries. Ponds and lakes in the coastal lowland. Winter visitor, uncommon in summer.
Black-crowned night heron (rookery site) <i>Nycticorax nycticorax hoactli</i>	*	Lagoons, estuaries, bayshores, ponds, and lakes. Often roost in trees. Year-round visitor. Localized breeding.
ACCIPITRIDAE – Hawks, Kites, and Eagles		
White-tailed kite (nesting) <i>Elanus leucurus majusculus</i>	CFP	Nest in riparian woodland, oaks, sycamores. Forage in open, grassy areas. Year-round resident.
Northern harrier (nesting) <i>Circus cyaneus hudsonius</i>	CSC, MSCP, *	Coastal lowland, marshes, grassland, agricultural fields. Migrant and winter resident, rare summer resident.
Cooper's hawk (nesting) <i>Accipiter cooperi</i>	MSCP, *	Mature forest, open woodlands, wood edges, river groves. Parks and residential areas. Year-round resident.
Golden eagle (nesting and wintering) <i>Aquila chrysaetos</i>	CFP, BEPA, CSC, BCC, MSCP, *	Require vast foraging areas in grassland, broken chaparral, or sage scrub. Nest in cliffs and trees. Uncommon resident.
FALCONIDAE – Falcons and Caracaras		
Prairie falcon (nesting) <i>Falco mexicanus</i>	*	Grassland, agricultural fields, desert scrub. Uncommon migrant and winter visitor.
STRIGIDAE – Typical Owls		
Western burrowing owl (burrow sites) <i>Athene cunicularia hypugaea</i>	CSC, MSCP, BCC, *	Grassland, agricultural land, coastal dunes. Require rodent burrows. Resident of the coastal lowland and agricultural areas of Imperial County.
LANIIDAE – Shrikes		
Loggerhead shrike <i>Lanius ludovicianus</i>	CSC, BCC, *	Open foraging areas near scattered bushes and low trees; agriculture, desert wash/scrub, grassland. Fairly common resident.
VIREONIDAE - Vireos		
Least Bell's vireo (nesting) <i>Vireo bellii pusillus</i>	FE, SE, MSCP, BCC, *	Willow riparian woodlands. Migrant and summer resident.
ALAUDIDAE - Larks		
California horned lark <i>Eremophila alpestris actia</i>	*	Sandy shores, mesas, disturbed areas, grasslands, agricultural lands, sparse creosote bush scrub. Common breeding resident, abundant migrant and winter visitor.

**TABLE 4**  
**SENSITIVE WILDLIFE SPECIES KNOWN TO OCCUR IN THE CPU AREA**  
**(continued)**

Species	Status	Habitat/Comments
<b>TROGLODYTIDAE – Wrens</b>		
Coastal cactus wren <i>Campylorhynchus brunneicapillus</i>	CSC, MSCP, *	Maritime succulent scrub, coastal sage scrub and desert scrub with <i>Opuntia</i> thickets. Rare localized resident.
<b>SYLVIIDAE – Gnatcatchers</b>		
Coastal California gnatcatcher <i>Poliophtila californica californica</i>	FT, CSC, MSCP, *	Coastal sage scrub, maritime succulent scrub. Resident.
<b>PARULIDAE – Wood Warblers</b>		
Yellow-breasted chat (nesting) <i>Icteria virens auricollis</i>	CSC, *	Breeding restricted to dense riparian woodland. Localized summer resident.
<b>EMBERIZIDAE – Emberizids</b>		
Southern California rufous-crowned sparrow <i>Aimophila ruficeps canescens</i>	MSCP, *	Coastal sage scrub, chaparral, grassland; favors steep and rocky areas. Localized resident.
Grasshopper sparrow (nesting) <i>Ammodramus savannarum perpallidus</i>	*	Tall grass areas. Localized summer resident, rare in winter.
<b>MAMMALS (Nomenclature from Baker et al. 2003 and Hall 1981)</b>		
<b>LEPORIDAE – Rabbits and Hares</b>		
San Diego black-tailed jackrabbit <i>Lepus californicus bennettii</i>	CSC, *	Open areas of scrub, grasslands, agricultural fields.
<b>HETEROMYIDAE – Pocket Mice and Kangaroo Rats</b>		
Northwestern San Diego pocket mouse <i>Chaetodipus fallax fallax</i>	CSC, *	San Diego County west of mountains in sparse, disturbed coastal sage scrub or grasslands with sandy soils.
<b>CRICETIDAE – New World Mice and Rats</b>		
San Diego desert woodrat <i>Neotoma lepida intermedia</i>	CSC, *	Coastal sage scrub and chaparral.

<sup>1</sup>The City of San Diego relinquished federal coverage for the seven vernal pool species, including San Diego and Riverside fairy shrimp. The City of San Diego still retains State coverage for these seven vernal pool species.

**TABLE 4**  
**SENSITIVE WILDLIFE SPECIES KNOWN TO OCCUR IN THE CPU AREA**  
**(continued)**

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**STATUS CODES**

Listed/Proposed

- FE = Listed as endangered by the federal government  
FT = Listed as threatened by the federal government  
SE = Listed as endangered by the State of California

Other

- BCC = U.S. Fish and Wildlife Service Birds of Conservation Concern species  
BEPA = Bald and Golden Eagle Protection Act  
CFP = California fully protected species  
CSC = California Department of Fish and Game species of special concern  
MSCP = Multiple Species Conservation Program covered species  
\* = Taxa listed with an asterisk fall into one or more of the following categories:
- Taxa considered endangered or rare under Section 15380(d) of CEQA guidelines
  - Taxa that are biologically rare, very restricted in distribution, or declining throughout their range
  - Population(s) in California that may be peripheral to the major portion of a taxon's range, but which are threatened with extirpation within California
  - Taxa closely associated with a habitat that is declining in California at an alarming rate (e.g., wetlands, riparian, old growth forests, desert aquatic systems, native grasslands)

observed depositing eggs on woolly plantain (*Plantago patagonia*), white snapdragon (*Antirrhinum coulterianum*), and thread-leaved bird's beak (*Cordylanthus rigidus*) (USFWS 2002b). It is possible that members of the figwort family (Scrophulariaceae), including purple owl's clover (*Castilleja exserta*), are also used (Brown 1991; Mattoni et al. 1997). Threats to this species include habitat loss, fragmentation, and habitat type conversion. In April 2002, the USFWS designated critical habitat for the Quino checkerspot butterfly in portions of San Diego and Riverside Counties (USFWS 2002b). A portion of the designated critical habitat for the Quino checkerspot butterfly occurs within the CPU area (Figure 6). Information regarding the occurrence of this species is from the CNDDDB (State of California 2012a), Alden (2012), and RECON (2004).

**Riverside fairy shrimp.** The Riverside fairy shrimp is federally listed as endangered and is an MSCP covered species (City of San Diego 1997, State of California 2011a). This species occurs in vernal pools, pool-like ephemeral ponds, and human-modified depressions from Orange, San Diego, and western Riverside Counties south to into Baja California, Mexico, and has the most restricted range of any fairy shrimp found in California (USFWS 1993; Eng et al. 1990). They are known to occur within 215 vernal pools in 11 vernal pool complexes in Otay Mesa (AECOM 2012). Riverside fairy shrimp are typically found in pools that are greater than 30 centimeters deep. Riverside fairy shrimp can require over 21 days of inundation to emerge. The species hatches in 7 to 12 days and develops to the adult stage in 48 to 56 days, depending on water temperature. The primary threats to this species are habitat destruction and fragmentation, alterations of wetland hydrology, off-road activity, and grazing. Information regarding the occurrence of this species is from the CNDDDB (State of California 2012a), AECOM (2012), RECON (2004), Alden (2012), and PBS&J (2004).

**San Diego fairy shrimp.** The San Diego fairy shrimp is federally listed as endangered and is an MSCP covered species (City of San Diego 1997; State of California 2011a). This fairy shrimp occurs in limited populations in Santa Barbara and Orange Counties and in San Diego County from San Marcos and Ramona south to Otay Mesa and into northwestern Baja California, Mexico, at Valle de Las Palmas (USFWS 1997b). The majority of San Diego fairy shrimp populations are located San Diego County. San Diego fairy shrimp are known to occur within 512 vernal pools in Otay Mesa (AECOM 2012). San Diego fairy shrimp are restricted to vernal pools and prefer cool water temperatures. This species can also be found in ditches and road ruts that are located in degraded vernal pool habitat. Fairy shrimp remain dormant in cysts until pools fill during the rainy season. Nauplii emerge from cysts and develop into adults sometime between mid-December and early May (Eriksen and Belk 1999). Development takes between 10 to 20 days and is dependent on water temperature. Primary threats to this species are habitat destruction and fragmentation, alterations of wetland hydrology, off-road vehicle activity, and grazing (USFWS 1997b). Information regarding the occurrence of this species is from the CNDDDB (State of California 2012a), RECON (2004), Alden (2012), and PBS&J (2004).

### 3.1.3.2 Sensitive Amphibians

**Western spadefoot (*Spea hammondi*).** The western spadefoot is a CDFW species of special concern (State of California 2011b). This species ranges from central northern California through the Coast Ranges from San Francisco and south into Baja California, Mexico, at elevations from sea level to 4,500 feet (Stebbins 1985; Zeiner et al. 1988). Habitat for the western spadefoot includes lowlands, washes, floodplains of rivers, alluvial fans, alkali flats, temporary ponds, and vernal pools. Although this species is generally found in areas of open vegetation with sandy or gravelly soil (Stebbins 1985), it has been observed in vernal pools containing clay soils on Otay Mesa (RECON 2004). Surface activity can occur from October through April depending on rainfall, and oviposition occurs between late February and May (Jennings and Hayes 1994). The western spadefoot diet consists of crickets, butterflies, ants, flies, and earthworms (Morey and Gullin, as cited in Jennings and Hayes 1994). Decline in western spadefoot populations is primarily due to habitat loss and fragmentation and possibly pesticide use. Information regarding the occurrence of this species is from RECON (2004) and Alden (2012).

### 3.1.3.3 Sensitive Reptiles

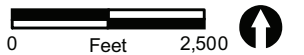
#### a. MSCP Covered Species

**Belding's orange-throated whiptail (*Aspidoscelis [=Cnemidophorus] hyperythrus beldingi*).** Belding's orange-throated whiptail is an MSCP covered species and a CDFW species of special concern (City of San Diego 1997, State of California 2011b). This lizard occurs from southwestern San Bernardino County south into Baja California at elevations from sea level to 3,500 feet. Belding's orange-throated whiptail frequents areas of open coastal sage scrub, chaparral, and streamside growth with loose sandy soils (Stebbins 1985). Belding's orange-throated whiptail typically hibernates during winter, emerging in February or March, but can be active year-round providing temperatures are warm (Jennings and Hayes 1994). Breeding occurs from May through July. Belding's orange-throated whiptails feed primarily on insects such as termites (*Reticulitermes* spp.). The decline of this species is attributed to the loss of coastal sage scrub in southern California. Information regarding the occurrence of this species is from the CNDDDB (State of California 2012a) and PBS&J (2004).

**San Diego horned lizard (*Phrynosoma coronatum blainvillii*).** The San Diego horned lizard is an MSCP covered species and a CDFW species of special concern (City of San Diego 1997, State of California 2011b). This lizard ranges from coastal southern California to the desert foothills and into Baja California. In San Diego County, it has a wide range but spotty distribution. It is often associated with coastal sage scrub, especially areas of level to gently sloping ground, with well-drained loose or sandy soil, but can also be found in annual grasslands, chaparral, oak woodland, riparian



- Otay Mesa Community Plan Boundary
- Not A Part
- USFWS Critical Habitat for the Quino Checkerspot Butterfly



**FIGURE 6**  
 Location of Designated Critical Habitat  
 for the Quino Checkerspot Butterfly  
 within the Otay Mesa Community Plan Boundary

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woodland, and coniferous forest (Mills 1991, Jennings and Hayes 1994). This animal usually avoids dense vegetation, preferring 20 to 40 percent bare ground in its habitat. Where it can be found, the San Diego horned lizard can be locally abundant, with densities up to 20 adults per acre. Adults are active from late March to late August; young are active from August to November or December. They are largely dependent upon native harvester ants (*Pogonomyrmex* spp.) for food. Populations along the coast and inland have been severely reduced by loss of habitat. Information regarding the occurrence of this species is from the CNDDB (State of California 2012a).

## **b. Other Sensitive Species**

**Coronado skink (*Eumeces skiltonianus interparietalis*).** The Coronado skink is a CDFW species of special concern (State of California 2011b). The Coronado skink ranges from central Riverside County south to Baja California, Mexico (Jennings and Hayes 1994). In San Diego County, the Coronado skink is found in a variety of plant communities including grassland, open woodland, forest, and broken chaparral habitats and is often associated with mesic areas. The Coronado skink is diurnal and most active from early spring until fall; breeding occurs in June or July (Zweifel 1952; Jennings and Hayes 1994). The diet of the Coronado skink consists of moths, beetles, crickets, grasshoppers, and leafhoppers. This species is threatened by habitat loss and fragmentation resulting from urbanization and agriculture. Information regarding the occurrence of this species is from RECON (2004).

**Two-striped garter snake (*Thamnophis hammondi*).** The two-striped garter snake is a CDFW species of special concern (State of California 2011b). The two-striped garter snake ranges from San Luis Obispo County south to El Rosario in Baja California, Mexico, from sea level to 8,000 feet (Jennings and Hayes 1994). They are normally found in or near permanent fresh water, inhabiting streams, ponds, and lakes throughout their range (Stebbins 1985) and can even be found in temporary bodies of water such as vernal pools. The two-striped garter snake inhabits riparian areas during summer months and occupies adjacent coastal sage scrub and grasslands during the winter (Jennings and Hayes 1994). The two-striped garter begins breeding in April and continues throughout the summer months. Adults feed on tadpoles, toads, insect larvae, fish, fish eggs, and earthworms. Population declines in the two-striped garter snake are generally attributable to impacts related to the loss of natural wetlands and increased development near and in suitable habitat. Information regarding the occurrence of this species is from RECON (2004).

**Red diamond rattlesnake (*Crotalus ruber*).** The red diamond rattlesnake is a CDFW species of special concern (State of California 2011b). This species occurs on both sides of the Peninsular Ranges of southwestern California from San Bernardino County south to Baja California, Mexico. Red diamond rattlesnakes inhabit coastal sage scrub, desert scrub, open chaparral, woodland, and grassland habitats, with a preference for rock outcrops as well as agricultural fields from sea level to 4,000 feet (Stebbins 1985).

Red diamond rattlesnakes are active year-round with peak activity occurring in April and May (Jennings and Hayes 1994). Breeding occurs from February through September. Their diet consists principally of small mammals, lizards, birds, and other snakes. Population declines of the red diamond rattlesnake are generally attributable to a reduction of habitat in the snake's restricted range due to urbanization and agriculture. Information regarding the occurrence of this species is from RECON (2004).

### 3.1.3.4 Sensitive Birds

#### a. Listed and MSCP Covered Species

**Cooper's hawk (*Accipiter cooperi*).** The Cooper's hawk is an MSCP covered species (City of San Diego 1997). Cooper's hawk nesting sites are considered sensitive by CDFW (CDFW 1991). The Cooper's hawk ranges year-round throughout most of the United States; its wintering range extends south to Central America and its breeding range extends north to southern Canada (Rosenfeld and Bielefeldt 1993). It is considered an uncommon resident during the breeding season in southern California, with numbers increasing in winter (Garrett and Dunn 1981). This hawk mainly breeds in oak and willow riparian woodlands but will also use eucalyptus trees. Breeding occurs from March to July. This hawk forages primarily on medium-sized birds but is also known to eat small mammals such as chipmunks and other rodents (Rosenfeld and Bielefeldt 1993). Urbanization and loss of habitat have caused the decline of this species. Information regarding the occurrence of this species is from RECON (2004), PBS&J (2004), and Alden (2012).

**Golden eagle (*Aquila chrysaetos*).** The golden eagle is a federally protected species under the Bald and Golden Eagle Protection Act, a State of California fully protected species, and an MSCP covered species (City of San Diego 1997, State of California 2011b). This eagle occurs throughout the United States and is an uncommon resident in San Diego County. Golden eagles forage over large areas of grassland and open chaparral or sage scrub where they primarily prey upon rabbits and ground squirrels. The nesting population in San Diego County is concentrated in the foothill zone and coastal lowlands. Golden eagles nest on cliffs or in large trees. Several golden eagle territories in the coastal lowland have been eliminated by urbanization, agricultural development, and other human disturbances (Unitt 2004). Information regarding the occurrence of this species is from RECON (2004) and PBS&J (2004).

**Western burrowing owl (*Athene cunicularia hypugaea*).** The western burrowing owl is a CDFW species of special concern and an MSCP covered species (City of San Diego 1997, State of California 2011b). The western burrowing owl is primarily restricted to the western United States and Mexico. Breeding burrowing owls remain in only five areas in San Diego County. The largest population of breeding burrowing owls occurs

on Otay Mesa, with the greatest concentration near the mesa's east end near the base of Otay Mountain (Unitt 2004).

Habitat for the western burrowing owl includes dry, open, short-grass areas often associated with burrowing mammals (Haug et al. 1993). A year-round resident in San Diego County, the burrowing owl ranges throughout the coastal lowlands in grasslands, agricultural areas, and coastal dunes (Unitt 2004). The grasslands in the Otay Mesa area are important to the survival and maintenance of the burrowing owl population in southern of San Diego County.

The burrowing owl is nocturnal and perches during daylight at the entrance to its burrow or on low posts. Nesting occurs from March through August. Burrowing owls form a pair-bond for more than one year and exhibit high site fidelity, reusing the same burrow year after year (Haug et al. 1993). The female remains inside the burrow during most of the egg laying and incubation period and is fed by the male throughout brooding. When disturbed within their burrows, burrowing owls mimic the sound of a rattlesnake rattling (Ehrlich et al. 1988). Western burrowing owls are opportunistic feeders, consuming a diet that includes arthropods, small mammals, and birds, and occasionally amphibians and reptiles (Haug et al. 1993). Urbanization has greatly reduced the amount of suitable habitat for this species. Other contributions to the decline of this species include the poisoning of squirrels and prairie dogs and collisions with automobiles. Information regarding the occurrence of this species is from the CNDDB (State of California 2012a), City of San Diego (2011a), RECON (2004), PBS&J (2004), and Alden (2012).

**Coastal cactus wren (*Campylorhynchus brunneicapillus couesi*).** The coastal cactus wren is a CDFW species of concern and an MSCP covered species (City of San Diego 1997, State of California 2011b). This species ranges from southern Orange County through San Diego County into extreme northwestern Baja California (Proudfoot et al. 2000). Year-round residents, coastal cactus wrens inhabit coastal lowlands containing thickets of cholla and prickly pear cactus in coastal sage and maritime succulent scrub (Unitt 2004). Coastal cactus wrens build their nests in the cactus and males often build secondary nests, used for roosting by adults and fledglings and nesting for subsequent broods (Proudfoot et al. 2000). Nesting occurs from March through July; fledglings remain in the nest until September. Their diet consists mainly of grasshoppers, beetles, ants, wasps, butterflies, moths, spiders, and occasionally vegetation, reptiles, and amphibians (Proudfoot et al. 2000). The primary cause for the decline of this species is degradation and loss of breeding habitat loss due to urbanization. Information regarding the occurrence of this species is from the CNDDB (State of California 2012a) and PBS&J (2004).

**Northern harrier (*Circus cyaneus hudsonius*).** The northern harrier is a CDFW species of special concern and an MSCP covered species (City of San Diego 1997, State of California 2011b). In addition, their nesting sites are considered sensitive by CDFW. Northern harriers winter throughout most of North America from southern

Canada to Central America and the Caribbean Islands (MacWhirter and Bildstein 1996). Their breeding range extends from Canada and Alaska to the northwestern United States, with some year-round residents in coastal California and northern Baja California. In San Diego County, the northern harrier is a fairly common migrant in the winter and a rare summer breeder (Unitt 2004). The northern harrier most commonly nests on the ground at the edge of marshes but will also nest on grasslands, in fields, or in areas of sparse shrubs (MacWhirter and Bildstein 1996). The northern harrier hovers close to the ground while foraging in grasslands, agricultural fields, and coastal marshes. Their diet consists of small- and medium-sized rodents, birds, reptiles, and frogs. The range of this species has been reduced due to urbanization and agricultural development. Information regarding the occurrence of this species is from RECON (2004), PBS&J (2004), and Alden (2012).

**Coastal California gnatcatcher (*Polioptila californica californica*).** The coastal California gnatcatcher is federally listed as threatened, a CDFW species of special concern, and an MSCP covered species (City of San Diego 1997; State of California 2011a). The coastal California gnatcatcher is a nonmigratory, resident species found on the coastal slopes of southern California, ranging from Ventura County southward through Los Angeles, Orange, Riverside, and San Diego Counties into Baja California, Mexico (Atwood and Bontrager 2001). Coastal California gnatcatchers typically occur in or near sage scrub habitat, although chaparral, grassland, and riparian woodland habitats are used where they occur adjacent to sage scrub. Breeding occurs from February through August, and nests are constructed most often in California sagebrush. The coastal California gnatcatcher diet consists mainly of sessile small arthropods, such as leafhoppers, spiders, beetles, and true bugs (Atwood and Bontrager 2001). The primary cause of decline in the coastal California gnatcatcher is due to habitat loss and degradation. Information regarding the occurrence of this species is from the CNDDDB (State of California 2012a), RECON (2004), PBS&J (2004), and Alden (2012).

**Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*).** The southern California rufous-crowned sparrow is an MSCP covered species (City of San Diego 1997). This subspecies of rufous-crowned sparrow is a resident and ranges throughout southern California from Los Angeles County to Baja California, Mexico (Collins 1999). Southern California rufous-crowned sparrows are found in chaparral and coastal sage scrub habitats and occasionally in grasslands adjacent to these habitats. The species exhibits a strong preference for moderate to steep, dry, rocky slopes interspersed with grasses and rock outcrops (Unitt 2004; Collins 1999). Breeding occurs from March through June and pair bonds are formed that may last year-round (Collins 1999). Their diet consists primarily of seeds, stems, and shoots and extends to insects during spring and summer months (Wolf 1977). Urbanization, range restrictions, and loss of habitat have decreased the amount of suitable habitat for southern California rufous-crowned sparrows. Information regarding the occurrence of this species is from RECON (2004), PBS&J (2004), and Alden (2012).

**Least Bell's vireo (*Vireo bellii pusillus*).** The least Bell's vireo is federally and state listed as endangered and is an MSCP covered species (City of San Diego 1997; State of California 2011a). Its historical breeding range once extended from northwestern Baja California, Mexico, to interior northern California, as far north as Red Bluff in Tehama County, California (Franzreb 1989). Its current distribution is now restricted to eight southern counties, the majority occurring in San Diego County (USFWS 1998). Least Bell's vireo winters in Mexico and breeds in southern California and northern Baja California, Mexico. The species is exclusively found in riparian habitats, including cottonwood-willow woodlands and forests, oak woodlands, and mule fat scrub, and requires dense cover for nesting (USFWS 1998). Least Bell's vireo arrives at the breeding grounds in mid-March and remains until September or October. Their diet consists primarily of insects and spiders and some fruit (Brown 1993). Populations of least Bell's vireo have declined drastically due to extensive loss of riparian habitat to agricultural and urban development, including channelization and mining of streams, and nest parasitism by brown-headed cowbirds (*Molothrus ater*). However, the population has increased as a result of extensive brown-headed cowbird trapping programs. This species occur just north of the Otay Mesa Community CPU area (State of California 2012a). Information regarding the occurrence of this species is from the CNDDB (State of California 2012a).

#### **b. Other Sensitive Species**

**Great egret (*Ardea alba egretta*).** Great egret rookery sites are considered sensitive by CDFW (State of California 2011b). Distributed throughout the U.S. and Mexico, the great egret is usually found near seashores, streams, ponds, salt- and freshwater marshes, mudflats, and swamps. This species is a common breeding resident at the Salton Sea and the Colorado River. Great egrets nest in colonies with other herons, ibises, and cormorants, or singly. Nests consist of a frail platform of sticks, twigs, and reeds, placed in a tree or shrub 8 to 40 feet above the ground or in cattails 1 to 4 feet above water. The great egret forages in shallow water for small fish and amphibians and also on land for insects, reptiles, and small mammals. They may feed solitarily or in large groups when food is concentrated. Great egret populations were decimated by plume hunters in the late 1800s and by DDT during the 1950s and 1960s. Clutch and brood sizes have increased since the 1972 ban in DDT, and the population is expanding (Stokes and Stokes 1996). Information regarding the occurrence of this species is from PBS&J (2004).

**Black-crowned night heron (*Nycticorax nycticorax*).** Black-crowned night heron nesting colonies are considered sensitive by CDFW (State of California 2011b). Black-crowned night herons have an extremely large range, occurring on all continents except Australia and Antarctica. Black-crowned night herons are historically common in fresh, brackish, and saltwater habitats throughout San Diego County and are known to nest at Naval Base Point Loma. Breeding typically occurs between January and June. Their diet

includes a variety of food sources from leeches and earthworms to insects, fish, crustaceans, amphibians, and reptiles (Davis 1993). Threats to the black-crowned heron include loss of foraging and nesting habitat. Information regarding the occurrence of this species is from PBS&J (2004).

**White-tailed kite (*Elanus leucurus*).** The white-tailed kite is a California fully protected species (State of California 2011b). This raptor occurs in coastal lowland areas from Oregon to northern Baja California, Mexico (National Geographic Society 1983). Nesting sites of white-tailed kites are considered sensitive. This resident bird nests in riparian woodlands, oaks, or sycamore groves that border grassland or open fields (Unitt 2004). The white-tailed kite forages over open areas and grasslands feeding primarily on small rodents and insects (National Geographic Society 1983). This species is known to roost in large communal groups (Unitt 2004). White-tailed kite populations in southern California have declined due to the loss of nesting and foraging habitat. Information regarding the occurrence of this species is from RECON (2004) and PBS&J (2004).

**Prairie falcon (*Falco mexicanus*).** The prairie falcon has no official resource agency status but is on the CDFW watch list and is a USFWS bird of conservation concern. This falcon ranges from the southeastern deserts northwest along the inner Coast Ranges and Sierra Nevada. The prairie falcon is both a permanent resident and occasional migrant in San Diego County. The bird is associated primarily with perennial grasslands, savannahs, rangeland, agricultural fields, and desert scrub areas but has also been observed using annual grasslands and alpine meadows. This species nests on cliff ledges and occasionally in rock crevices. Threats to prairie falcon populations in California include increased pesticide use, falconry, and outdoor recreational activities (Zeiner et al. 1990). Information regarding the occurrence of this species is from PBS&J (2004) and Alden (2012).

**California horned lark (*Eremophila alpestris actia*).** The California horned lark has no official resource agency status but is on the CDFW watch list (State of California 2011b). Its range is limited to the coastal slopes of California from Sonoma County to San Diego County and includes most of the San Joaquin Valley at elevations for sea level to 8,500 feet and can occur as high as 11,500 feet in the San Bernardino Mountains (Small 1994). In San Diego County, the California horned lark typically inhabits areas with sparse vegetation, including sandy shores, grasslands, mesas, and agricultural lands. Breeding occurs during the months of March through July with peak activity occurring in May. California horned larks forage by walking and running on the ground, from a diet of spiders, insects and insect larvae, snails, buds, berries, waste grains, and seeds from grasses, weeds, and forbs (Green 1990). Horned larks usually forage in flocks except during nesting. Decline of this species is generally attributed to loss of habitat, urbanization, and human disturbance. Information regarding the occurrence of this species is from the City of San Diego (2011a) and PBS&J (2004).

**Loggerhead shrike (*Lanius ludovicianus*).** The loggerhead shrike is a CDFW species of special concern and USFWS bird of conservation concern (State of California 2011b). This species inhabits most of the continental United States and Mexico and is a year-round resident of southern California. The loggerhead shrike prefers open habitat with perches for hunting and fairly dense shrubs for nesting (Yosef 1996). In southern California, loggerhead shrikes inhabit grasslands, agricultural fields, chaparral, and desert scrub (Unitt 2004). Loggerhead shrikes are highly territorial and usually live in pairs in permanent territories (Yosef 1996). Loggerhead shrikes feed on small reptiles, mammals, amphibians, and insects that they often impale on sticks or thorns before eating. Loggerhead shrike populations are declining, likely due to urbanization and loss of habitat and, to a lesser degree, pesticide use (Yosef 1996). Information regarding the occurrence of this species is from RECON (2004) and PBS&J (2004).

**Yellow-breasted chat (*Icteria virens*).** The yellow-breasted chat is a CDFW species of special concern (State of California 2011b). Yellow-breasted chat breeding range extends from southern California south to central Mexico, including most of the United States (Eckerle and Thompson 2001). Breeding occurs in dense brush or scrub, usually along streams or marshy areas with dense riparian woodlands. Yellow-breasted chats arrive in California to breed during April or May. Their diet consists mainly of insects and berries (Eckerle and Thompson 2001). Destruction of riparian woodlands by development and other human activities has caused population declines and it is possible that brown-headed cowbird parasitism may also have contributed to the decline of the species. Information regarding the occurrence of this species is from PBS&J (2004).

**Grasshopper sparrow (*Ammodramus savannarum*).** The grasshopper sparrow has no official resource agency status but is considered locally sensitive. Grasshopper sparrows are a localized summer resident in San Diego County and very rare in winter (Unitt 2004). This species has a patchy distribution within grasslands along coastal California and the foothills of the Sierra Nevada. This species breeds in grasslands, cultivated fields, and prairies and has two broods per year. Its diet consists of invertebrates and the seeds of grass and forbs. Threats to this species include predation and habitat loss and modification (Ehrlich et al. 1988). Information regarding the occurrence of this species is from PBS&J (2004) and Alden (2012).

### **3.1.3.5 Sensitive Mammals**

**Northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*).** The northwestern San Diego pocket mouse is a California species of special concern (State of California 2011b). It ranges from Los Angeles County and extreme southern San Bernardino County southward into west-central Baja California, Mexico (Hall 1981). In San Diego County, the northwestern San Diego pocket mouse is known from Del Mar, Dulzura, Jacumba, Lake Hodges, Pala, San Diego, and San Marcos (Bond 1977).

Habitat for this species is most often sparse or disturbed coastal sage scrub or grasslands with sandy soils. Breeding occurs from March to May. The northwestern San Diego pocket mouse diet consists of seeds from forbs, shrubs, and grasses (Brylski 1983). Threats to this species include degradation of habitat and loss of habitat from development. Information regarding the occurrence of this species is from the CNDDDB (State of California 2012a).

**San Diego desert woodrat (*Neotoma lepida intermedia*).** The San Diego desert woodrat is a CDFW species of special concern (State of California 2011b). Its range extends through coastal areas from San Luis Obispo well into Baja California, inland to the San Bernardino Mountains and Julian (Hall 1981). The San Diego desert woodrat occurs west of the mountains in San Diego County within chaparral areas with a preference for rock outcrops (Bond 1977). The middens (nests) of this species can be occupied by multiple generations and have been documented as old as 200 to 400 years of age. The desert woodrat is adept at moving among spiny cactuses without injury. Its diet is composed of spiny cacti along with yucca pods, bark, berries, seeds, and any available green vegetation (Whitaker 1997). Threats to this species include habitat degradation and loss of habitat. Information regarding the occurrence of this species is from the CNDDDB (State of California 2012a) and RECON (2004).

**San Diego black-tailed jackrabbit (*Lepus californicus bennettii*).** The San Diego black-tailed jackrabbit is a CDFW species of special concern (State of California 2011b). It ranges from near Mt. Pinos (at the Kern-Ventura county line) southward and west of the Peninsular Range into Baja California (Hall 1981). This species can be found throughout southern California, with the exception of the high-altitude mountains. It occupies open or semi-open habitats (such as coastal sage scrub and open chaparral areas). Forested and thick chaparral regions are not suitable (Bond 1977). The San Diego black-tailed jackrabbit breeds throughout the year, with the greatest number of births occurring from April through May. The black-tailed jackrabbit is strictly herbivorous, preferring habitat with ample forage such as grasses and forbs. Declines in San Diego black-tailed jackrabbit populations are due to a decline in suitable habitat as a result of urban development. Information regarding the occurrence of this species is from RECON (2004), PBS&J (2004), and the CNDDDB (State of California 2012a).

### **3.4 Jurisdictional Waters/Wetlands**

Agencies with jurisdictional authority over wetlands and other jurisdictional water resources include USFWS, USACE, CDFW, RWQCB, and the City of San Diego.

There are approximately 55 acres of the CPU area that have been mapped as a wetland or water resource (e.g., riparian, vernal pool, basin with fairy shrimp, mule fat scrub, freshwater marsh, and alkali seep). An assessment of wetland (e.g., protocol wetland



delineation) and water resources would need to be made at the project-specific level for all subsequent development proposals, in order to identify any potential wetlands and other jurisdictional waters. If warranted, a formal wetland delineation would need to be conducted to identify the precise boundaries of these resources to determine the extent of the existing waters/wetlands and to accurately determine if any impacts would occur from any proposed future project.

### **3.4.1 U.S. Army Corps of Engineers**

As stated in the federal regulations for the Clean Water Act, wetlands are defined as:

those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions (EPA, 40 CFR 230.3 and CE, 33 CFR 328.3).

Wetlands are delineated using three parameters: hydrophytic vegetation, wetland hydrology, and hydric soils. According to USACE, indicators for all three parameters must be present to qualify an area as a wetland.

In accordance with Section 404 of the Clean Water Act, USACE regulates the discharge of dredged or fill material into waters of the U.S. The term “waters of the United States” is defined as:

- All waters currently used, or used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters subject to the ebb and flow of the tide;
- All interstate waters including interstate wetlands;
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds; the use, degradation, or destruction of which could affect foreign commerce including any such waters: (1) which could be used by interstate or foreign travelers for recreational or other purposes; or (2) from which fish or shellfish are, or could be taken and sold in interstate or foreign commerce; or (3) which are used or could be used for industries in interstate commerce.;
- All other impoundments of waters otherwise as defined as waters of the United States under the definition;
- Tributaries of waters identified above;
- The territorial seas; and

- Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in the paragraphs above [33 CFR Part 328.3(a)].

USACE also requires the delineation of non-wetland jurisdictional waters. These waters must have strong hydrology indicators such as the presence of seasonal flows and an ordinary high watermark. An ordinary high watermark is defined as:

. . . that line on the shore established by the fluctuations of water and indicated by physical characteristics such as [a] clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas (33 CFR Part 328.3).

Areas delineated as non-wetland jurisdictional waters may lack wetland vegetation or hydric soil characteristics. Hydric soil indicators may be missing, because topographic position precludes ponding and subsequent development of hydric soils. Absence of wetland vegetation can result from frequent scouring due to rapid water flow. These types of jurisdictional waters are delineated by the lateral and upstream/downstream extent of the ordinary high watermark of the particular drainage or depression.

### **3.4.2 U.S. Fish and Wildlife Service**

Under section 7 and 10 of the Endangered Species Act, USFWS has regulatory authority over federally listed endangered or threatened plant and animal species. Specifically, section 7 requires agencies to ensure that their activities are not likely to jeopardize the continued existence of listed species or impact designated critical habitats through consultation with the Service. Under Section 7, the USFWS issues a Biological Opinion that serves as the incidental take permit (ITP) associated with a 404 permit authorized by the USACE. Under section 10(a)1(A), the USFWS requires the preparation of an HCP which accompanies the ITP to ensure that the authorized take is adequately mitigated and minimized. Therefore, impacts to any of the seven federally listed vernal pool species must be approved by USFWS, in addition to any other applicable Wildlife Agencies. A draft vernal pool HCP is currently being prepared by the City in coordination with the Wildlife Agencies. If adopted, the City would have “take” authority for the vernal pool species occurring within the HCP areas.

### **3.4.3 California Department of Fish and Wildlife**

Under sections 1600–1607 of the Fish and Wildlife Code, CDFW regulates activities that would divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. CDFW has jurisdiction over riparian habitats (e.g., riparian scrub) associated with watercourses. Jurisdictional

waters are delineated by the outer edge of riparian vegetation or at the top of the bank of streams or lakes, whichever is wider.

### **3.4.4 RWQCB Jurisdiction**

RWQCB is the regional agency responsible for protecting water quality in California. The jurisdiction of this agency includes all waters of the state and all waters of the United States as mandated by both the federal Clean Water Act and the California Porter-Cologne Water Quality Control Act. State waters are all waters that meet one of three criteria (hydrology, hydric soils, or wetland vegetation), and generally include but are not limited to, all waters under the jurisdiction of USACE and CDFW.

### **3.4.5 City of San Diego**

According to the City of San Diego's Municipal Code (City of San Diego 2012), wetlands are areas which are characterized by any of the following conditions: (1) all areas persistently or periodically containing naturally occurring wetland vegetation communities characteristically dominated by hydrophytic vegetation; (2) areas that have hydric soils or wetland hydrology and lack naturally occurring wetland vegetation communities because human activities have removed the historic wetland vegetation; and (3) areas lacking wetland vegetation communities, hydric soils, and wetland hydrology due to non-permitted filling of previously existing wetlands.

## **3.5 Wildlife Movement Corridors**

Habitat linkages and wildlife corridors are defined as areas that connect suitable wildlife habitat areas in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. Natural features such as canyon drainages, ridgelines, or areas with vegetation cover provide corridors for wildlife travel. Habitat linkages and wildlife corridors are important because they provide access to mates, food, and water; allow the dispersal of individuals away from high population density areas; and facilitate the exchange of genetic traits between populations. Wildlife movement corridors are considered sensitive by the City of San Diego and resource and conservation agencies.

Within the CPU area, Dennery and Spring Canyons, connected by the Otay Mesa Road culvert and State Route 905 wildlife crossing, function as the primary north-south wildlife movement corridor in western Otay Mesa. Moody Canyon is connected to the eastern side of Spring Canyon and provides east-west wildlife movement within the CPU area. Dennery Canyon connects to the Otay River Valley along the northern boundary of the CPU area. The Otay River Valley provides a major movement corridor for east-west wildlife movement north of the CPU area and provides connectivity to a larger expanse of open space.

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## 4.0 Regulatory Framework

### 4.1 Multiple Species Conservation Program

The MSCP is a comprehensive, habitat conservation planning program for San Diego County. A goal of the MSCP is to preserve a network of habitat and open space, thereby protecting biodiversity. Local jurisdictions, including the City of San Diego, implement their portions of the MSCP through subarea plans, which describe specific implementing mechanisms.

The City of San Diego's MSCP Subarea Plan was approved in March 1997. The MSCP Subarea Plan is a plan and process for the issuance of permits under the federal and state Endangered Species Act and the California Natural Communities Conservation Planning Act of 1991. The primary goal of the MSCP Subarea Plan is to conserve viable populations of sensitive species and to conserve regional biodiversity while allowing for reasonable economic growth.

In July 1997, the City of San Diego signed an Implementing Agreement (IA) with USFWS and CDFW. The IA serves as a binding contract between the City, USFWS, and CDFW that identifies the roles and responsibilities of the parties to implement the MSCP and subarea plan. The agreement became effective on July 17, 1997, and allows the City to issue Incidental Take Authorizations under the provisions of the MSCP. Applicable state and federal permits are still required for wetlands and listed species that are not covered by the MSCP.

#### 4.1.1 Vernal Pool Lawsuit

Under the Federal Endangered Species Act (FESA), an ITP is required when non-federal activities would result in "take" of a threatened or endangered species. An ITP can be issued as a Biological Opinion under FESA Section 7 in conjunction with a 404 permit or under Section 10(A) which requires that a Habitat Conservation Plan (HCP) accompany any applications for a federal ITP. Take authorization for federally listed species covered in the HCP shall generally be effective upon approval of the HCP.

In October of 2006, Judge Brewster issued a Decision and Injunction [Case no. 98-CV-2234-B(JMA)] in a lawsuit filed by the Southwest Center for Biological Diversity against the USFWS over the issuance of an ITP under Section 10 of the ESA to the City of San Diego based upon the MSCP. The lawsuit was limited to the seven vernal pool species including two crustacean species, San Diego fairy shrimp (*Branchinecta sandiegonensis*) and Riverside fairy shrimp (*Streptocephalus wootoni*), and five plant

species: Otay mesa mint, California Orcutt grass, San Diego button celery, San Diego mesa mint (*Pogogyne abramsii*), and spreading navarretia.

The Court enjoined the City of San Diego's ITP for all pending and future development projects where "take" of any of the seven vernal pool species may occur, including:

- Pending applications for development of land containing vernal pool habitat.
- Projects where the City has granted permits, but development had not yet occurred.
- Future development where the permittee was engaged in the destruction of vernal pool habitat.

As a result of this ruling, numerous private and public development projects which contained vernal pool resources within their project site were enjoined. The Court determined that the City and USFWS were not providing adequate coverage under the MSCP for vernal pool species. The following are the main inadequacies identified in the ruling:

- Mitigation was not beneficial and could not be modified for the life of the permit.
- Creation of vernal pools was not always feasible due to site conditions and the difficulty with creating the proper conditions to support vernal pool flora and fauna.
- Measures to determine impact allowance was arbitrary and did not provide the same level of protection for "unnatural" vernal pools.
- Funding was speculative.

All parties entered into mediation in 2007 which continued through 2009, when it ended in an impasse. During the mediation, it was determined that a Vernal Pool HCP should be prepared for the comprehensive protection of vernal pool resources. The City was awarded an Endangered Species Act Section 6 grant in 2009 for the preparation of a vernal pool HCP. In April 2010, the City entered into a Planning Agreement with the USFWS for the preparation of the vernal pool HCP. A draft vernal pool HCP is currently being prepared by the City in coordination with the Wildlife Agencies.

In April 2010, the City also relinquished federal coverage of the seven vernal pool species. In 2011, Judge Brewster vacated the 2006 ruling since the relevant portions (i.e., vernal pool species) of the City's ITP were no longer in effect. This partial relinquishment and cancellation of the ITP only applies to coverage of the seven vernal pool species; the remainder of the City's MSCP ITP was not affected. The City is still responsible for the management of vernal pool resources, including the seven vernal pool species, owned and/or conserved through the City's permitting process. State coverage of the seven vernal pool species remains in effect.

As of the date of surrender, April 20, 2010, the City has relinquished coverage and does not rely on the City's federal ITP to authorize an incidental take of the two vernal pool animal species and five vernal pool plant species. Upon completion of a HCP for vernal pools, the City would enter into an IA in order to obtain species coverage and a federal ITP for the seven vernal pool species under Section 10(A). Incidental take authorization for projects that affect the seven vernal pool species could also be authorized through a FESA Section 10(A) or through a Section 7 consultation with the USFWS, initiated as part of the 404 permit process by the USACE. A Biological Opinion is issued that serves as the ITP.

## **4.1.2 Multi-Habitat Planning Area**

The Multi-Habitat Planning Area (MHPA) is the area within which the permanent MSCP preserve will be assembled and managed for its biological resources. Input from responsible agencies and other interested participants resulted in adoption of the City's MHPA in 1997. The City's MHPA areas are defined by "hard-line" limits, "with limited development permitted based on the development area allowance of the OR-1-2 zone [open space residential zone]" (City of San Diego 1997).

The MHPA consists of public and private lands, much of which has been conserved. Conserved lands shown on the SanGIS database (SanGIS 2013; Figure 7) include lands that have been set aside for mitigation or purchased for conservation. These lands may be owned by the City or other agencies, may have easements, may be dedicated, or may have some restrictions placed upon the property through the City's processes that protects the overall quality of the resources and prohibits development.

Private land within the MHPA is allowed only up to 25 percent development in the least sensitive area per the City's MSCP Subarea Plan. Should more than 25 percent development be desired, an MHPA boundary line adjustment may be proposed. The City's MSCP Subarea Plan states that adjustments to the MHPA boundary line are permitted without the need to amend the City's Subarea Plan, provided the boundary adjustment results in an area of equivalent or higher biological value. To meet this standard, the area proposed for addition to the MHPA must meet the six functional equivalency criteria set forth in Section 5.4.2 of the Final MSCP Plan (City of San Diego 1998). All MHPA boundary line adjustments require approval by the Wildlife Agencies and approval from a City discretionary hearing body.

A MHPA Boundary Line Correction was approved by the City and Wildlife Agencies on March 13, 2013. The boundary line correction included a mapping registration error associated with the International Business Center Project (EQD 86-0535), which was approved in the late 1980s. The existing MHPA was shifted to exclude 3.7 acres of approved development and to add 10.8 acres of existing conserved area within Wruck Canyon, as shown on Figure 8. The correction resulted in a net gain of 7.1 acres within

the MHPA and was consistent with the approved project, which required that 27 acres of open space within Wruck Canyon be preserved.

For parcels located outside the MHPA, “there is no limit on the encroachment into sensitive biological resources, with the exception of wetlands, and listed non-covered species’ habitat (which are regulated by state and federal agencies) and narrow endemic species.” However, “impacts to sensitive biological resources must be assessed and mitigation, where necessary, must be provided in conformance” with the City’s Biological Guidelines (City of San Diego 2012).

The MSCP includes management priorities to be undertaken by the City as part of its MSCP implementation requirements. Those actions identified as Priority 1 are required to be implemented by the City as a condition of the MSCP Take Authorization to ensure that covered species are adequately protected. The actions identified as Priority 2 may be undertaken by the City as resources permit.

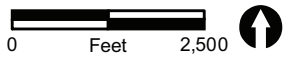
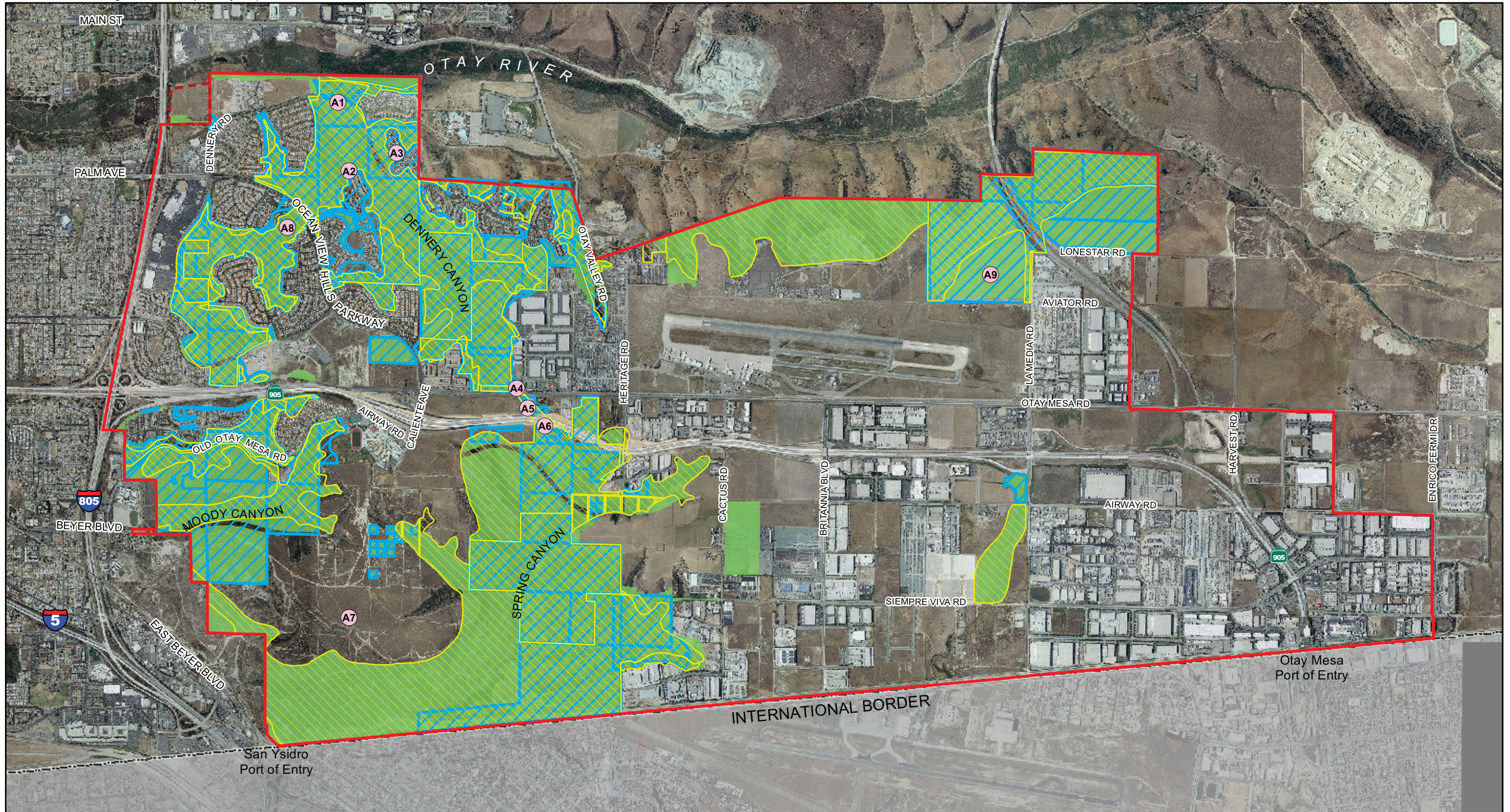
### **4.1.3 MHPA Land Use Adjacency Guidelines**

To address the integrity of the MHPA and mitigate for indirect impacts to the MHPA, guidelines were developed to manage land uses adjacent to the MHPA. The MHPA adjacency guidelines are intended to be incorporated into the Mitigation Monitoring and Reporting Program (MMRP) and applicable permits during the development review phase of a proposed project. These guidelines address the issues of drainage, toxics, lighting, noise, barriers, invasive species, brush management, and grading/development.

#### **4.1.3.1 MSCP Subarea Plan: Otay Mesa MHPA Management Directives**

Otay Mesa is in the southern area of the MHPA which also includes the Otay River Valley, Tijuana Estuary, and Tijuana River Valley. The plan describes the Otay Mesa areas of the MHPA and its vision as a network of open and relatively undisturbed canyons containing a full ensemble of native species and providing functional wildlife habitat and movement capability. The City’s MHPA Guidelines for Otay Mesa as described in Section 1.2.1 of the City’s Subarea Plan (1997) are as follows:





- Otay Mesa Community Plan Boundary
  - Not A Part
  - MHPA Specific Guideline Areas
  - City of San Diego MHPA
  - SANGIS Conserved Lands Database
  - OPEN SPACE
- Otay Mesa Community Land Use Plan**

FIGURE 7

Location of MHPA, SanGIS Conserved Lands, and Proposed Otay Mesa Community Plan Open Space

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**Legend**

- Existing Multi-Habitat Planning Area
- Otay Mesa MHPA Delete 3-2013
- Otay Mesa MHPA Addition 5-2013
- Parcels

Feet 150



**FIGURE 8**  
Otay Mesa Community Plan MHPA Boundary Line Correction

1. Maintain and/or provide trail access for Border Patrol use around the rim of canyons, where feasible. Motorized off-road-vehicle use in the MHPA should be prohibited except by Border Patrol, MHPA (Preserve) managers, or emergency vehicles.
2. In the area south of proposed State Route (SR-905), minimize road crossings of Spring Canyon. Where road crossings must occur, use bridges or culverts (see #3 below). Manufactured slopes adjacent to roadways should be revegetated with appropriate native vegetation.
3. Unless noted otherwise, culvert dimensions should be at least 30 feet wide by 15 feet high, and where feasible, have a maximum 2:1 length to width ratio. The floor of the culvert must be natural/soft bottom, and the ceiling constructed using skylights where possible to provide adequate visibility for wildlife.
4. Vernal pool areas should be preserved per adopted regulations. Where development is considered, the vernal pools should be assessed for transplantation of sensitive flora and fauna. Any wetland impacts will be mitigated for losses to meet the state and federal goal of “no net loss of wetland function and value.” Mitigation should occur in accordance with requirements to be determined through the 404 and 1602 permitting process for individual projects.

In addition to the general MHPA Guidelines identified above, the City’s MSCP identifies the following specific guidelines for the Otay Mesa area (see Figure 7 for locations of A1–A9):

- A1. Improve the wildlife/pedestrian corridor in Dennery Canyon by incorporating two culverts in Dennery Canyon Road. Revegetate the disturbed portions of Dennery Canyon with coastal sage scrub species.
- A2. Modify street alignments to retain additional natural areas. Reduced street classifications and roadbed widths where possible to reflect reduced development.
- A3. The Robinhood Ridge project has a legal right to develop under an existing approved Tentative Map. In the event that the approved map expires, future development proposals would be required to conform to the MHPA boundaries depicted by the Subarea Plan and associated land use regulations.
- A4. Provide a culvert under Otay Mesa Road to facilitate wildlife crossing. Ideally, the culvert would provide both limited pedestrian and wildlife access from the Otay River Valley Regional Park through Dennery Canyon to areas to the south in Spring Canyon. However, if this dimension is not possible due to engineering

constraints, the culvert must be large enough to allow mid-size mammal and predator undercrossing.

- A5. Enhance/restore disturbed areas within the wildlife crossing. This will entail revegetation with coastal sage scrub species and if necessary, possible experimental restoration of graded vernal pools immediately north of Otay Mesa Road. The revegetation effort should not use medium to tall shrubs and trees, to address Border Patrol concerns. Provide fencing to direct animals into the undercrossing.
- A6. The SR-905 design shall include a bridge-type structure over the wildlife corridor south of Otay Mesa Road. This crossing shall be enhanced with grading and revegetation.
- A7. Prior to any development impacts in this area, mitigation must include collecting and reseeded vernal pool species into other preserved Otay Mesa pools.
- A8. Final configuration of this area is subject to redesign of approved maps.
- A9. The MHPA designation on the Baldwin property at the far northeastern end of the Otay Mesa area will need to be fenced at the time of development. Depending on the future use of adjacent areas outside the MHPA, the frequency and monitoring for disturbance, fence repairs, and other maintenance will be determined at the time of development. Due to the sensitivity of the vernal pools and other sensitive species in this area, public access should be carefully directed.

#### **4.1.3.2 MSCP Subarea Plan: Specific Management Policies and Directives for Otay Mesa**

Section 1.5.3 of the City of San Diego MSCP Subarea Plan (1997) describes the specific management and directives for the Otay Mesa area. The major issues that require consideration for management in the Otay Mesa area include the following, in order of priority, as excerpted from Section 1.5.3 of the City of San Diego MSCP Subarea Plan (1997):

- Intense land uses and activities adjacent to and in covered species habitat and linkages;
- Off-road-vehicle activity;
- Dumping, litter, and vandalism;
- Enhancement and restoration needs;
- Exotic (non-native), invasive plants and animals;
- Illegal immigration and Border Patrol activities; and
- Utility, facility and road repair, construction, and maintenance activities.

### **a. MSCP Subarea Plan: Overall Management Policies and Directives for Otay Mesa**

As described in the plan:

The Otay Mesa Community Plan contains lists and maps of vernal pools and sensitive species, as well as descriptions of native vegetation, wildlife and the ecological significance of the Otay Mesa area. The MHPA boundaries closely follow the open space designation in the adopted plan for the area south of Otay Mesa Road but have made modifications in the north area by adding substantial areas for preservation.

#### ***General Policies***

General Policies for the MHPA contained in Section 1.5.3 of the MSCP Subarea Plan include:

Priority 1:

1. No unauthorized motorized vehicles except Border Patrol, MHPA managers, maintenance personnel, or emergency vehicles will be allowed on any trails or off-trail in the MHPA. The Border Patrol should restrict vehicles to the existing access roads as much as feasible, to avoid disturbance of habitat.
2. Remove all trash, hazardous materials, and vehicles from the MHPA prior to transfer from private to public ownership and/or management. If hazardous materials remain, these areas should be signed to indicate their locations, and made off-limits to people.
3. Inventory vernal pool areas within the Otay Mesa area for sensitive and target species where not previously or recently done, and assess for enhancement/restoration needs or opportunities, general status, and potential threats.

Priority 2:

1. Assess vernal pool areas proposed for development (e.g., approved development projects or proposed regional transportation facilities such as SR-905 and SR-125) for transplantation of sensitive plants and soils containing seedbanks of sensitive flora and fauna. Include in mitigation programs arrangements for proper timing of soil and plant removal, proper storage if necessary, and appropriate timing of enhancement/restoration efforts, including transplantation.

## **b. Specific Management Directives for Otay Mesa**

Specific Management Directives for Otay Mesa contained in Section 1.5.3 of the MSCP Subarea Plan are identified as follow:

### ***Northwest Otay Mesa***

Priority 1:

1. Protect the area with concentrations of *Ferocactus*, *Dudleya*, and succulents on the ridge located in the northeast corner of the California Terraces from trampling and poaching of plants. Provide barriers to this area that accommodate wildlife movement.
2. Regular enforcement patrols may be necessary in Denney Canyon and its tributaries to prevent vandalism, poaching, and off-road-vehicle activity.
3. The wildlife crossings under Otay Mesa Road and SR-905 are the only link from south to north Otay Mesa. These crossings must be kept free of debris and illegal encampments. Provide screening of this area along both sides from residential and other adjacent development, and provide limited cover for wildlife within the crossing area that is compatible with Border Patrol activities. Restrict night lighting near this crossing.

Priority 2:

1. Evaluate the mesa north of Brown Field for potential research opportunities in studying natural regeneration. If regeneration is not possible, pursue restoration of disturbed habitats in this area.

### ***Northeast Otay Mesa***

Priority 1:

1. Delineate the MHPA boundaries along areas of the mesa and slopes north of Brown Field with markers and signs to inform Brown Field employees, contractors, and other people of the boundaries of the MHPA to prevent disturbance of the area. This area should be made off-limits to illegal tilling of the mesas (except where required for brush management), dumping, storage of materials, and other disturbances. Fencing or other protection mechanisms will only be necessary if continued disturbance of these areas is evident.
2. Retain mesa areas which are currently non-native grasslands in order to allow regeneration or continue in their present state, thus providing needed raptor foraging area. If regeneration to coastal sage or other native habitats appears to be

unbalancing the need for grassland areas in the future, assess these areas for management that would maintain a grassland (preferably native) community.

Priority 2:

1. Evaluate the mesa north of Brown Field for potential research opportunities in studying natural regeneration. If regeneration is not possible, pursue restoration of disturbed habitats in this area.

### ***Southern Otay Mesa***

Priority 1:

1. Continuous coordination with the U.S. Border Patrol will be necessary to ensure continued awareness of the MHPA and cooperation in maintenance. The presence of the Border Patrol in this area should help to make the MHPA safe for visitors. If possible, improve coordination with the U.S. Border Patrol to aid in the identification and prevention of vandalism, off-road vehicle use, dumping, and other disturbances to habitat.
2. Install barriers and signage along Spring Canyon where agriculture or development abuts the MHPA.

Priority 2:

1. Provide educational materials and training on the MSCP and on native wildlife to U.S. Border Patrol agents and other public agency personnel working in the Otay Mesa border area to encourage sensitive behavior towards wildlife and its habitat, and to discourage unnecessary off-road vehicle use in sensitive areas.
2. Ensure that the night lighting along the border intrudes as little as possible on lands in the interior of the MHPA.
3. Assess and prioritize the Spring Canyon area for restoration of disturbed areas. Include existing roads and those determined not to be needed for Border Patrol activities in the restoration assessment. Burned areas should not need restoration, but off-road use and other disturbed areas should either be restored or other steps taken to encourage regeneration. This could offer potential research opportunities.

## **4.2 City of San Diego Environmentally Sensitive Lands Regulations**

The purpose of the Environmentally Sensitive Lands (ESL) Regulations is to “protect, preserve, and, where damaged restore, the *environmentally sensitive lands* of San



Diego and the viability of the species supported by those lands. These regulations are intended to assure that *development* occurs in a manner that protects the overall quality of the resources and the natural and topographic character of the area, encourages a sensitive form of *development*, retains biodiversity and interconnected habitats, maximizes physical and visual public access to and along the shoreline, and reduces hazards due to *flooding* in specific areas while minimizing the need for construction of *flood* control facilities. These regulations are intended to protect the public health, safety, and welfare while employing regulations that are consistent with sound resources conservation principles and the rights of private property owners” (City of San Diego 2010). ESL Regulations cover sensitive biological resources, including wetlands, within and outside of the coastal zone and MHPA. Future development proposed in accordance with the CPU will be required to comply with all applicable ESL regulations.

### **4.3 City of San Diego General Plan Policies**

The General Plan presents goals and policies for biological resources in the Conservation Element. Relevant excerpts from this element are included in Table 5 below.

**TABLE 5  
GENERAL PLAN POLICIES RELATING TO BIOLOGICAL RESOURCES**

Policy	Description
CE-B.1	<p>Protect and conserve the landforms, canyon lands, and open spaces that: define the City’s urban form; provide public views/vistas; serve as core biological areas and wildlife linkages; are wetlands habitats; provide buffers within and between communities; or provide outdoor recreational opportunities.</p> <ol style="list-style-type: none"> <li>a. Utilize Environmental Growth Funds and pursue additional funding for the acquisition and management of MHPA and other important community open space lands.</li> <li>b. Support the preservation of rural lands and open spaces throughout the region.</li> <li>c. Protect urban canyons and other important community open spaces including those that have been designated in community plans for the many benefits they offer locally, and regionally as part of a collective citywide open space system (see also Recreation Element, Sections C and F; Urban Design Element, Section A).</li> <li>d. Minimize or avoid impacts to canyons and other environmentally sensitive land by relocating sewer infrastructure out of these areas where possible, minimizing construction of new sewer access roads into these areas, and redirecting of sewage discharge away from canyons and other environmentally sensitive lands.</li> <li>e. Encourage the removal of invasive plant species and the planting of native plants near open space preserves.</li> <li>f. Pursue formal dedication of existing and future open space areas throughout the City, especially in core biological resource areas of the City's adopted MSCP Subarea Plan.</li> <li>g. Require sensitive design, construction, relocation, and maintenance of trails to optimize public access and resource conservation.</li> </ol>
CE-B.2	<p>Apply the appropriate zoning and ESL regulations to limit development of floodplains and sensitive biological areas including wetlands, steep hillsides, canyons, and coastal lands.</p> <ol style="list-style-type: none"> <li>a. Manage watersheds and regulate floodplains to reduce disruption of natural systems, including the flow of sand to the beaches. Where possible and practical, restore water filtration, flood and erosion control, biodiversity and sand replenishment benefits.</li> <li>b. Limit grading and alterations of steep hillsides, cliffs and shoreline to prevent increased erosion and landform impacts.</li> </ol>
CE-B.3	<p>Use natural landforms and features as integrating elements in project design to complement and accentuate the City’s form (see also Urban Design Element, Section A).</p>
CE-B.4	<p>Limit and control runoff, sedimentation, and erosion both during and after construction activity.</p>
CE-C.1	<p>Protect, preserve, restore and enhance important coastal wetlands and habitat (tide pools, lagoons and marine canyons) for conservation, research, and limited recreational purposes.</p>
CE-C.2	<p>Control sedimentation entering coastal lagoons and waters from upstream urbanization using a watershed management approach that is integrated into local community and land use plans (see also Land Use Element, Policy LU-E-1).</p>
CE-C.3	<p>Minimize alterations of cliffs and shorelines to limit downstream erosion and to ensure that sand flow naturally replenishes beaches.</p>

**TABLE 5  
GENERAL PLAN POLICIES RELATING TO BIOLOGICAL RESOURCES  
(continued)**

Policy	Description
CE-C.4	Manage wetland areas as described in Section H, Wetlands, for natural flood control and preservation of landforms.
CE-C.6	Implement watershed management practices designed to reduce runoff and improve the quality of runoff discharged into coastal waters.
CE-D.3	<p>Continue to participate in the development and implementation of watershed management plans.</p> <ul style="list-style-type: none"> <li>a. Control water discharge in a manner that does not reduce reasonable use by others, damage important native habitats and historic resources, or create hazardous conditions (e.g., erosion, sedimentation, flooding and subsidence).</li> <li>b. Protect reservoir capacity from sedimentation.</li> <li>c. Improve and maintain drinking water quality and urban runoff water quality through implementation of Source Water Protection Guidelines for New Development.</li> <li>d. Improve and maintain urban runoff water quality through implementation of storm water protection measures (see also Urban Runoff Management, Section E).</li> <li>e. Encourage proper sustainable agricultural practices (if applicable) such as tillage, use of grass filter strips, runoff detention basins, and organic farming.</li> </ul>
CE-D.4	<p>Continue to develop and implement public education programs.</p> <ul style="list-style-type: none"> <li>a. Involve the public in addressing runoff problems associated with development and raising awareness of how an individual's activities contribute to runoff pollution.</li> <li>b. Work with local businesses and developers to provide information and incentives for the implementation of Best Management Practices for pollution prevention and control.</li> <li>c. Implement watershed awareness and water quality educational programs for City staff, community planning groups, the general public, and other appropriate groups.</li> </ul>

**TABLE 5  
GENERAL PLAN POLICIES RELATING TO BIOLOGICAL RESOURCES  
(continued)**

Policy	Description
CE-E.2	<p>Apply water quality protection measures to land development projects early in the process- during project design, permitting, construction, and operations- in order to minimize the quantity of runoff generated on-site, the disruption of natural water flows and the contamination of storm water runoff.</p> <ul style="list-style-type: none"> <li>a. Increase on-site infiltration, and preserve, restore or incorporate natural drainage systems into site design.</li> <li>b. Direct concentrated drainage flows away from the MHPA and open space areas. If not possible, drainage should be directed into sedimentation basins, grassy swales or mechanical trapping devices prior to draining into the MHPA or open space areas.</li> <li>c. Reduce the amount of impervious surfaces through selection of materials, site planning, and street design where possible.</li> <li>d. Increase the use of vegetation in drainage design.</li> <li>e. Maintain landscape design standards that minimize the use of pesticides and herbicides.</li> <li>f. Avoid development of areas particularly susceptible to erosion and sediment loss (e.g., steep slopes) and, where impacts are unavoidable, enforce regulations that minimize their impacts.</li> <li>g. Apply land use, site development, and zoning regulations that limit impacts on, and protect the natural integrity of topography, drainage systems, and water bodies.</li> <li>h. Enforce maintenance requirements in development permit condition.</li> </ul>
CE-E.3	<p>Require contractors to comply with accepted storm water pollution prevention planning practices for all projects.</p> <ul style="list-style-type: none"> <li>a. Minimize the amount of graded land surface exposed to erosion and enforce erosion control ordinances.</li> <li>b. Continue routine inspection practices to check for proper erosion control methods and housekeeping practices during construction.</li> </ul>
CE-E.4	<p>Continue to participate in the development and implementation of Watershed Management Plans for water quality and habitat protection.</p>
CE-E.5	<p>Assure that City departments continue to use "Best Practice" procedures so that water quality objectives are routinely implemented.</p> <ul style="list-style-type: none"> <li>a. Incorporate water quality objectives into existing regular safety inspections.</li> <li>b. Follow Best Management Practices and hold training sessions to ensure that employees are familiar with those practices.</li> <li>c. Educate City employees on sources and impacts of pollutants on urban runoff and actions that can be taken to reduce these sources.</li> <li>d. Ensure that contractors used by the City are aware of and implement urban runoff control programs.</li> <li>e. Serve as an example to the community-at-large.</li> </ul>

**TABLE 5  
GENERAL PLAN POLICIES RELATING TO BIOLOGICAL RESOURCES  
(continued)**

Policy	Description
CE-E.6	<p>Continue to encourage "Pollution Control" measures to promote the proper collection and disposal of pollutants at the source, rather than allowing them to enter the storm drain system.</p> <ul style="list-style-type: none"> <li>a. Promote the provision of used oil recycling and/or hazardous waste recycling facilities and drop-off locations.</li> <li>b. Review plans for new development and redevelopment for connections to the storm drain system.</li> <li>c. Follow up on complaints of illegal discharges and accidental spills to storm drains, waterways, and canyons.</li> </ul>
CE-E.	<p>Manage floodplains to address their multi-purpose use, including natural drainage, habitat preservation, and open space and passive recreation, while also protecting public health and safety.</p>
CE-G.1	<p>Preserve natural habitats pursuant to the MSCP, preserve rare plants and animals to the maximum extent practicable, and manage all City-owned native habitats to ensure their long-term biological viability.</p> <ul style="list-style-type: none"> <li>a. Educate the public about the impacts invasive plant species have on open space.</li> <li>b. Remove, avoid, or discourage the planting of invasive plant species.</li> <li>c. Pursue funding for removal of established populations of invasive species within open space.</li> </ul>
CE-G.2	<p>Prioritize, fund, acquire, and manage open spaces that preserve important ecological resources and provide habitat connectivity.</p>
CE-G.3	<p>Implement the conservation goals/policies of the City's MSCP Subarea Plan, such as providing connectivity between habitats and limiting recreational access and use to appropriate areas.</p>
CE-G.4	<p>Protect important ecological resources when applying floodplain regulations and development guidelines.</p>
CE-G.5	<p>Promote aquatic biodiversity and habitat recovery by reducing hydrological alterations, such as grading a stream channel.</p>
CE-H.1	<p>Use a watershed planning approach to preserve and enhance wetlands.</p>
CE-H.2	<p>Facilitate public-private partnerships that improve private, federal, state and local coordination through removal of jurisdictional barriers that limit effective wetland management.</p>
CE-H.3	<p>Seek state and federal legislation and funding that support efforts to research, classify, and map wetlands including vernal pools and their functions, and improve restoration and mitigation procedures.</p>
CE-H.4	<p>Support the long-term monitoring of restoration and mitigation efforts to track and evaluate changes in wetland acreage, functions, and values.</p>
CE-H.5	<p>Support research and demonstration projects that use created wetlands to help cleanse urban and storm water runoff, where not detrimental to natural upland and wetland habitats.</p>

**TABLE 5  
GENERAL PLAN POLICIES RELATING TO BIOLOGICAL RESOURCES  
(continued)**

Policy	Description
CE-H.6	Support educational and technical assistance programs, for both planning and development professionals, and the general public, on wetlands protection in the land use planning and development process.
CE-H.7	Encourage site planning that maximizes the potential biological, historic, hydrological and land use benefits of wetlands.
CE-H.8	Implement a “no net loss” approach to wetlands conservation in accordance with all city, state, and federal regulations.
CE-J.1	Develop, nurture, and protect a sustainable urban/community forest.

SOURCE: City of San Diego General Plan Conservation Element 2008.

## 4.4 CPU Plan Policies

The CPU presents goals and policies for biological resources in the Conservation Element. Relevant excerpts from this element are included in Table 6 below.

**TABLE 6  
CPU PLAN POLICIES RELATING TO BIOLOGICAL RESOURCES**

Policy	Description
LU 2.1-2	Achieve comprehensive neighborhood and community village development through Specific Plans that: <ul style="list-style-type: none"> <li>c. Respect the natural topography and sensitive habitat areas with growth patterns that balance development with preservation of natural resources.</li> <li>d. Provide a land use map that illustrates the detailed land use designations, including any lands set aside for resource conservation. The specific plan land use map will refine the Otay Mesa Community Plan Land Use Map as part of the specific plan approval process.</li> <li>g. Illustrate a separate system of pedestrian and bicycle pathways linking the activity centers with the residential areas, public facilities, and open space systems.</li> </ul>
LU 2.6-1	Maintain the existing open space, and collaborate with the Wildlife Agencies, environmental groups, and the public to ensure adequate conservation for sensitive biological resources.
LU 2.6-2	Create a close relationship between the natural environment of the Otay River Valley, Spring Canyon, and the Dennery Canyon systems and developed areas through the provision of multi-use trails and educational elements.
LU 2.6-3	Maintain existing parks within the Northwest District, and develop remaining parks in the Riviera Del Sol and Hidden Trials neighborhoods.
LU 2.6-4	Identify and provide population-based parks per the General Plan standards at locations that are accessible and centrally located to most users within the Southwest and Central villages.

**TABLE 6  
CPU PLAN POLICIES RELATING TO BIOLOGICAL RESOURCES  
(continued)**

Policy	Description
UD 4.1-2	Incorporate interpretive centers to provide educational information for sensitive resources within the Dennery Canyon system and the Otay River Valley as new development and redevelopment occurs.
UD 4.2-6	Consider landscape as a major element of the streetscape and incorporate a consistent theme along the roadways while including an appropriate mix of plant types in order to provide a diverse ecosystem.
UD 4.3-1	Employ sensitive design techniques when developing adjacent to Otay Mesa's natural canyon and open space systems. a. Comply with General Plan policies UD-A.2 and UD-A.3.
PF 6.1-3	Enforce brush management regulations in vacant areas in order to reduce the risk of fire-related emergencies.
RE 7.1-7	When siting and locating new parks consider the following: e. Orient and design new parks adjacent to canyon/open space edges, when feasible, to enhance public views and create a buffer between natural open space areas and other built land uses.
RE 7.2-1	Balance goals to preserve MHPA and open space areas with opportunities for providing recreation. a. Maintain Spring Canyon and portions of the Otay Valley Regional Park in their natural state. Future uses should be compatible with the open space concept, and may include hiking, bicycling, and sightseeing. b. Create a close relationship between the natural environment of Spring Canyon and developed areas through an extensive parks, recreation, and open space system by connecting parks to open space trails, bike routes, and sidewalks.
RE 7.2-2	Minimize activities that require alterations to the natural open space.
RE 7.2-3	Require the sensitive placement of structures such as benches, picnic tables in open space areas.
RE 7.2-4	Locate scenic overlooks, and parks adjacent to Spring Canyon and Otay River Valley trail entrances. a. Design scenic overlooks and trail entrances using natural materials and native plant species to reflect the natural surroundings. b. Include benches, picnic tables, or other types of seating at trail entrances. c. Include information boards and trail maps at trail entrances.
RE 7.2-5	Support efforts to designate trails and create a comprehensive trails system within Spring Canyon and the Otay Valley Regional Park's Dennery Canyon open space areas.
RE 7.2-6	Seek to obtain public access easements across private property for bike/hike trails areas.
CE 8.1.1	Implement the ESL ordinance related to biological resources and steep slopes for all new development.
CE 8.1.2	Preserve a network of open and relatively undisturbed canyons containing a full ensemble of native species and providing functional wildlife habitat and movement capability.

**TABLE 6  
CPU PLAN POLICIES RELATING TO BIOLOGICAL RESOURCES  
(continued)**

Policy	Description
CE 8.1.3	Plan development to minimize grading and relate to the topography and natural features of Otay Mesa.
CE 8.1.4	Implement the MSCP Management Policies and Directives for Otay Mesa through the project review process.
CE 8.1.5	Implement City regulations and Biology Guidelines for preservation, acquisition, restoration, management, and monitoring of biological resources.
CE 8.1.6	Implement Area Specific Management Directives and Conditions of Coverage as stated in Table 3-5 of the MSCP Subarea Plan for species protected in Otay Mesa and identified in Table 8-1 of the CPU.
CE 8.1.7	<p>Require preservation, restoration, management, and monitoring within identified vernal pool preservation areas in accordance with City, state, and federal policies and regulations. The boundaries of vernal pool preserve areas should be of sufficient size and shape to protect the vernal pool basins, watersheds, functional buffers, and areas necessary to maintain vernal pool ecosystem function and species viability.</p> <p>a. Design, as feasible, the preserve areas to provide connectivity between vernal pools, surrounding open space, and nearby vernal pool complexes.</p> <p>b. Conduct management and monitoring of preserved and restored vernal pool sites in accordance with the citywide regulations and Biology Guidelines.</p>
CE 8.1.8	Amend the Otay Mesa Community Plan as needed for consistency with an adopted HCP.
CE 8.1.9	Foster local stewardship and develop positive neighborhood awareness of the open space preserve areas with environmental education programs through local schools, homeowners associations, community groups, and other public forums that address the local ecosystem and habitat preservation. Incorporate hands-on learning via neighborhood hikes or other initiatives that present information in a manner that will increase interest in the natural world.
CE 8.1.10	Require development to obtain all required state and federal permits.
CE 8.1.11	Encourage the development of a comprehensive approach to habitat identification, management, and establishment of preservation nodes in order to address long term survival of the burrowing owl on Otay Mesa.
CE 8.5.1	Ensure the overall tree cover and other vegetation throughout Otay Mesa is no less than 20 percent in urban residential areas and 10 percent in the business areas so that the natural landscape is sufficient in mass to provide significant benefits to the city in terms of air and water management.
CE 8.5.2	Work with the City's Urban Forestry Division to coordinate the appropriate selection and location of shade-producing trees from the Otay Mesa Community Street Tree Plan.
CE 8.5.3	Require new development to retain significant and mature trees, where feasible.
CE 8.5.4	Support public outreach efforts to educate business owners, residents, and school children on the care of and environmental benefits of shade-producing street trees.
CE 8.5.5	Plant trees strategically to achieve energy savings. Generally, orient tree plantings so that building structures maximize shading and cooling benefits from the canopy spread.



## **5.0 Project Impacts**

Impacts associated with implementation of the CPU are analyzed below. The biological impacts of the CPU were assessed according to guidelines set forth in the City of San Diego's Development Services Department CEQA Significance Thresholds (2011b) and the MSCP (City of San Diego 1997). Mitigation would be required for impacts that are considered significant under these guidelines. Impact areas were based on the CPU Land Use Plan and include the following categories of development (residential, commercial, industrial, institutional, parks, and right-of-way). The impact area shown in Table 7 is subdivided into impacts occurring inside or outside of the MHPA. Up to 25 percent development in the least sensitive area would be allowed within ESL if future development is proposed. Impacts to lands within the MHPA and SanGIS Conserved Lands database would only occur from three CPU circulation element roads (e.g., Beyer Boulevard, Airway Road, and Del Sol Boulevard).

### **5.1 Vegetation Community Impacts**

The proposed CPU land use plan would impact a maximum of approximately 1948.18 acres of the 9,349.08-acre study area (Figure 9). Table 7 summarizes the acreage of vegetation communities and land cover types that would be impacted by build-out of the CPU. The impact footprint does not include land previously characterized as developed (i.e., developed or entitled and mitigated for, not necessarily built/graded) or ornamental/landscape vegetation as only impacts to sensitive vegetation communities or habitat as defined by the City's Biology Guidelines and ESL Regulations would be considered significant (see Section 6.3.1).

**TABLE 7  
ANTICIPATED IMPACTS TO VEGETATION COMMUNITIES AND LAND COVER TYPES  
WITHIN THE CPU**

Vegetation Communities/ Land Cover Type	CPU Impact Area		Total
	Inside MHPA*	Outside MHPA	
Non-native grassland	10.9	1,219.5	1,230.4
Diegan coastal sage scrub	1.4	160.6	162
Disturbed land	0	374.2	374.2
Maritime succulent scrub	0.78	64.7	65.48
Agriculture	0.1	110.6	110.7
Riparian	0.35	0	0.35
Non-native vegetation	0	0.1	0.1
Vernal pool	0.05	2.9	2.95
Basin with fairy shrimp	0**	0.7	0.7
Mule fat scrub	1.3	0	1.3
Southern mixed chaparral	0	0	0
Alkali Seep	0	0	0
Freshwater marsh	0	0	0
Eucalyptus woodland	0	0	0
<b>TOTAL</b>	<b>14.88</b>	<b>1,933.3</b>	<b>1948.18</b>

\*Lands within the MHPA that have not been 100 percent conserved have the potential for a 25 percent loss in the least sensitive area due to allowable encroachment under the MSCP.

\*\* impact acreage less than 0.01

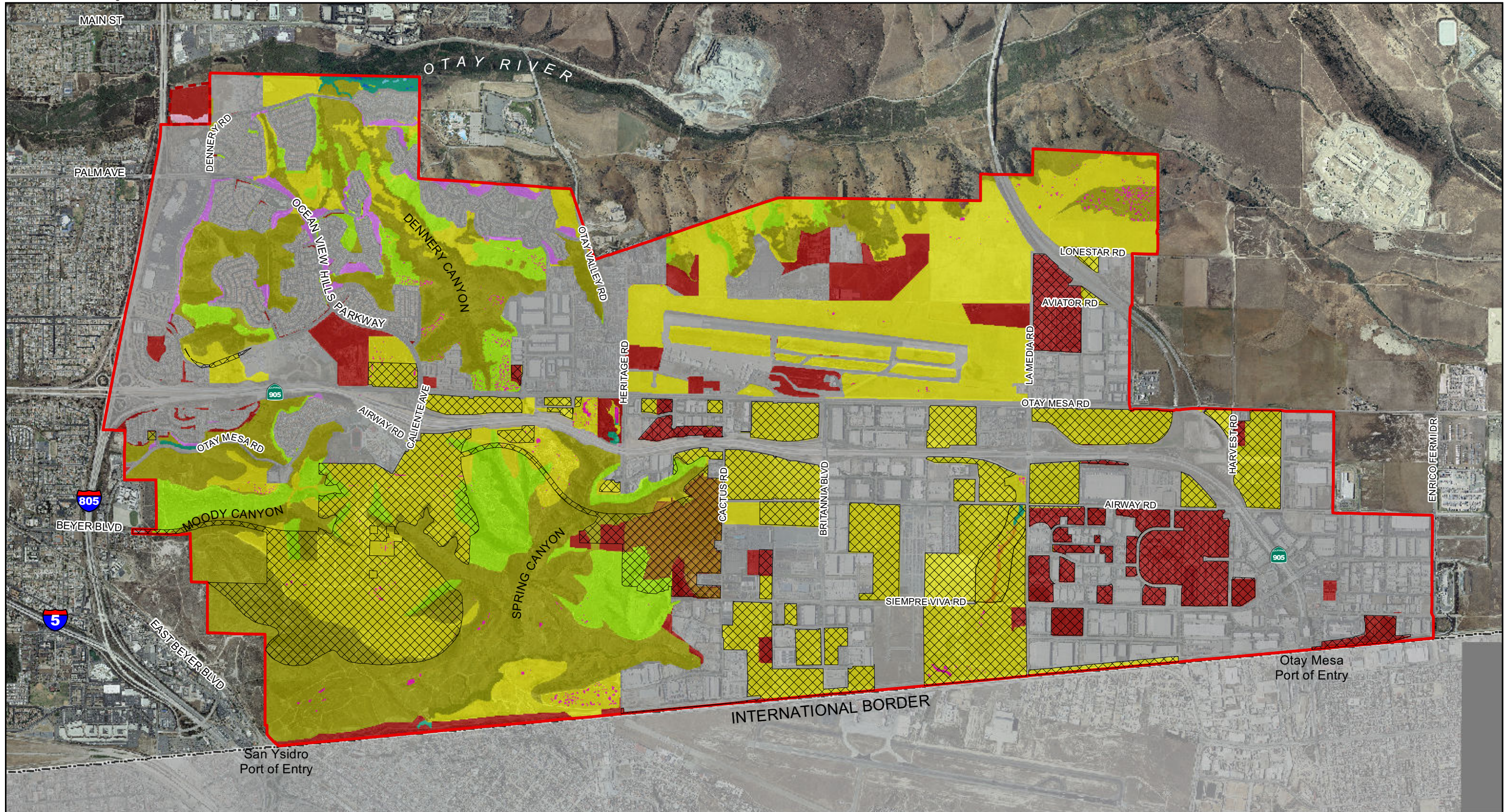
## 5.2 Impacts to Common Wildlife Species

The impact to common wildlife species would result from the loss of a maximum of approximately 1948.18 acres of the study area. Wildlife using the site would be displaced and some small mammals, amphibians, and reptiles with low mobility may be inadvertently harmed during grading of the site. Impacts to common wildlife species are considered less than significant, as they are not classified as sensitive by the City of San Diego (City of San Diego 2012).

## 5.3 Sensitive Biological Resources Impacts

Impacts to unique, rare, endangered, sensitive, or fully protected species of plants or animals would occur with implementation of the CPU. Impacts to sensitive biological resources would be considered significant and could be mitigated at the project level in accordance with ESL Regulations and the City’s Biology Guidelines.

Due to the fact that portions of the biological resource assessment are based on secondary source information rather than site specific field surveys, the impacts would be refined for individual projects. Instead, the program-level analysis identifies areas of potential impacts associated with implementation of the overall CPU. Site-specific



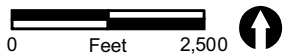
- Project Boundary
- Not A Part
- Proposed Impacts

**Vegetation Communities and Land Cover Types**

- Alkali Seep
- Coastal and Valley Freshwater Marsh
- Diegan Coastal Sage Scrub
- Eucalyptus Woodland

- Maritime Succulent Scrub
- Mule Fat Scrub
- Non-native Grassland
- Non-native Vegetation
- Riparian

- Southern Mixed Chaparral
- Vernal Pool
- Agriculture
- Disturbed Land
- Urban/Developed



**FIGURE 9**  
Impacts to Vegetation Communities and Land Cover Types

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surveys would be conducted for future project-level review to verify the presence of sensitive plant species occurring on individual properties and determine the extent of any potential impacts.

### 5.3.1 Sensitive Vegetation Communities

Implementation of the CPU has the potential to result in loss of on-site sensitive vegetation communities. These sensitive habitats include upland communities in Tiers I-III B as shown on Figure 10. Potential impacts to sensitive vegetation communities would include the loss of basins with fairy shrimp, Diegan coastal sage scrub, maritime succulent scrub, non-native grassland, riparian, and vernal pools. Table 7 provides the acreage of each habitat type that would be impacted by the CPU. Impacts to wetlands, including vernal pools, are discussed in Section 6.5.

### 5.3.2 Sensitive Plants

Implementation of the CPU has the potential to impact 17 sensitive plant species known to occur on-site. Precise locations of sensitive plant species would be identified through on-site reconnaissance in conjunction with proposed future development.

Ten of the plant species are federally listed, state listed, and/or MSCP-covered species. These include:

**Otay tarplant** is state listed as endangered and a federally listed as threatened (State of California 2012b). It is considered a narrow endemic species under the MCSP and has a CNPS Rare Plant Ranking of 1B.1 (rare, threatened, or endangered in California or elsewhere; seriously endangered in California) (City of San Diego 1997, CNPS 2012). Habitat for this species is coastal sage scrub, valley and foothill grasslands in clay soils.

**San Diego ambrosia** is federally listed as endangered (State of California 2012b). It is considered a narrow endemic species under the MSCP and has a CNPS Rare Plant Ranking of 1B.1 (Rare, threatened, or endangered in California and elsewhere; seriously endangered in California) (City of San Diego 1997, CNPS 2012). Habitat for this species is disturbed areas in chaparral, coastal scrub, grassland, or vernal pool communities or along creek beds, seasonally dry drainages, and floodplains along the edge of willow woodland, in Riverwash or sandy alluvial soils.

**Variiegated dudleya** is considered a narrow endemic species under the MSCP and has a CNPS Rare Plant Ranking of 1B.2 (Rare, threatened, or endangered in California or elsewhere; fairly endangered in California) (City of San Diego 1997, CNPS 2012). It can be found in openings in chaparral, coastal sage scrub, grasslands, or vernal pool habitats.

**San Diego button-celery** is federally and state listed as endangered (State of California 2012b). It is considered a narrow endemic species under the MSCP and has a CNPS Rare Plant Ranking of 1B.1 (Rare, threatened, or endangered in California or elsewhere; seriously endangered in California) (City of San Diego 1997, CNPS 2012). It is found in vernal pools and wet areas within coastal sage scrub and grasslands.

**Spreading navarretia** is federally listed as threatened, is considered a narrow endemic species under the MSCP, and has a CNPS Rare Plant Ranking of 1B.1 (Rare, threatened, or endangered in California and elsewhere; seriously endangered in California) (State of California 2012b; City of San Diego 1997, CNPS 2012). Its habitat is vernal pools, marshes, and swamps. A portion of the Otay Mesa area has been designated as critical habitat by the USFWS for spreading navarretia (Figure 11).

**California Orcutt grass** is a state and federally endangered species (State of California 2012b). It is considered a narrow endemic species under the MSCP and has a CNPS Rare Plant Ranking of 1B.1 (Rare, threatened, or endangered in California and elsewhere; seriously endangered in California) (City of San Diego 1997, CNPS 2012). This species grows in vernal pools.

**Otay mesa mint** is state and federally listed as an endangered species and has a CNPS Rare Plant Ranking of 1B.1 (Rare, threatened, or endangered in California and elsewhere; seriously endangered in California) (State of California 2012b; CNPS 2012). It is considered a narrow endemic under the MSCP (City of San Diego 1997). This plant grows in vernal pools.

**Small-leaved rose** is state listed as endangered, covered under the MSCP, and has a CNPS Rare Plant Ranking of 2.1 (rare, threatened, or endangered in California, but more common elsewhere; seriously endangered in California) (State of California 2012b; City of San Diego 1997, CNPS 2012). Its habitat is coastal sage scrub. It is known in California from only one occurrence on Otay Mesa. Because this location of this species is part of a translocation program within the Ocean View Hills project (approved and built), impacts would not be anticipated.

**San Diego goldenstar** is a covered species under the MSCP and has a CNPS Rare Plant Ranking of 2.1 (rare, threatened, or endangered in California, but more common elsewhere; seriously endangered in California) (City of San Diego 1997, CNPS 2012). It occurs in chaparral, coastal sage scrub, grasslands, and vernal pool habitats.

**San Diego barrel cactus** is a covered species under the MSCP and has a CNPS Rare Plant Ranking of 2.1 (rare, threatened, or endangered in California, but more common elsewhere; seriously endangered in California) (City of San Diego 1997, CNPS 2012). It is found in chaparral, coastal sage scrub, grassland, and vernal pool habitats.

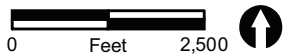
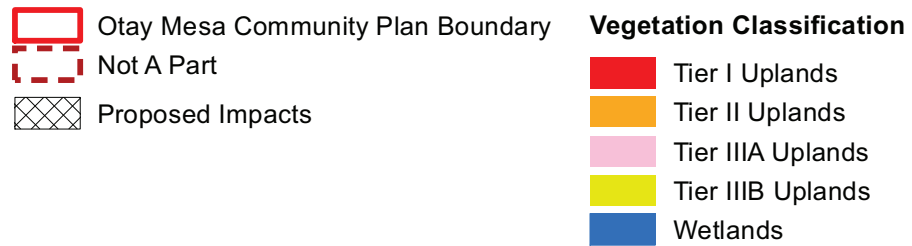
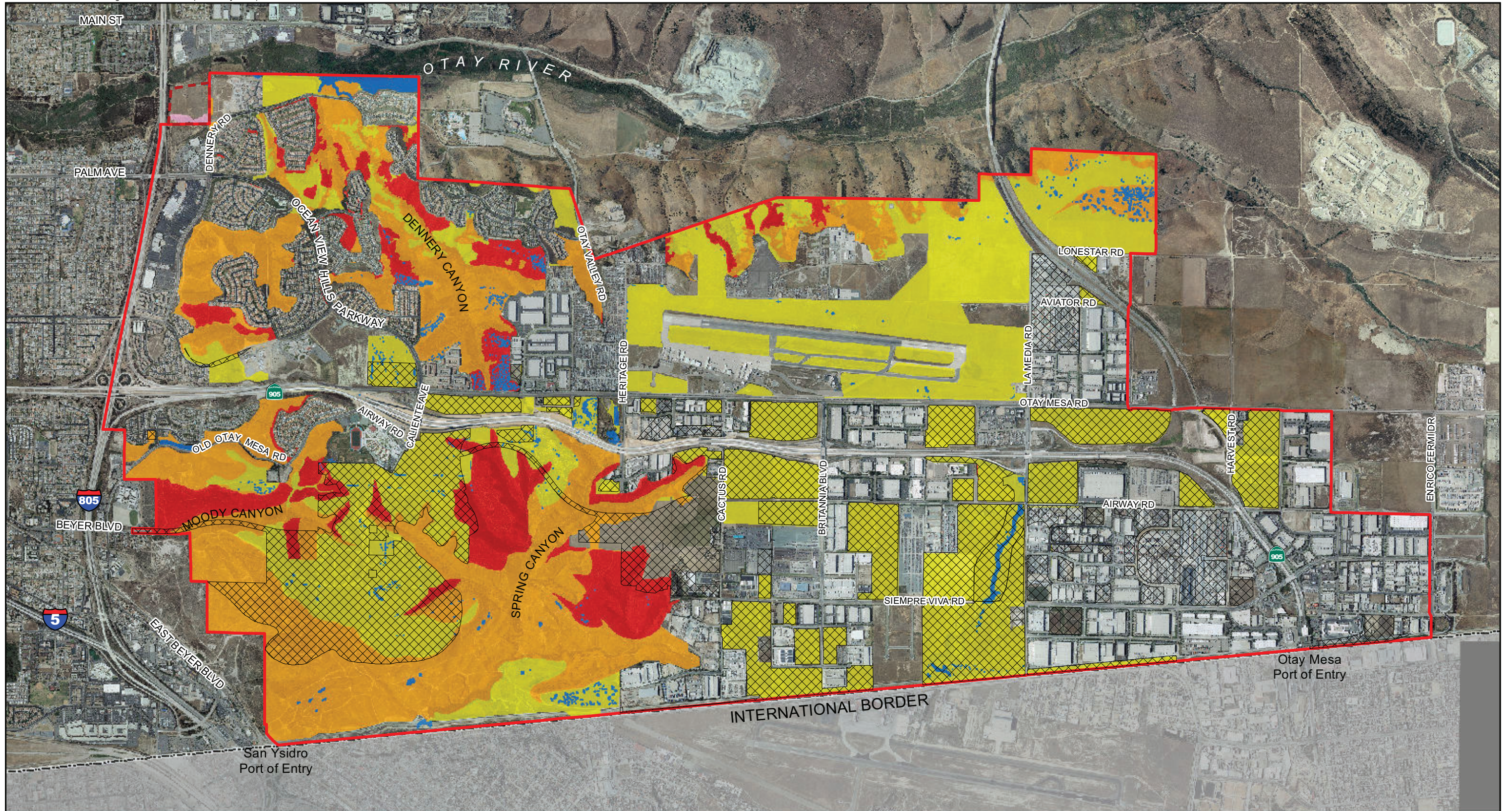
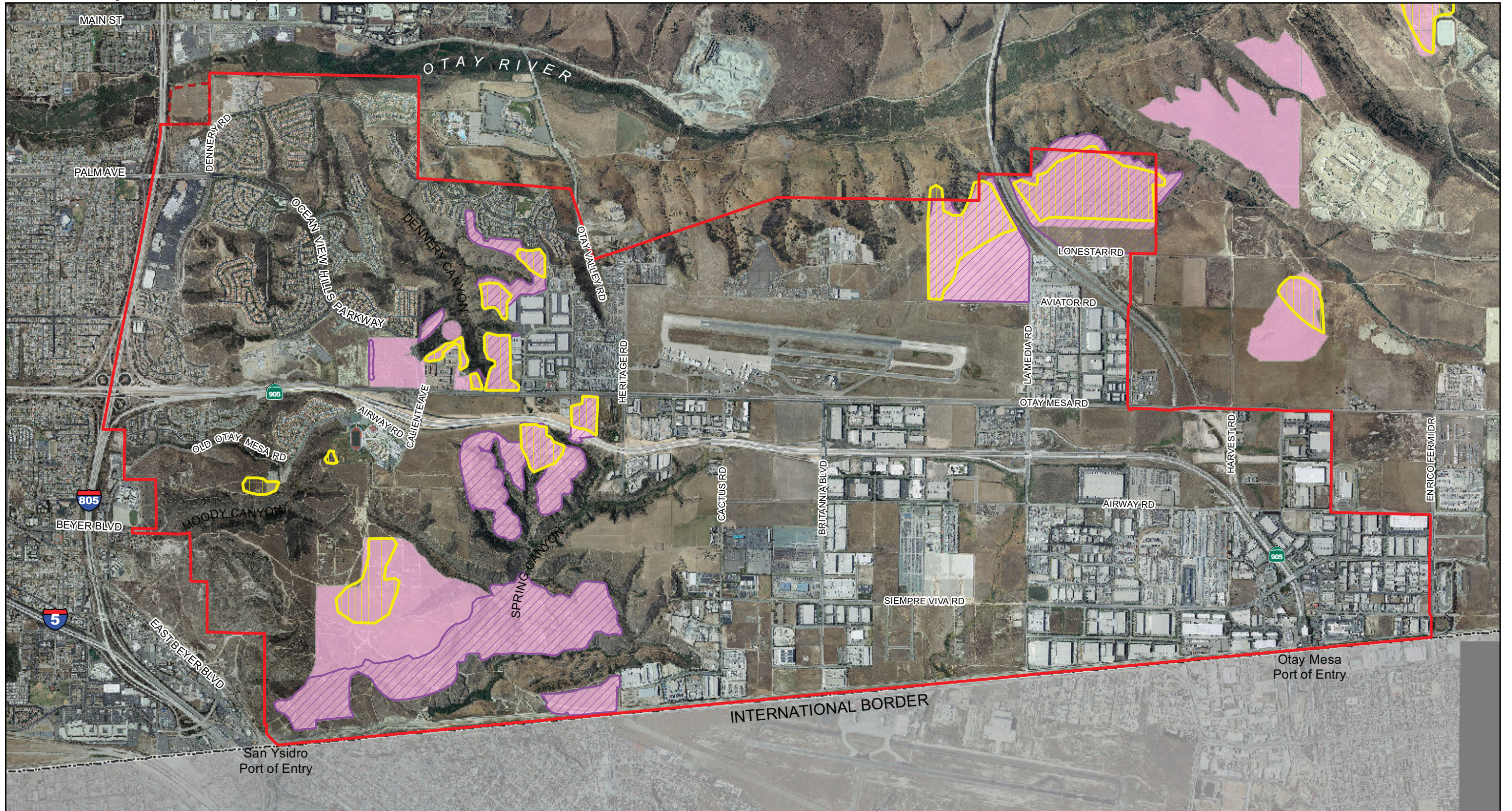


FIGURE 10  
Impacts to Sensitive Vegetation Communities

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- Otay Mesa Community Plan Boundary
- Not A Part
- USFWS Critical Habitat for Spreading Navarretia
- USFWS Critical Habitat for Riverside Fairy Shrimp
- USFWS Critical Habitat for San Diego Fairy Shrimp

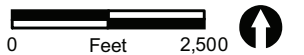


FIGURE 11

Location of Designated Critical Habitat for Spreading Navarretia, San Diego Fairy Shrimp and Riverside Fairy Shrimp within the Otay Mesa Community Plan Boundary

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Additional plant species are not covered in the MSCP, but considered rare and occurring on the CNPS List. These include:

**South coast saltscale** has a CNPS Rare Plant Ranking of 1B.2 (rare, threatened, or endangered in California, but more common elsewhere; fairly endangered in California) and is found in coastal sage scrub habitat (CNPS 2012).

**Nuttall's scrub oak** has a CNPS Rare Plant Ranking of 1B.1 (rare, threatened, or endangered in California and elsewhere; seriously endangered in California) (CNPS 2012). It is found in chaparral and coastal sage scrub habitats.

**San Diego bur-sage** has a CNPS Rare Plant Ranking of 2.1 (Rare, threatened, or endangered in California, but more common elsewhere; seriously endangered in California) and is found in coastal sage scrub (CNPS 2012).

**Golden-spined cereus** has a CNPS Rare Plant Ranking of 2.2 (rare, threatened, or endangered in California, but more common elsewhere; fairly endangered in California) and is found in chaparral and coastal sage scrub (CNPS 2012).

**Cliff spurge** has a CNPS Rare Plant Ranking of 2.2 (rare, threatened, or endangered in California, but more common elsewhere; fairly endangered in California) and is found in coastal sage scrub and maritime succulent scrub (CNPS 2012).

**Little mousetail** has a CNPS Rare Plant Ranking of 3.1 (needs review; seriously endangered in California) and is found in vernal pools and grasslands (CNPS 2012).

**San Diego County viguiera** has a CNPS Rare Plant Ranking of 4.2 (uncommon in California; fairly endangered in California) and is found in chaparral and coastal sage scrub (CNPS 2012).

### **5.3.3 Sensitive Wildlife**

Implementation of the CPU has the potential to impact sensitive wildlife species known to occur on-site. Precise locations of sensitive wildlife species and suitable habitat would be identified through on-site reconnaissance in conjunction with proposed future development. Potentially affected species and suitable habitat are described below.

#### **5.3.3.1 Federally Listed Endangered Species**

The federally endangered Quino checkerspot butterfly, San Diego fairy shrimp, Riverside fairy shrimp, and least Bell's vireo could be impacted with proposed future development implemented in accordance with the CPU lands use plan. Impacts to the San Diego fairy shrimp, Riverside fairy shrimp, least Bell's Vireo, and Quino checkerspot butterfly must be approved by USFWS under Section 7 or 10(A) of FESA.

The San Diego fairy shrimp and Riverside fairy shrimp are federally listed endangered species. The City relinquished federal coverage of these species in the MSCP, but has retained state coverage through the MSCP. They are both associated with vernal pool habitat and have designated critical habitat in Otay Mesa (see Figure 11).

The Quino checkerspot is also a federally listed endangered species and a non-covered species in the MSCP. It occurs in open dry areas of the mesa and has designated critical habitat in Otay Mesa.

The least Bell's vireo is a federally and state listed endangered species and an MSCP covered species that could nest in the CPU. It is a migratory species and summer resident in riparian woodlands dominated by willows.

### **5.3.3.2 Federally Listed Threatened Species**

The coastal California gnatcatcher, a federally listed threatened species, CDFW listed species of special concern, and MSCP covered species, could be impacted with future development implemented in accordance with the CPU land use plan. Coastal sage scrub and maritime succulent scrub habitat occupied by the coastal California gnatcatcher occurs in the CPU area. Direct impacts to occupied habitat that occurs in an MHPA area could be impacted under the proposed CPU land use plan. Indirect impacts (temporary construction noise) may occur to this species if construction occurs during the breeding season.

### **5.3.3.3 State Listed Endangered Species**

The least Bell's vireo is a federally and state listed endangered species and an MSCP covered species that could nest in the CPU area. As such, impacts to least Bell's vireo must comply with the federal and state regulations regarding take of a listed species.

### **5.3.3.4 CDFW Species of Special Concern**

The western burrowing owl is a CDFW species of special concern, USFWS bird of conservation concern, and MSCP covered species that is known to occur within the CPU area. The western burrowing owl occupies open areas, including native and non-native grassland, sparsely vegetated shrubland, agricultural land, disturbed habitat, as well as disturbed land. They typically nest in ground squirrel or other small mammal burrows, but may dig their own nests in soft soil or use culverts or drainage pipes. The burrowing owl population located within the Otay Mesa area is the largest remaining population of this species in San Diego County (Unitt 2004).

Impacts to burrowing owls would include not only direct impacts to individuals, nests, and suitable nesting habitat, but also indirect impacts from "eradication of host

burrowers; changes in vegetation management (i.e., grazing); use of pesticides and rodenticides; destruction, conversion or degradation of nesting, foraging, over-wintering or other habitats; destruction of natural burrows and burrow surrogates; and disturbance which may result in the harassment of owls at occupied burrows” (CDFW 2012). Implementation of the CPU may result in impacts to 1,230.4 acres of non-native grassland, 110.7 acres of agricultural land, and 374.2 acres of disturbed land. Impacts to non-native grassland would affect the preferred habitat of the burrowing owl and would likely reduce population numbers. Although the species prefers grasslands, it is also known to use agricultural lands and disturbed lands when suitable grassland habitat is not available near an occupied area. Therefore, impacts to agricultural and disturbed lands need to be evaluated for their potential to support the burrow owl.

As a part of future environmental analysis for future projects, burrowing owl surveys would be required to be conducted in suitable habitat to determine if this species is present and to locate active burrows and burrow complexes. If burrowing owls are present, mitigation measures must be implemented, including avoidance of impacts inside the MHPA. Outside the MHPA impacts must be avoided to the maximum extent practicable by the relocation of owls out of impact areas by trained professionals and the conservation of occupied burrowing owl habitat or conservation of lands appropriate for restoration, management, and enhancement of burrowing owl nesting and foraging requirements to compensate for lost habitat. Management plans and directives must be prepared for these burrowing owl conservation lands in accordance with CDFW’s staff report for burrowing owls dated March 2012 and would be subject to approval by the Wildlife Agencies.

Raptors, including the Cooper’s hawk and northern harrier, are known to forage in the CPU area and may nest in suitable habitats within the CPU area. Cooper’s hawk is a CDFW species of concern, USFWS bird of conservation concern, and MSCP covered year-round resident in San Diego. The Cooper’s hawk habitat includes mature forest, open woodlands, woodland edges, parks, and residential areas. The northern harrier is a CDFW species of concern and MSCP covered migrant and winter resident in San Diego. The northern harrier occupies coastal lowlands, marshes, grassland, and agricultural fields. The CPU would remove up to approximately 1,459.53 acres of foraging habitat for birds of prey (including approximately 1,230.4 acres of non-native grasslands and 229.13 acres of scrubland). In compliance with the Migratory Bird Treaty Act (MBTA) and Section 3503 of the California Fish and Wildlife Code, no active nests of migratory bird species may be impacted during project construction.

Coastal cactus wren is CDFW species of special concern, USFWS bird of conservation concern, and MSCP covered species. It occupies maritime succulent scrub and coastal sage scrub. Any impacts to these habitat types could impact the coastal cactus wren. Proposed future development projects would be required to conduct focused protocol surveys for the coastal cactus wren if suitable habitat is determined to be present.

Additional CDFW species of special concern occurring in the CPU area include San Diego horned lizard and Belding's orange-throated whiptail. Both are MSCP-covered and occupy chaparral and coastal sage scrub habitats.

Others include western spadefoot, Coronado skink, red diamond rattlesnake, loggerhead shrike (USFWS bird of conservation concern), yellow-breasted chat, northwestern San Diego pocket mouse, San Diego woodrat, and San Diego black-tailed jackrabbit. These species are not covered by the MSCP.

### **5.3.3.5 CDFW Fully Protected Species**

Other raptors, such as the golden eagle (CDFW fully protected species and species of special concern; USFWS bird of conservation concern; MSCP covered) and white-tailed kite (CDFW fully protected species), may nest or winter in the CPU area. The golden eagle requires vast foraging areas in grassland, broken chaparral, or sage scrub. It nests in cliffs and trees.

### **5.3.3.6 Other MSCP Covered Species**

Southern California rufous-crowned sparrow is a CDFW watch list and MSCP covered species that occupies coastal sage scrub, chaparral and grassland.

### **5.3.3.4 Other Non-covered Sensitive Species**

These include species listed or considered sensitive but are not covered in the City's MSCP: great egret; black-crowned night heron; prairie falcon (CDFW watch list; federal bird of conservation concern); California horned lark (CDFW watch list) in addition to the species listed above.

## **5.4 Jurisdictional Waters/Wetlands**

Wetlands habitats in the CPU area consist primarily of vernal pools, basins with fairy shrimp, freshwater marsh, alkali seep, and riparian habitat. Figure 9 illustrates the locations of potential impacts to these categories of wetlands with implementation of the CPU.

The City of San Diego's Biology Guidelines, ESL Regulations, and MSCP Subarea Plan require, in general, that impacts to wetlands, which include vernal pools, shall be avoided and that a sufficient buffer shall be maintained around all wetlands to protect wetland functions and values. In the case of vernal pools, avoidance includes maintaining a sufficient amount of the pool's watershed area necessary for its continued viability and providing a buffer around the vernal pool to protect wetland functions and

values. Buffer distances are typically 100 feet, but in some cases, a lesser buffer may be approved provided it can be demonstrated that the functions and values of the wetland are not compromised.

Projects with proposed impacts to wetlands in the City of San Diego require a deviation from the ESL Regulations. Wetland impacts may be considered under the following three options: the Essential Public Projects, Economic Viability Option, or Biologically Superior Option. Under the wetland deviation process for the Essential Public Projects and Economic Viability Options impacts must be avoided, but if not feasible, then impacts must be minimized to the maximum extent practicable. Under the wetland deviation process for the Biologically Superior Option, only wetland resources of low biological quality may be impacted and must result in a biologically superior outcome. The assessment of low biological quality would be specific to the resource type impacted (e.g., vernal pools, riparian, and unvegetated channels), and shall include consideration of the following factors: use of the wetland by federal and/or state endangered, threatened, sensitive, rare and/or other indigenous species, diversity of native flora and fauna enhancement or restoration potential, habitat function/ecological role, connectivity to other wetland or upland systems, hydrologic functions, status of watershed, and source and quality of water. In addition, impacts to vernal pools would require special assessments as noted in Section 5.4.1.

Impacts to wetlands would be considered significant, but could be mitigated for at the project level. Projects with any proposed impacts to wetlands must clearly demonstrate that: (1) there is no least environmentally damaging alternative that would reduce/avoid the impact; (2) impacts are minimized to the maximum extent possible; and (3) impacts are fully mitigated in accordance with the City of San Diego's Biology Guidelines.

### **5.4.1 Vernal Pools**

Vernal pools and basins with fairy shrimp occur throughout the CPU area. As mentioned previously, basins with fairy shrimp may be considered vernal pools or road ruts and must be based on protocol surveys. Project-specific analysis would be required for proposed future projects during project approval to determine what agencies (City, USFWS, RWQCB, USACE, or CDFW) have regulatory authority over vernal pools and basins with fairy shrimp.

Implementation of the CPU has potential to impact up to 2.95 acres of vernal pools and 0.7 acre of basins with fairy shrimp. It is recognized that as future development projects come forward, the impacts could be lessened or avoided depending on site-specific project designs.

Impacts to vernal pools and basins with fairy shrimp would require a deviation from the City of San Diego's ESL Regulations. The vernal pools which could be impacted would

require the following assessments: presence of vernal pool flora and fauna, information on hydrology, determination of habitat function, and restoration potential. In addition, protocol fairy shrimp surveys would be required for all vernal pools to determine the presence or absence of these species. Impacts to fairy shrimp would require authorization under a Section 10(a)1(A) permit or Section 7 consultation from the USFWS.

A draft vernal pool HCP is currently being prepared by the City and Wildlife Agencies. The vernal pool HCP will propose vernal pool preserve areas for conservation as well as vernal pool areas with potential for development. If adopted, the City would have “take” authority for fairy shrimp occurring within the vernal pool HCP areas. Impacts to vernal pool HCP areas would be required to comply with the City of San Diego’s ESL Regulations.

## **5.4.2 Other Jurisdictional Wetlands**

Implementation of the CPU has potential to result in impacts to both wetland and non-wetland streambed waters regulated by the USACE, CDFW, RWQCB, and City of San Diego. In addition, the USFWS would be involved under Section 7 of the FESA during consultation initiated by the USACE during the 404 permit process if federal listed species are present. If there is no federal nexus to jurisdictional waters then a Section 10(A) authorization from USFWS would be required to cover any potential affects to federal listed species. There is also the potential for additional unmapped non-wetland waters of the U.S. and streambeds to occur within the project area. Future development has the potential to result in disturbances to habitat and drainages that are under the jurisdiction of the USACE according to Section 404 of the Clean Water Act, RWQCB in accordance with Section 401 of the Clean Water Act, and CDFW under Section 1600 of the Fish and Wildlife Code. In addition, impacts to wetlands would require a deviation from the City of San Diego’s ESL Regulations. Wetland and jurisdictional impacts would be determined at the project level and would require subsequent environmental review. It is recognized that as future development projects come forward, the impacts could be lessened or avoided depending on site-specific project designs. All impacts to wetlands are considered significant.

## **5.5 Wildlife Movement Corridors**

Wildlife movement within the CPU area focuses on the canyon areas which are part of the adopted MHPA open space system. This MHPA network in the Otay Mesa area, along with the City of Chula Vista’s and County’s MSCP Subarea Preserve Areas which are contiguous to the northeast portion of the CPU, is planned to link to the regionally significant Otay River Valley. Dennery and Spring canyons and the smaller canyons along the northern boundary that drain into Otay River Valley are key local components



of the wildlife movement corridors within the MHPA network. The CPU maintains the planned habitat linkage corridors of the MHPA in terms of location and acreage; however, CPU Mobility Element roads, utility lines, and/or temporary construction activities are within the MHPA and have potential to impact wildlife movement directly as a result of habitat loss or fragmentation. Additionally, as shown on Figure 7, some of these lands have been conserved.

Several of the community plan roads are planned within, adjacent to or would cross MHPA and SanGIS Conserved Lands Database. These roads are currently in various stages of development and include the following:

- The Beyer Boulevard alignment would run along Moody Canyon within the MHPA.
- Airway Road would cross the northern tip of the Spring Canyon within the MHPA and connect with Heritage/Otay Valley Road.
- Otay Mesa Road, Ocean View Hills Parkway, and Del Sol Boulevard would cross Moody Canyon within the MHPA.
- Dennery Road would run through the Dennery Canyon within the MHPA.
- The northern extension of Heritage/Otay Valley Road would extend into the Otay River Valley and run along the edge of a portion of the MHPA within the CPU area. Heritage Road would cross the Spring Canyon within the MHPA.
- Portions of La Media Road and Siempre Viva Road would run close to MHPA areas but would not cross them.

According to the MSCP Subarea Plan, roads in the MHPA are limited to Community Plan Circulation Element roads, collector streets, and necessary maintenance/emergency access roads. The MSCP identifies several policies aimed at protecting the integrity of the wildlife corridors. Such policies address minimizing disruption caused by construction and staging areas; avoiding canyon bottoms and allowing wildlife movement through use of bridges or culverts where roads cross the MHPA; narrowing of roads to minimize habitat fragmentation and disruption of wildlife movement; and placing roads in lower quality habitat or disturbed areas to the extent possible.

## **5.6 Multi-Habitat Planning Area**

As designated in the City's MSCP Subarea Plan, the MHPA is the permanent preserve area for habitat conservation. In the CPU area, the MHPA is primarily a network of canyons and drainages that connect to the Otay River Valley (off-site; see Figure 7).

Overall, the MHPA in the Otay Mesa area supports sensitive habitats (coastal sage scrub, maritime succulent scrub, wetlands, vernal pools) and significant populations of MSCP covered species, both plant and wildlife. Direct impacts to the MHPA are summarized in Table 7. In addition, lands within the MHPA that have not been preserved as open space have the potential for a 25 percent loss in the least sensitive area due to allowable encroachment under the MSCP.

### **5.6.1 MHPA Consistency**

The CPU is generally consistent with the currently designated MHPA preserve areas. As mentioned previously, several roads included on the CPU circulation plan would be within or cross the MHPA. The MSCP limits roads in the MHPA to those identified in community plan circulation element, collector streets essential for area circulation, and necessary maintenance/emergency access roads. Local streets should not cross the MHPA except where needed to access isolated development areas. The MSCP provides additional policies relating to the construction of roads to minimize impacts and fragmentation of sensitive species and habitat.

Other allowed uses outlined in Section 6.2 of the MSCP include: (1) existing uses, (2) public access and recreation, (3) infrastructure, scientific and biologic activities, and (4) emergency, safety and police services. The MSCP provides specific requirements relating to the implementation of these allowed uses. All activities must be consistent with the MSCP Subarea Plan. Impacts from these allowed uses would be determined at the project level and would require subsequent environmental review.

A MHPA Boundary Line Correction was approved by the City and Wildlife Agencies on March 13, 2013. Due to a mapping registration error, the MHPA was mapped over 3.7 acres of existing development permitted as part of the International Business Center Project (EQD No. 86-0535), which was approved in the late 1980s. The MHPA boundary was shifted to the south in order to remove the approved developed area and to add the 10.8 acres in Wruck Canyon that had been conserved as part of the International Business Center Project. The correction resulted in a net gain of 7.1 acres within the MHPA.

### **5.6.2 MHPA Boundary Adjustments**

MHPA boundary adjustment(s) may be proposed as part of future development within the CPU area. The City's MSCP allows for adjustments to the MHPA boundary without the need to amend the Subarea Plan, provided the boundary adjustment results in an area of equivalent or higher biological value. Six functional equivalency criteria must be met for a boundary adjustment. Any MHPA boundary adjustments would require concurrence from the Wildlife Agencies. Any necessary MHPA boundary adjustments and functional equivalencies would be addressed at the time future development

proposals are brought forward pursuant to an adopted CPU. Potential impacts to the MHPA preserve configuration as a result of MHPA boundary adjustments would not be considered significant, because the adjustment must meet the required equivalency criteria from the Wildlife Agencies and obtain approval.

### **5.6.3 MHPA Land Use Adjacency Guidelines**

The MHPA has been designed to maximize conservation of sensitive biological resources, including sensitive species. When land is developed adjacent to the MHPA, there is a potential for secondary impacts that may degrade the habitat value or disrupt animals within the preserve area. These secondary effects of project development may include habitat insularization, drainage/water quality impacts, lighting, noise roadkill, exotic plant species, nuisance animal species, and human intrusion. These impacts could be short-term resulting from construction activities, or long-term. Short-term construction impacts could result in disruption of nesting and breeding thus affecting the population of sensitive species. To address these concerns, the MSCP includes a set of MHPA Land Use Adjacency Guidelines that are to be evaluated and implemented at the project level.

Indirect effects can occur wherever development and human activity is adjacent to natural areas. These effects include those due to increased runoff, trampling and removal of plant cover due to hiking, biking and other human activities, increased presence of toxins, increased nighttime light levels, and redirection or blockage of wildlife movement, increased levels of non-native and invasive plants. These indirect effects could reduce the quality of the MHPA. The Land Use Adjacency Guidelines require certain measures to be incorporated in the design of projects adjacent to the MHPA to reduce indirect impacts to a level that is less than significant.

As implementation of the CPU would introduce land uses adjacent to MHPA, this is a potentially significant impact. Future development proposals would be required to address indirect impacts and incorporate the Land Use Adjacency Guidelines.

### **5.6.4 Specific Management Directives for Otay Mesa**

The MSCP envisions “a network of open and relatively undisturbed canyons containing a full ensemble of native species which provide functional wildlife habitat and movement capability.” Specific Management Directives are aimed at carrying out this vision and include measures to protect sensitive species, limit access into the canyons, provide wildlife crossing under Otay Mesa Road/SR-905, and address regeneration and restoration. The CPU would be generally consistent with the vision of the Otay Mesa MHPA; therefore, there are no significant, direct impacts anticipated to the MHPA.

## **5.7 Cumulative Impacts**

Preservation of the region's biological resources has been addressed through the implementation of regional habitat conservation plans (i.e., MSCP). Impacts to biological resources in the City of San Diego, the County of San Diego, and the City of Chula Vista are managed through the adopted MSCP Subarea Plans.

Cumulative impacts from the project were evaluated with regards to past, present, and future projects within the local area. Eight city-wide and regional plans were identified for the evaluation of cumulative impacts: the City of San Diego General Plan; the City of San Diego MSCP Subarea Plan; the SANDAG RCP; the City of Chula Vista General Plan; the City of Chula Vista General Development Plan and Otay Ranch Specific Area Plan Amendment; the County of San Diego East Otay Mesa Specific Plan; the County of San Diego MSCP South County Subarea Plan; and the Chula Vista MSCP Subarea Plan. All but the City of Chula Vista General Development Plan and Otay Ranch Specific Area Plan Amendment of the aforementioned citywide and regional plans were determined to have significant biological impacts. The area of analysis extends, as appropriate, beyond the City's MSCP and into adjacent jurisdictions for this cumulative impacts analysis and are discussed by resource area below.

### **5.7.1 Sensitive Biological Resources**

The CPU would result in significant cumulative impacts to sensitive biological resources, such as vegetation communities, plants, and wildlife. These cumulative impacts are discussed in detail below.

#### **5.7.1.1 Sensitive Vegetation Communities**

Direct and indirect impacts to riparian and natural communities within the CPU area would contribute to the cumulative loss of these sensitive vegetation types in San Diego County. Thus, impacts of the CPU in conjunction with the aforementioned city-wide and regional plans to sensitive vegetation communities would be considered a cumulative significant impact. The incremental contributions of the CPU to those cumulative impacts would be cumulatively considerable. Implementation of the CPU policies and future compliance with established development standards contained in the City's ESL Regulations and Biology Guidelines as well as the MSCP Subarea Plan and Land Use Adjacency Guidelines would serve to reduce impacts to a degree, but cannot guarantee that cumulative project-level impacts would be avoided or mitigated to a level less than significant. Because the extent of future development projects is unknown at this time, the degree of impact and applicability, feasibility, and success of mitigation measures cannot be accurately known for each specific future project at this program level of analysis. The CPU would, therefore, result in a cumulatively considerable impact to sensitive vegetation communities.

### **5.7.1.2 Sensitive Plants**

The direct and indirect impacts presented above in subchapter 5.3.2 for sensitive plant species would add to the cumulative impacts to these species primarily through habitat loss and to a lesser extent through the potential loss of individuals of these species that occur within the CPU area. Thus, impacts of the CPU in conjunction with the aforementioned city-wide and regional plans to sensitive plants would be considered a cumulative significant impact. The incremental contributions of the CPU to those cumulative impacts would be cumulatively considerable. Implementation of the CPU policies and future compliance with established development standards contained in the City's ESL Regulations and Biology Guidelines as well as the MSCP Subarea Plan and Land Use Adjacency Guidelines would serve to reduce impacts to a degree, but cannot guarantee that cumulative project-level impacts would be avoided or mitigated to a level less than significant. Because the extent of future development projects is unknown at this time, the degree of impact and applicability, feasibility, and success of mitigation measures cannot be accurately known for each specific future project at this program level of analysis. The CPU would, therefore, result in a cumulatively considerable impact to sensitive plant species.

### **5.7.1.3 Sensitive Wildlife**

The direct and indirect impacts presented above in subchapter 5.3.3 for sensitive wildlife species would add to the cumulative impacts to these species primarily through habitat loss and to a lesser extent through the potential loss of individuals of these species that occur within the CPU area. Loss of upland habitat resulting from future development implemented in accordance with the CPU would contribute to a cumulative loss of raptor foraging areas, including grasslands that support burrowing owl. The loss of large areas of non-native grassland could have a significant cumulative effect on the burrowing owl population in the Otay Mesa area as this is the preferred habitat for the species.

Thus, impacts of the CPU in conjunction with the aforementioned city-wide and regional plans to sensitive wildlife would be considered a cumulative significant impact. The incremental contributions of the CPU to those cumulative impacts would be cumulatively considerable. Implementation of the CPU policies and future compliance with established development standards contained in the City's ESL Regulations and Biology Guidelines as well as the MSCP Subarea Plan and Land Use Adjacency Guidelines would serve to reduce impacts to a degree, but cannot guarantee that cumulative project-level impacts would be avoided or mitigated to a level less than significant. Because the extent of future development projects is unknown at this time, the degree of impact and applicability, feasibility, and success of mitigation measures cannot be accurately known for each specific future project at this program level of analysis. The CPU would, therefore, result in a cumulatively considerable impact to sensitive wildlife species.

## **5.7.2 Jurisdictional Waters/Wetlands**

The direct and indirect impacts to federal, state, and County jurisdictional waters and wetlands from the project would add to the cumulative loss of jurisdictional waters and wetlands in the County of San Diego. Thus, cumulative impacts of the CPU in conjunction with the aforementioned city-wide and regional plans to jurisdictional waters and wetlands would be considered a cumulatively significant impact. The incremental contributions of the CPU to those cumulative impacts would be cumulatively considerable. Implementation of the CPU policies and future compliance with established development standards contained in the City's ESL Regulations and Biology Guidelines as well as the MSCP Subarea Plan and Land Use Adjacency Guidelines would serve to reduce impacts to a degree, but cannot guarantee that cumulative project-level impacts would be avoided or mitigated to a level less than significant. Because the extent of future development projects is unknown at this time, the degree of impact and applicability, feasibility, and success of mitigation measures cannot be accurately known for each specific future project at this program level of analysis. The CPU would, therefore, result in a cumulatively considerable impact to jurisdictional waters and wetlands.

## **5.7.3 Wildlife Movement Corridors**

Direct and indirect impacts to wildlife movement corridors within the CPU area would generally contribute to the cumulative impacts to local wildlife movement. Thus, cumulative impacts of the CPU in conjunction with the aforementioned city-wide and regional plans to wildlife movement corridors would be considered a cumulatively significant impact. The incremental contributions of the CPU to those cumulative impacts would be considered a cumulatively significant impact. The CPU maintains the planned habitat linkage corridors of the MHPA in terms of location and acreage; however, CPU Circulation Element roads, utility lines, and/or temporary construction activities within the MHPA have potential to impact wildlife movement directly as a result of habitat loss or fragmentation. Implementation of the CPU policies and future compliance with established development standards contained in the MSCP Subarea Plan's General Planning Policies and Design Guidelines would serve to reduce impacts to a degree, but cannot guarantee that all cumulative project-level impacts would be avoided or mitigated to a level less than significant. Because the extent of future development projects is unknown at this time, the degree of impact and applicability, feasibility, and success of mitigation measures cannot be accurately known for each specific future project at this program level of analysis. The CPU would, therefore, result in a cumulatively considerable impact to wildlife movement corridors.

## **5.7.4 Multi-Habitat Planning Area**

Any modification to the MHPA boundaries would be required to result in equal or better biological values and would not result in significant direct or indirect impacts associated with environmental or habitat conservation plans; direct and indirect impacts to sensitive vegetation communities and species as a result of MHPA boundary adjustments would generally not contribute to cumulative impacts to the long-term conservation of biological resources as described in the MSCP. Thus, cumulative impacts of the CPU in conjunction with the aforementioned city-wide and regional plans to the long-term conservation of biological resources as described in the MSCP would not be considered a cumulatively significant impact.

Implementation of the CPU policies and future compliance with established development standards contained in the City's ESL Regulations, Biology Guidelines, and other applicable regulations as well as the MSCP Subarea Plan's Land Use Adjacency Guidelines, Management Policies and Directives, and Area Specific Management Directives would serve to reduce impacts to below a level of significance.

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## 6.0 Mitigation Framework

Mitigation is required for impacts that are considered significant under the City of San Diego's Biology Guidelines (2012) and the City of San Diego's Development Services Department CEQA Significance Determination Thresholds (2011b). All impacts to sensitive biological resources should be avoided to the maximum extent feasible and minimized when avoidance is not possible. Where impacts are not avoidable or cannot be minimized, mitigation is required to reduce significant impacts to a level of less than significant. Mitigation measures typically employed include resource avoidance, restoration or creation of habitat, dedication or acquisition of habitat, or payment of monies into the City of San Diego's Habitat Acquisition Fund. Mitigation measures would be determined and implemented at the project level. Adherence to the recommendations below is anticipated to minimize impacts to sensitive biological resources.

To reduce potentially significant impacts that would cause a reduction in the number of unique, rare, endangered, sensitive, or fully protected species of plants or animals, if present within the CPU area, all subsequent projects developed in accordance with the CPU shall be analyzed in accordance with the CEQA Significance Thresholds, which require that site-specific biological resources surveys be conducted in accordance with City of San Diego Biology Guidelines (2012). The locations of any sensitive plant species, including listed, rare, and narrow endemic species, as well as the potential for occurrence of any listed or rare wildlife species shall be recorded and presented in a biological resources report. Based on available habitat within CPU area, focused presence/absence surveys shall be conducted in accordance with the biology guidelines and applicable resource agency survey protocols to determine the potential for impacts resulting from the project on these species. Engineering design specifications based on project-level grading and site plans shall be incorporated into the project design to minimize or eliminate direct impacts on sensitive plant and wildlife species consistent with the FESA, MBTA, Bald and Golden Eagle Protection Act, California Endangered Species Act (CESA), MSCP Subarea Plan, and ESL Regulations.

In addition, a preliminary or final jurisdictional wetlands delineation shall be completed following the methods outlined in the USACE 1987 Wetlands Delineation Manual and the Regional Supplement to the Corps of Engineers Delineation Manual for the Arid West Region (2008). A determination of the presence/absence and boundaries of any Waters of the U.S. and Waters of the State shall also be completed following the appropriate USACE guidance documents for determining Ordinary High Water Mark (OHWM) boundaries. The limits of any riparian habitats on-site under the sole jurisdiction of CDFW shall also be delineated, as well as any special aquatic sites (e.g., vernal pools) that may not be within the USACE jurisdiction under the Clean Water Act or meet other federal jurisdictional criteria but are regulated by the FESA, CESA,, and/or

RWQCB. The City no longer has coverage for vernal pools containing sensitive species. A USFWS permit would be required if impacts to vernal pools with sensitive species or basins with fairy shrimp were to occur.

## **6.1 Sensitive Vegetation Communities**

Projects proposing impacts on sensitive upland Tier I, II, IIIA, or IIIB habitats shall implement avoidance and minimization measures consistent with the City's Biology Guidelines (Table 2 – presented as Table 8 in this mitigation framework) and provide suitable mitigation in accordance with the MSCP Subarea Plan. Engineering design specifications based on project-level grading and site plans shall be incorporated into the project design to minimize direct impacts on sensitive vegetation communities including but not limited to riparian habitats, wetlands, oak woodlands, coastal sage scrub, and chaparral consistent with federal, state, and City guidelines. Any required mitigation for impacts on sensitive vegetation communities shall be outlined in a conceptual mitigation plan following the outline provided in the City's Biology Guidelines.

Mitigation for impacts to sensitive vegetation communities would be implemented at the time future development projects are proposed. Project-level analysis would determine whether the impacts are within or outside of the MHPA. Any MHPA boundary adjustments would be processed by the individual project applicants through the City and Wildlife Agencies during the early project planning stage.

Mitigation for impacts to sensitive upland habitats and wetlands would occur in accordance with the MSCP mitigation ratios as specified within the City's Biology Guidelines (City of San Diego 2012). These mitigation ratios are based on Tier level of the vegetation community, wetland type, the location of the impact and the location of the mitigation site(s). For example, impacts to lands inside of an MHPA and mitigated outside an MHPA would have the highest mitigation ratio whereas impacts to lands outside an MHPA and mitigated inside an MHPA would have the lowest mitigation ratio.

Subsequent activities (e.g., future development projects) would need to evaluate the specific impacts and proposed mitigation to determine the level of mitigation required.

Mitigation for impacts to conserved lands from circulation element roads (i.e., Beyer Boulevard, Airway Road, and Del Sol Boulevard) would be based on the Tier habitat as required by the City's Biology Guidelines. However, an additional 1:1 ratio would be added to the City required mitigation ratio in order to replace the lands that were previously preserved as open space. Mitigation lands purchased to compensate for impacts to areas within conserved lands must be located in the Otay Mesa area if feasible.

**TABLE 8  
MITIGATION RATIOS FOR IMPACTS TO UPLAND VEGETATION COMMUNITIES  
AND LAND COVER TYPES**

Tier	Habitat Type	Mitigation Ratios			
TIER 1 (rare uplands)	Southern Foredunes Torrey Pines Forest Coastal Bluff Scrub Maritime Succulent Scrub Maritime Chaparral Scrub Oak Chaparral Native Grassland Oak Woodlands	Location of Preservation			
				Inside	Outside
		Location of Impact	Inside*	2:1	3:1
			Outside	1:1	2:1
TIER II (uncommon uplands)	Coastal Sage Scrub (CSS) CSS/Chaparral	Location of Preservation			
				Inside	Outside
		Location of Impact	Inside*	1:1	2:1
			Outside	1:1	1.5:1
TIER III A (common uplands)	Mixed Chaparral Chamise Chaparral	Location of Preservation			
				Inside	Outside
		Location of Impact	Inside*	2:1	3:1
			Outside	1:1	2:1
TIER III B (common uplands)	Non-Native Grasslands	Location of Preservation			
				Inside	Outside
		Location of Impact	Inside*	1:1	1.5:1
			Outside	0.5:1	1:1

**Notes:**

For all Tier I impacts, the mitigation could (1) occur within the MHPA portion of Tier I (in Tier) or (2) occur outside of the MHPA within the affected habitat type (in-kind).

For impacts on Tier II, IIIA, and IIIB habitats, the mitigation could (1) occur within the MHPA portion of Tiers I – III (out-of-kind) or (2) occur outside of the MHPA within the affected habitat type (in-kind). Project-specific mitigation will be subject to applicable mitigation ratios at the time of project submittal.

## 6.2 Sensitive Plants

Prior to any grading or vegetation clearing for future projects in the CPU area, focused rare plant surveys shall be conducted during the appropriate time of year to optimize detection of potentially occurring rare plants. An impact assessment and mitigation plan would be prepared and implemented in accordance with the MSCP and City Biology Guidelines. Mitigation for impacts to rare plant species shall be in accordance with established MSCP mitigation ratios as specified within the City’s Biology Guidelines (City of San Diego 2012).

## **6.3 Sensitive Wildlife**

At the time subsequent activities and future development proposals are brought forward pursuant to the adopted CPU, projects shall be analyzed in accordance with the CEQA Significance Thresholds and mitigation requirements and protocols would be required to ensure that impacts to sensitive species are reduced to below a level of significance. This includes site-specific biological resources surveys and a biological survey report that identifies any direct or indirect impacts to wildlife, including impacts to wildlife movement or habitat, as required by the City's Biology Guidelines (2012). Mitigation measures may include the following:

### **6.3.1 Fairy Shrimp**

Prior to the issuance of grading permits for future projects in the CPU area, protocol surveys shall be completed to confirm the presence/absence of San Diego fairy shrimp and/or Riverside fairy shrimp. If San Diego fairy shrimp and/or Riverside fairy shrimp are identified on-site, authorization for take of the species shall be obtained from the USFWS prior to impacts to the species or its occupied habitat. A draft vernal pool HCP is currently being prepared by the City in coordination with the Wildlife Agencies. If adopted, the City would have "take" authority for fairy shrimp occurring within the vernal pool HCP areas. Mitigation for impacts to fairy shrimp within the vernal pool HCP areas would be required to comply with the vernal pool HCP.

Direct impacts to vernal pool habitat and species may also require permits from USACE, RWQCB, and CDFW. Any required permits shall be obtained prior to issuance of any construction permits in areas impacting fairy shrimp or vernal pool habitat or species. Mitigation shall be determined at the project level and be developed in consultation with the City of San Diego and Wildlife Agencies.

### **6.3.2 Quino Checkerspot Butterfly**

Prior to the issuance of construction permits for future projects in the CPU area, protocol surveys shall be completed to confirm the presence/absence of the Quino checkerspot butterfly. If the species is not identified, then no mitigation would be required. If the butterfly is identified on-site, authorization for take of the species shall be obtained from the USFWS prior to impacts to the species or its occupied habitat. If authorization is obtained, mitigation measures such as the avoidance of occupied habitat and/or the acquisition of occupied habitat shall be developed in consultation with the USFWS and the City of San Diego.

### **6.3.3 Coastal California Gnatcatchers**

Prior to the issuance of construction permits for future projects in the CPU area, protocol surveys shall be completed in suitable habitat for the coastal California gnatcatcher. If the species is determined to occupy the site, the loss of occupied habitat shall be mitigated for in accordance with the City of San Diego's Biology Guidelines and MSCP Subarea Plan.

### **6.3.4 Sensitive Nesting Species**

To reduce potentially significant impacts that would interfere with the nesting, foraging, or movement of wildlife species within the CPU area, all future projects implemented shall be analyzed in accordance with the CEQA Significance Thresholds, which require that site-specific biological resources surveys be conducted in accordance with City of San Diego Biology Guidelines. The limits of any identified local-scale wildlife corridors or habitat linkages shall be identified and analyzed in relation to local fauna, and the conversion of vegetation communities (e.g., nonnative grassland to riparian or agricultural to developed) shall be analyzed for its effects. Engineering design specifications based on project-level grading and site plans shall be incorporated into the project design to minimize direct impacts on sensitive wildlife species and to provide for continued wildlife movement through the corridor. Measures that shall be incorporated into project level construction activities to address wildlife movement prior to issuance of any grading permits shall include the following.

- If project grading is proposed during the raptor breeding season (February 1 to September 15), the project biologist shall conduct a pre-grading survey for active raptor nests within 300 feet of the development area and submit a letter report to MMC prior to the preconstruction meeting. If active raptor nests are detected, the report shall include mitigation in conformance with the City's Biology Guidelines (i.e., appropriate buffers, monitoring schedules, etc.) to the satisfaction of the City's Environmental Department. Mitigation requirements determined by the project biologist shall be incorporated into the project's Biological Construction Monitoring Exhibit, and monitoring results shall be incorporated into the final biological construction monitoring report. If no nesting raptors are detected during the pre-grading survey, no mitigation is required. Pre-grading clearance surveys shall be completed as required to comply with the FESA, MBTA, Bald and Golden Eagle Protection Act, State Fish and Game Code, and/or ESL Regulations.
- Prior to the issuance of any construction permit during the nesting season for other sensitive birds (cactus wren, February 15-August 15; least Bell's vireo, March 15-September 15; coastal California gnatcatcher, March 1-August 15; burrowing owl February 1-August 31), the City Manager (or appointed designee)

shall verify that the MHPA boundaries and the following project requirements regarding nesting cactus wren, least Bell's vireo, burrowing owl, and/or coastal California gnatcatcher are shown on the construction plans:

No clearing, grubbing, grading, or other construction activities shall occur during the breeding seasons for cactus wren, least Bell's vireo, and/or coastal California gnatcatcher, until the following requirements have been met to the satisfaction of the City Manager:

- A. A Qualified Biologist (possessing a valid Endangered Species Act Section 10(a)(1)(a) Recovery Permit) shall survey those habitat areas within the MHPA that would be subject to construction noise levels exceeding 60 decibels [dB(a)] hourly average for the presence of cactus wren, least Bell's vireo, and/or coastal California gnatcatcher. Surveys for cactus wren, least Bell's vireo, and/or coastal California gnatcatcher shall be conducted pursuant to the protocol survey guidelines established by the U.S. Fish and Wildlife Service within the breeding season prior to the commencement of any construction. If any of the aforementioned species are present, then the following conditions must be met:
  - I. Between breeding seasons for cactus wren, least Bell's vireo, and/or coastal California gnatcatcher, no clearing, grubbing, or grading of occupied habitat shall be permitted. Areas restricted from such activities shall be staked or fenced under the supervision of a Qualified Biologist; and
  - II. During the breeding seasons for cactus wren, least Bell's vireo, and/or coastal California gnatcatcher, no construction activities shall occur within any portion of the site where construction activities would result in noise levels exceeding 60dB(A) hourly average at the edge of occupied habitat. An analysis showing that noise generated by construction activities would not exceed 60 dB(A) hourly average at the edge of occupied habitat must be completed by a Qualified Acoustician (possessing current noise engineer license or registrations with monitoring noise level experience with listed animal species) and approved by the City Manager at least two weeks prior to the commencement of construction activities. Prior to the commencement of construction activities during the breeding season, areas restricted from such activities shall be staked or fenced under the supervision of a Qualified Biologist; or
  - III. At least two weeks prior to the commencement of construction activities, under the direction of a qualified acoustician, noise attenuation measures (i.e., berms, walls) shall be implemented to ensure that noise levels resulting from construction activities will not exceed 60 dB(A) hourly average at the edge of occupied habitat. Concurrent with the

commencement of construction activities and the construction of necessary noise attenuation facilities, noise monitoring\* shall be conducted at the edge of the occupied habitat area to ensure that noise levels do not exceed 60 dB(A) hourly average. If noise attenuation techniques implemented are determined to be inadequate by the Qualified Acoustician or biologist, then the associated construction activities shall cease until such time that adequate noise attenuation is achieved or until the end of the breeding season.

\* Construction noise monitoring shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the construction activity, to verify that noise levels at the edge of occupied habitat are maintained below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. If not, other measures shall be implemented in consultation with the biologist and City Manager, as necessary, to reduce noise levels to below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. Such measures may include, but are not limited to, limitations on the placement of construction equipment and the simultaneous use of equipment.

- B. If cactus wren, least Bell's vireo, and/or coastal California gnatcatcher are not detected during the protocol survey, the qualified biologist shall submit substantial evidence to the City Management and applicable resource agencies which demonstrates whether or not mitigation measures such as noise walls are necessary during the breeding season as follows:
  - I. If this evidence indicates the potential is high for cactus wren, least Bell's vireo, and/or coastal California gnatcatcher to be present based on historical records or site conditions, then condition A.II or A.III shall be adhered to as specified above.
  - II. If this evidence concludes that no impacts to this species are anticipated, no further mitigation measures are necessary.

### **6.3.5 Raptors/Migratory Birds**

If project grading is proposed during the raptor breeding season (February 1 to September 15), the project biologist shall conduct a pre-grading survey for active raptor nests within 300 feet of the development area and submit a letter report to MMC prior to the preconstruction meeting. If active raptor nests are detected, the report shall include mitigation in conformance with the City's Biology Guidelines (i.e., appropriate buffers, monitoring schedules, etc.) to the satisfaction of the City's ED. In addition, work near any active nests during the breeding season must include suitable noise abatement

measures. Noise attenuation shall be required that would ensure construction noise levels at the MHPA boundary would not exceed 60 dB(A)  $L_{eq}$ . If northern harriers or golden eagle nests are found during such pre-grading survey, the 300-foot buffer for raptors shall be extended to 900 or 4,000 feet, respectively. Mitigation requirements determined by the project biologist shall be incorporated into the project's Biological Construction Monitoring Exhibit, and monitoring results shall be incorporated into the final biological construction monitoring report. If no nesting raptors are detected during the pre-grading survey, no mitigation is required. Pre-grading clearance surveys shall be completed as required to comply with the ESA, MBTA, Bald and Golden Eagle Protection Act, State Fish and Game Code, and/or ESL Regulations.

### **6.3.6 Burrowing Owls**

Prior to issuance of construction permits for future projects in the CPU area, a habitat assessment would be conducted to determine whether or not occupancy surveys are needed. Should burrowing owl habitat or sign be encountered on or within 150 meters of the project site, breeding season surveys would be conducted. If occupancy is determined, site-specific avoidance and mitigation measures would be developed in accordance with the protocol established in the Staff Report on Burrowing Owl Mitigation (CDFW 2012). Measures to avoid and minimize impacts to burrowing owl may include take avoidance (pre-construction) surveys, site surveillance, and the use of buffers, screens, or other measures to minimize impacts during project activities.

### **6.3.7 Coastal Cactus Wren**

Prior to issuance of construction permits for future projects in the CPU area, any habitat considered suitable for the presence of coastal cactus wren shall be surveyed to determine presence or absence. If the species is present mitigation measures shall include area-specific management directives contained in the MSCP for the coastal cactus wren that include the restoration of maritime succulent scrub with propagation of cactus patches within the MHPA, adaptive management of cactus wren habitat, monitoring of populations, and compliance with the MHPA Land Use Adjacency Guidelines to reduce detrimental edge effects. No clearing of occupied habitat may occur from the period of February 15 to August 15.

## **6.4 Wildlife Movement Corridors**

To reduce potentially significant impacts that would interfere with the nesting, foraging, or movement of wildlife species, all future discretionary projects implemented in accordance with the CPU shall be analyzed in accordance with the CEQA Significance Thresholds. This includes site-specific biological resources surveys and a biological survey report that identifies any direct or indirect impacts to wildlife, including impacts to



wildlife movement or habitat, as required by the City's Biology Guidelines (2012). Engineering design specifications based on project-level grading and site plans shall incorporate minimization and avoidance measures into the project design to minimize or eliminate direct impacts on wildlife movement consistent with the MSCP Subarea Plan's General Planning Policies and Design Guidelines (1997) aimed at protecting the integrity of the wildlife corridors would be incorporated.

Relevant development standards from the MSCP Subarea Plan's Construction and Maintenance Policies (1997) are as follows:

1. All proposed utility lines (e.g., sewer, water, etc.) should be designed to avoid or minimize intrusion into the MHPA. These facilities should be routed through developed or developing areas rather than the MHPA, where possible. If no other routing is feasible, then the lines should follow previously existing roads, easements, rights-of-way and disturbed areas, minimizing habitat fragmentation.
2. All new development for utilities and facilities within or crossing the MHPA shall be planned, designed, located and constructed to minimize environmental impacts. All such activities must avoid disturbing the habitat of MSCP covered species, and wetlands. If avoidance is infeasible, mitigation will be required.
3. Temporary construction areas and roads, staging areas, or permanent access roads must not disturb existing habitat unless determined to be unavoidable. All such activities must occur on existing agricultural lands or in other disturbed areas rather than in habitat. If temporary habitat disturbance is unavoidable, then restoration of, and/or mitigation for, the disturbed area after project completion will be required.
4. Construction and maintenance activities in wildlife corridors must avoid significant disruption of corridor usage. Environmental documents and mitigation monitoring and reporting programs covering such development must clearly specify how this will be achieved, and construction plans must contain all the pertinent information and be readily available to crews in the field. Training of construction crews and field workers must be conducted to ensure that all conditions are met. A responsible party must be specified.
5. Roads in the MHPA will be limited to those identified in Community Plan Circulation Elements, collector streets essential for area circulation, and necessary maintenance/emergency access roads. Local streets should not cross the MHPA except where needed to access isolated development areas.
6. Development of roads in canyon bottoms should be avoided whenever feasible. If an alternative location outside the MHPA is not feasible, then the road must be designed to cross the shortest length possible of the MHPA in order to minimize

impacts and fragmentation of sensitive species and habitat. If roads cross the MHPA, they should provide for fully-functional wildlife movement capability. Bridges are the preferred method of providing for movement, although culverts in selected locations may be acceptable. Fencing, grading and plant cover should be provided where needed to protect and shield animals, and guide them away from roads to appropriate crossings.

7. Where possible, roads within the MHPA should be narrowed from existing design standards to minimize habitat fragmentation and disruption of wildlife movement and breeding areas. Roads must be located in lower quality habitat or disturbed areas to the extent possible.
8. For the most part, existing roads and utility lines are considered a compatible use within the MHPA and therefore will be maintained. Exceptions may occur where underutilized or duplicative road systems are determined not to be necessary as identified in the Framework Management Section 1.5 [of the MSCP Subarea Plan].

Relevant development standards from the MSCP Subarea Plan's Fencing, Lighting, and Signage Policies (1997) are as follows:

- a. Fencing or other barriers will be used where it is determined to be the best method to achieve conservation goals and adjacent to land uses incompatible with the MHPA. For example, use chain link or cattle wire to direct wildlife to appropriate corridor crossings, natural rocks/boulders or split rail fencing to direct public access to appropriate locations, and chain link to provide added protection of certain sensitive species or habitats (e.g., vernal pools).
- b. Lighting shall be designed to avoid intrusion into the MHPA and effects on wildlife. Lighting in areas of wildlife crossings should be of low-sodium or similar lighting. Signage will be limited to access and litter control and educational purposes.

## **6.5 Jurisdictional Waters/Wetlands**

To reduce potential direct impacts on City, state, and federally regulated wetlands, all subsequent projects developed in accordance with the CPU, including future projects, shall be required to comply with USACE Clean Water Act Section 404 requirements and special conditions, CDFW Section 1602 Streambed Alteration Agreement (SAA) requirements and special conditions, and the City of San Diego ESL Regulations for minimizing impacts on wetlands. Achieving consistency with these regulations for impacts on wetlands and special aquatic sites would reduce potential impacts on

regulated wetlands and provide compensatory mitigation(as required) to ensure no net-loss of wetland habitats.

Prior to obtaining discretionary permits for future projects, a site-specific biological resources survey shall be completed in accordance with City of San Diego Biology Guidelines. Any required mitigation for impacts shall be outlined in a conceptual mitigation plan following the outline provided in Attachment III of the City Guidelines for Conducting Biological Surveys. In addition, a preliminary or final jurisdictional wetlands delineation of the project site shall be completed following the methods outlined in the USACE's 1987 *Wetlands Delineation Manual* and the *Regional Supplement to the Corps of Engineers Delineation Manual for the Arid West Region*. A determination of the presence/absence and boundaries of any Waters of the U.S. and Waters of the State shall also be completed following the appropriate USACE guidance documents for determining OHWM boundaries. The limits of any riparian habitats on-site under the sole jurisdiction of CDFW shall also be delineated, as well as any special aquatic sites (excluding vernal pools) that may not meet federal jurisdictional criteria but are regulated by the RWQCB. Engineering design specifications based on project-level grading and site plans shall be incorporated into the project design to minimize direct impacts on wetlands, jurisdictional waters, riparian habitats, vernal pools, etc. consistent with federal, state, and City guidelines.

Additionally, any impacts to wetlands in the City of San Diego would require a deviation from the ESL wetland regulations. Under the wetland deviation process, development proposals that have wetland impacts may be considered only pursuant to one of three options; Essential Public Projects, Economic Viability Option, or Biologically Superior Option. ESL Regulations require that impacts to wetland be avoided. Unavoidable impacts to wetlands should be minimized to the maximum extent practicable and mitigated as follows:

- As part of the project-specific environmental review pursuant to CEQA, all unavoidable wetland impacts will need to be analyzed, and mitigation will be required in accordance with ratios shown in Tables 9a and 9b. Mitigation should be based on the impacted type of wetland and project design. Mitigation should prevent any net loss of wetland functions and values of the impacted wetland.
- For the Biologically Superior Option, the project and proposed mitigation shall include avoidance, minimization, and compensatory measures, which would result in a biologically superior net gain in overall function and values of (a) the type of wetland resource being impacted and/or (b) the biological resources to be conserved. The Biologically Superior Option mitigation shall include either (1) standard mitigation per Table 9a, including wetland creation or restoration of the same type of wetland resource that is being impacted that results in high quality wetlands; and a biologically superior project design whose avoided area(s) (i) is in a configuration or alignment that optimizes the potential long-term biological

viability of the on-site sensitive biological resources, and/or (ii) conserves the rarest and highest quality on-site biological resources; or (2) for a project not considered consistent with “1” above, extraordinary mitigation per Table 9b is required.

**TABLE 9a**  
**CITY OF SAN DIEGO WETLAND MITIGATION RATIOS**  
**(with Biologically Superior Design)**

Vegetation Community	Mitigation Ratio
Riparian	2:1 to 3:1
Vernal pool*	2:1 to 4:1
Basin with fairy shrimp*	2:1 to 4:1
Freshwater marsh	2:1

\*The City currently does not have take authority for vernal pools. A draft vernal pool HCP is currently being prepared by the City in coordination with the Wildlife Agencies. If adopted, the City would have “take” authority for the vernal pool species occurring within the vernal pool HCP areas.

**TABLE 9b**  
**CITY OF SAN DIEGO WETLAND MITIGATION RATIOS**  
**(without Biologically Superior Design Outside of the Coastal Zone)**

Vegetation Community	Mitigation Ratio
Riparian	4:1 to 6:1
Vernal pool*	4:1 to 8:1
Basin with fairy shrimp*	4:1 to 8:1
Freshwater marsh	4:1

\*The City currently does not have take authority for vernal pools. A draft vernal pool HCP is currently being prepared by the City in coordination with the Wildlife Agencies. If adopted, the City would have “take” authority for the vernal pool species occurring within the vernal pool HCP areas.

As part of any future project-specific environmental review pursuant to CEQA, all unavoidable wetlands impacts (both temporary and permanent) would need to be analyzed and mitigation required in accordance with Table 3.3-4 of the City Biology Guidelines (see Table 2); mitigation must be based on the impacted type of wetland habitat. Mitigation must prevent any net loss of wetland functions and values of the impacted wetland. The following provides operational definitions of the four types of activities that constitute wetland mitigation under the ESL Regulations:

- **Wetland creation** is an activity that results in the formation of new wetlands in an upland area. An example is excavation of uplands adjacent to existing wetlands and the establishment of native wetland vegetation.
- **Wetland restoration** is an activity that re-establishes the habitat functions of a former wetland. An example is the excavation of agricultural fill from historic wetlands and the re-establishment of native wetland vegetation.

- **Wetland enhancement** is an activity that improves the self-sustaining habitat functions of an existing wetland. An example is removal of exotic species from existing riparian habitat.
- **Wetland acquisition** may be considered in combination with any of the three mitigation activities above.

Wetland enhancement and wetland acquisition focus on the preservation or the improvement of existing wetland habitat and function and do not result in an increase in wetland area; therefore, a net loss of wetland may result. As such, acquisition and/or enhancement of existing wetlands may be considered as partial mitigation only for any balance of the remaining mitigation requirement after restoration or creation if wetland acreage is provided at a minimum of a 1:1 ratio. For permanent wetland impacts that are unavoidable and minimized to the maximum extent feasible, mitigation must consist of creation of new in-kind habitat to the fullest extent possible and at the appropriate ratios. If on-site mitigation is not feasible, then at least a portion of the mitigation must occur in the same watershed. The City's Biology Guidelines and MSCP Subarea Plan require that impacts on wetlands, including vernal pools, shall be avoided, and that a sufficient wetland buffer shall be maintained, as appropriate, to protect resource functions/values. The City biology report shall include an analysis of on-site wetlands (including City, state, and federal jurisdiction analysis) and, if present, include project alternatives that fully/substantially avoid wetland impacts. Detailed evidence supporting why there is no feasible less environmentally damaging location or alternative to avoid any impacts must be provided for City staff review, as well as a mitigation plan that specifically identifies how the project is to compensate for any unavoidable impacts. A conceptual mitigation program (which includes identification of the mitigation site) must be approved by City staff prior to the release of the draft environmental document. Avoidance is the first requirement; mitigation can only be used for impacts clearly demonstrated to be unavoidable.

Prior to the commencement of any construction-related activities on-site for projects impacting wetland habitat (including earthwork and fencing) the applicant shall provide evidence of the following to the Assistant Deputy Director (ADD)/Environmental Department prior to any construction activity:

- Compliance with USACE Section 404 nationwide permit;
- Compliance with the RWQCB Section 401 Water Quality Certification; and
- Compliance with the CDFW Section 1601/1603 Streambed Alteration Agreement.

## 6.5.1 Vernal Pools

The City of San Diego no longer has federal coverage for certain vernal pool species. As of the date of surrender, April 20, 2010, the City has relinquished federal coverage and does not rely on the City's federal ITP to authorize an incidental take of the two vernal pool animal species and five vernal pool plant species. Species that have been removed from the MSCP covered species list include: San Diego fairy shrimp (*Branchinecta sandiegonensis*), Riverside fairy shrimp (*Streptocephalus woottonii*), Otay mesa mint (*Pogogyne nuduliscula*), California Orcutt grass (*Orcuttii californica*), San Diego button celery (*Eryngium aristulatum*), San Diego mesa mint (*Pogogyne abramsii*), and spreading navarretia (*Navarretia fossalis*). Upon approval of the City of San Diego Vernal Pool HCP, the City will receive take authorization for the seven vernal pool species through an ITP and associated IA by and between USFWS and CDFW.

Impacts to vernal pools would require assessments of vernal pool flora and fauna, hydrology, habitat function, and restoration potential and protocol fairy shrimp surveys, in addition to the requirements listed above. Impacts to fairy shrimp shall require either a section 10(a)1(A) permit or Section 7 consultation Biological Opinion from USFWS. If the vernal pool HCP is adopted, the City will receive take authorization for the seven vernal pool species.

Mitigation for projects impacting vernal pools within the City of San Diego shall include salvage of sensitive species from vernal pools to be impacted, introduction of salvaged material into restored vernal pool habitat where appropriate (e.g., same vernal pool series), and maintenance of salvaged material pending successful restoration of the vernal pools. Salvaged material shall not be introduced to existing vernal pools containing the same species outside the vernal pool series absent consultation with and endorsement by vernal pool species experts not associated with the project (e.g., independent expert). The mitigation sites shall include preservation of the entire watershed and a buffer based on functions and values; however, if such an analysis is not conducted, there shall be a default of a 100-foot buffer from the watershed. Restoration of vernal pools shall only be conducted within an area that has been known to historically support vernal pools. Identification and implementation of restoration in such "vernal pool preserve(s)" should occur in coordination with the City of San Diego and Wildlife Agencies. Currently, a vernal pool HCP is being prepared by the City of San Diego in coordination with the Wildlife Agencies. Future vernal pool mitigation would be required to comply with the vernal pool HCP if adopted.

## **6.6 Multi-Habitat Planning Area**

At the time future development projects are proposed, impacts to vegetation communities and sensitive species would be assessed and mitigated according to the wetland and upland ratios defined in the Land Development Manual – Biology Guidelines (City of San Diego 2012). In addition, MHPA boundary adjustments may be processed through the City in conjunction with future development proposals. Proposed boundary adjustments shall maintain the overall existing preserve configuration. In order to adjust the MHPA boundary, the applicant must demonstrate that the area to be traded for MHPA lands is equivalent or better functionally than the area requested for removal from the MHPA. There are six biological factors that shall be considered in assessing functional equivalency.

- The adjustment will increase the amount of sufficiently and significantly conserved habitat.
- The adjustment will increase habitat for MSCP covered species.
- The adjustment will not affect habitat linkages and functions of the MHPA preserved areas.
- The adjustment will improve the MHPA configuration by removing a disturbed area and adding nesting and foraging habitat to the MHPA lands.
- The adjustment will not result in a loss of ecotones or other factors that affect species diversity. The adjustment will add habitat to the MHPA.
- The adjustment will be beneficial to species that are not on the MSCP covered species list.

## **6.7 MHPA Land Use Adjacency Guideline Compliance**

Indirect impacts to the MHPA from the CPU would be mitigated for at the project level. Projects adjacent to the MHPA would incorporate features into the project and/or permit conditions that demonstrate compliance with the MHPA Land Use Adjacency Guidelines. To ensure avoidance or reduction of potential MHPA impacts resulting from land use adjacency, the following mitigation measures shall be implemented by future projects at the time of future development permit processing:

All subsequent development projects in the CPU area adjacent to designated MHPA areas shall comply with the Land Use Adjacency Guidelines of the MSCP in terms of land use, drainage, access, toxic substances in runoff, lighting, noise, invasive plant species, grading, and brush management requirements. Mitigation measures include, but are not limited to: sufficient buffers and design features, barriers (rocks,

boulders, signage, fencing, and appropriate vegetation) where necessary, lighting directed away from the MHPA, and berms or walls adjacent to commercial or industrial areas and any other use that may introduce construction noise or noise from future development that could impact or interfere with wildlife utilization of the MHPA. The project biologist for each proposed project would identify specific mitigation measures needed to reduce impacts to below a level of significance. Subsequent environmental review would be required to determine the significance of impacts from land use adjacency and compliance with the Land Use Adjacency Guidelines of the MSCP. Prior to approval of any subsequent development project in an area adjacent to a designated MHPA, the Environmental Designee of the City of San Diego and the Development Services Department shall identify the specific provisions which shall be included in the conditions of approval in order to avoid or to reduce potential impacts to adjacent MHPA to below significance.

Specific requirements shall include:

- Prior to the issuance of occupancy permits, development areas shall be permanently fenced where development is adjacent to the MHPA to deter the intrusion of people and/or pets into the MHPA open space areas. Signage may be installed as an additional deterrent to human intrusion as required by the City.
- The use of structural and nonstructural best management practices (BMPs), including sediment catchment devices, shall be required to reduce the potential indirect impacts associated with construction to drainage and water quality. Drainage shall be directed away from the MHPA or, if not possible, must not drain directly into the MHPA. Instead, runoff shall flow into sedimentation basins, grassy swales, or mechanical trapping devices prior to draining into the MHPA. Drainage shall be shown on the site plan and reviewed satisfactory to the City Engineer.
- All outdoor lighting adjacent to open space areas shall be shielded to prevent light over-spill off-site. Shielding shall consist of the installation of fixtures that physically direct light away from the outer edges of the road or landscaping, berms, or other barriers at the edge of development that prevent light over spill.
- The landscape plan for the project shall contain no exotic plant/invasive species and shall include an appropriate mix of native species which shall be used adjacent to the MHPA native habitat areas.
- All manufactured slopes must be included within the development footprint and outside the MHPA.
- All brush management areas shall be shown on the site plan and reviewed and approved by the ED. Zone 1 brush management areas must be included within the development footprint and outside the MHPA. Brush management Zone 2



may be permitted within the MHPA (considered impact neutral) but cannot be used as mitigation. Vegetation clearing shall be done consistent with City standards and shall avoid/minimize impacts to covered species to the maximum extent possible. For all new development, regardless of the ownership, the brush management in the Zone 2 area will be the responsibility of a homeowners association or other private party.

- Access to the MHPA, if any, shall be directed to minimize impacts and shall be shown on the site plan and reviewed and approved by the ED.
- Land uses, such as recreation and agriculture, that use chemicals or generate by-products such as manure, that are potentially toxic or impactful to wildlife, sensitive species, habitat, or water quality need to incorporate measures to reduce impacts caused by the application and/or drainage of such materials into the MHPA. Such measures should include drainage/detention basins, swales, or holding areas with non-invasive grasses or wetland-type native vegetation to filter out the toxic materials. Regular maintenance should be provided. Where applicable, this requirement should be incorporated into leases on publicly owned property as leases come up for renewal.

Implementation of the draft CPU policies and future compliance with established development standards and regulations would serve to reduce biological resource impacts to a degree, but cannot guarantee that all future project-level impacts would be avoided or mitigated to below a level of significance. Because the extent of future development projects is unknown at this time, the degree of impact and applicability, feasibility, and success of these measures cannot be accurately predicted for each specific project at this time. Therefore, direct and/or indirect impacts to the number of unique, rare, endangered, sensitive, or fully protected species of plants or animals, and sensitive vegetation communities (including wetlands) are considered significant and unavoidable at the Community Plan level.

## **6.8 Mitigation for Cumulative Impacts**

Mitigation measures for direct and indirect cumulative impacts to biological resources would be developed at the project level. Mitigation measures would be developed accordance with the mitigation framework identified in the PEIR and the City's Biological Guidelines, ESL Regulations, and the MSCP Subarea Plan.

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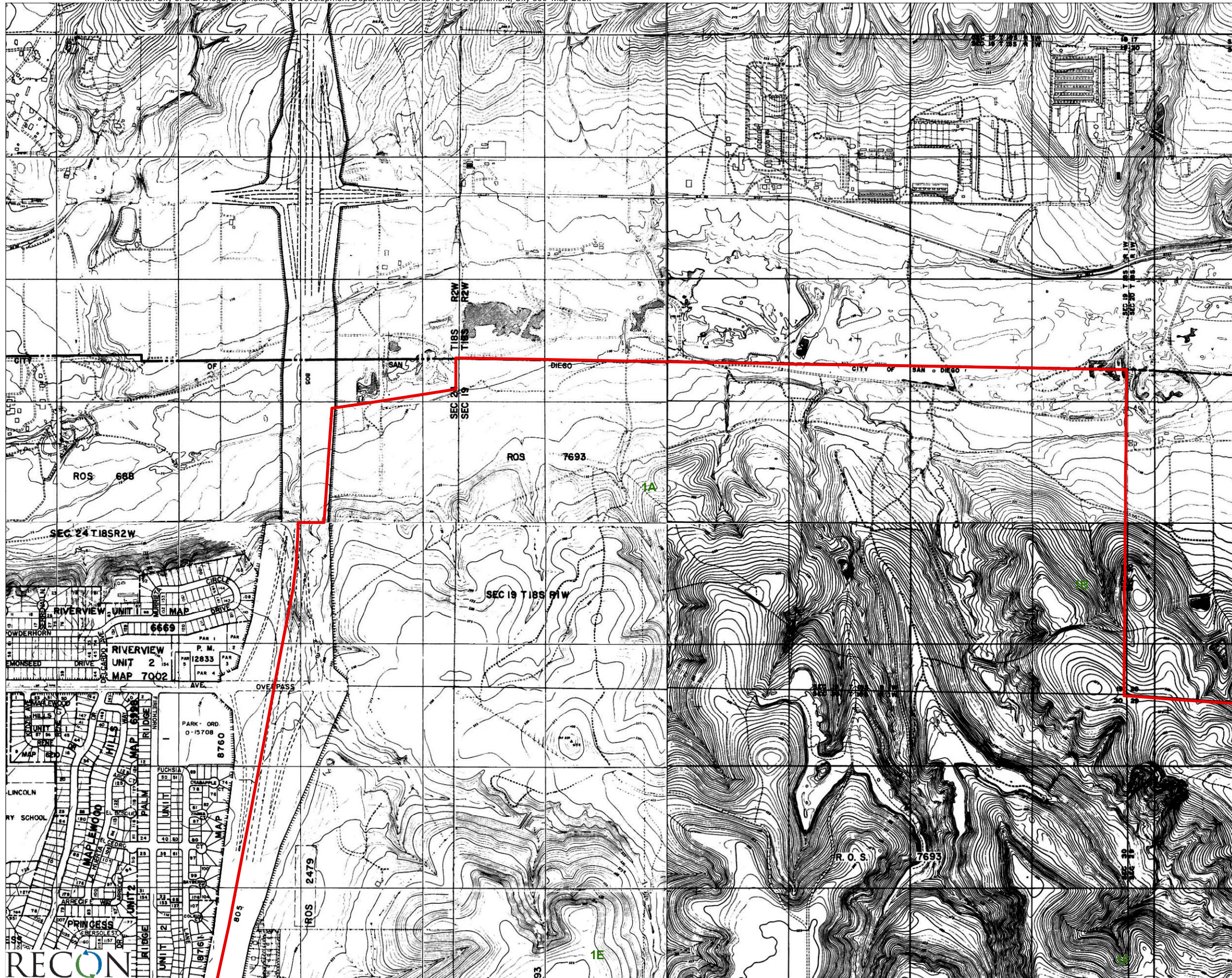
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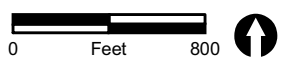
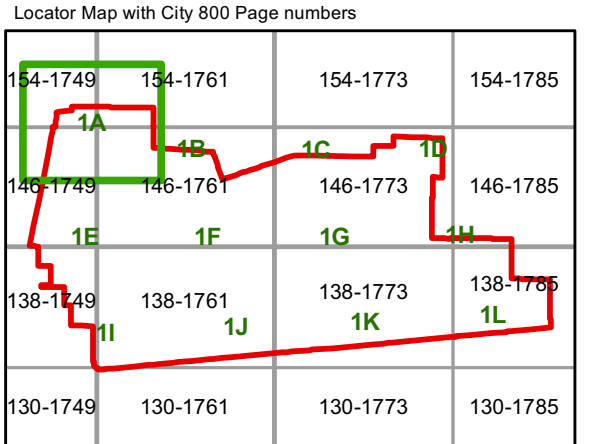
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### **Otay Mesa Community Plan Area on City 800' Map**

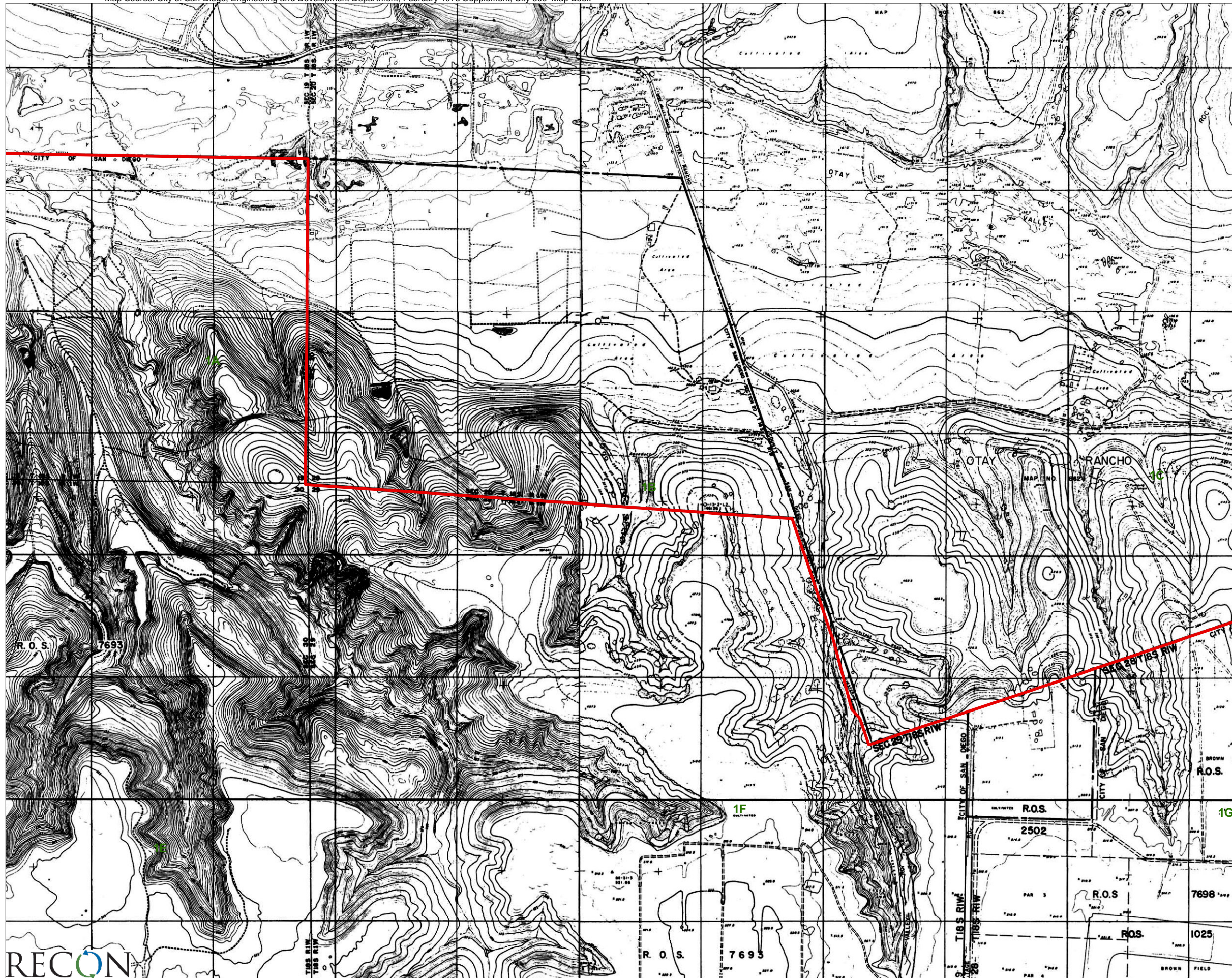
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Otay Mesa Community Plan Boundary

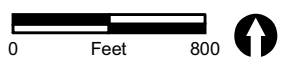
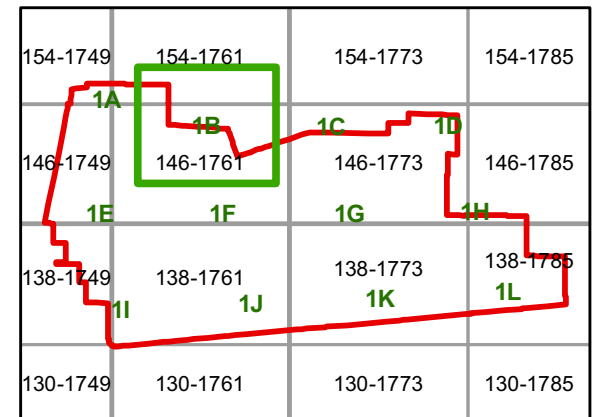


**ATTACHMENT 1A**  
 Otay Mesa Community Plan  
 Area on City 800' Map



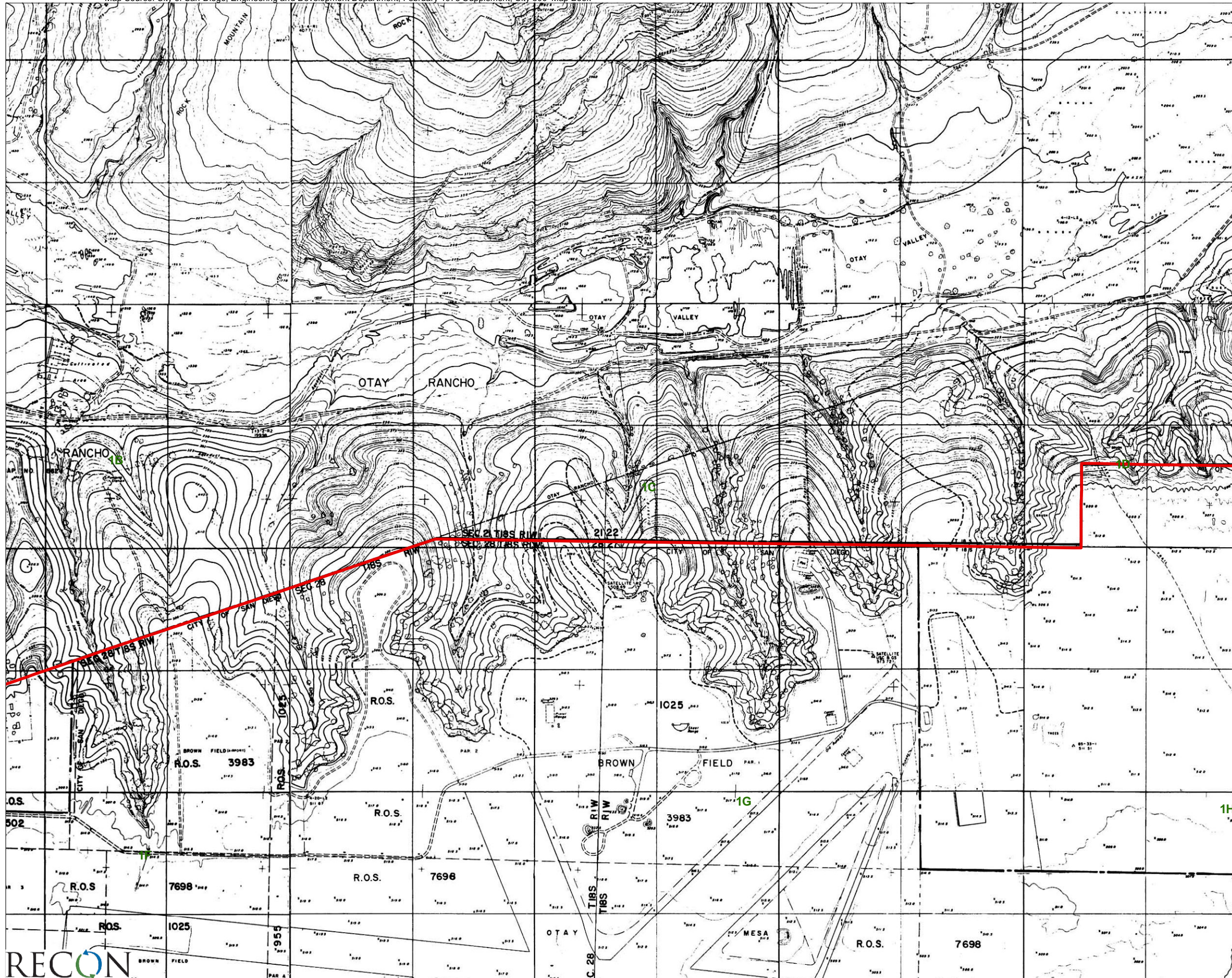
 Otay Mesa Community Plan Boundary


Locator Map with City 800 Page numbers



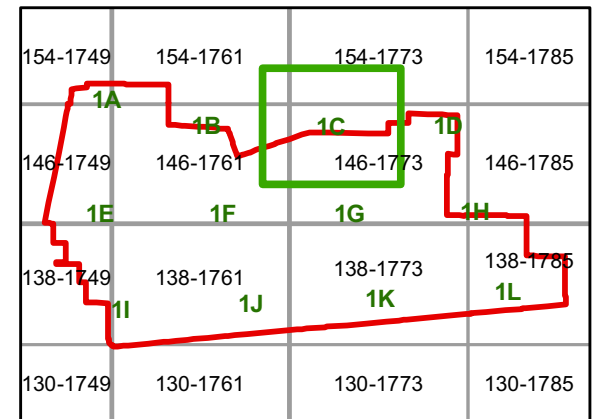
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 Otay Mesa Community Plan  
 Area on City 800' Map



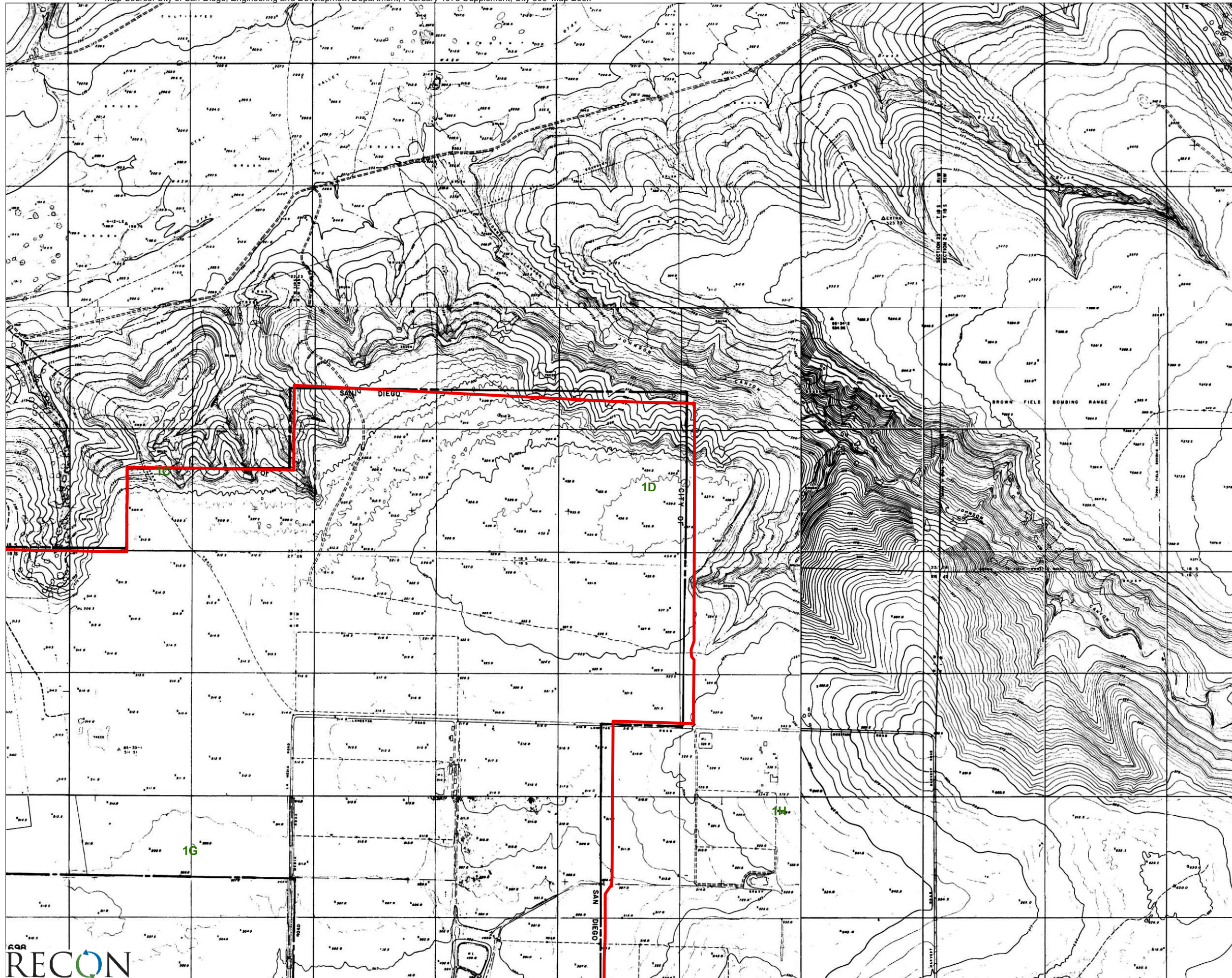



 Otay Mesa Community Plan Boundary

Locator Map with City 800 Page numbers

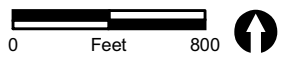
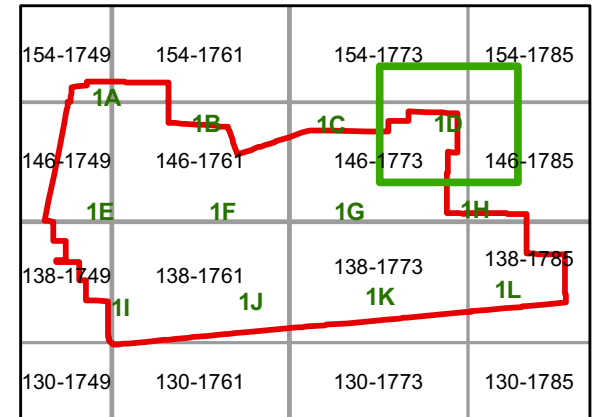


**ATTACHMENT 1C**  
 Otay Mesa Community Plan  
 Area on City 800' Map

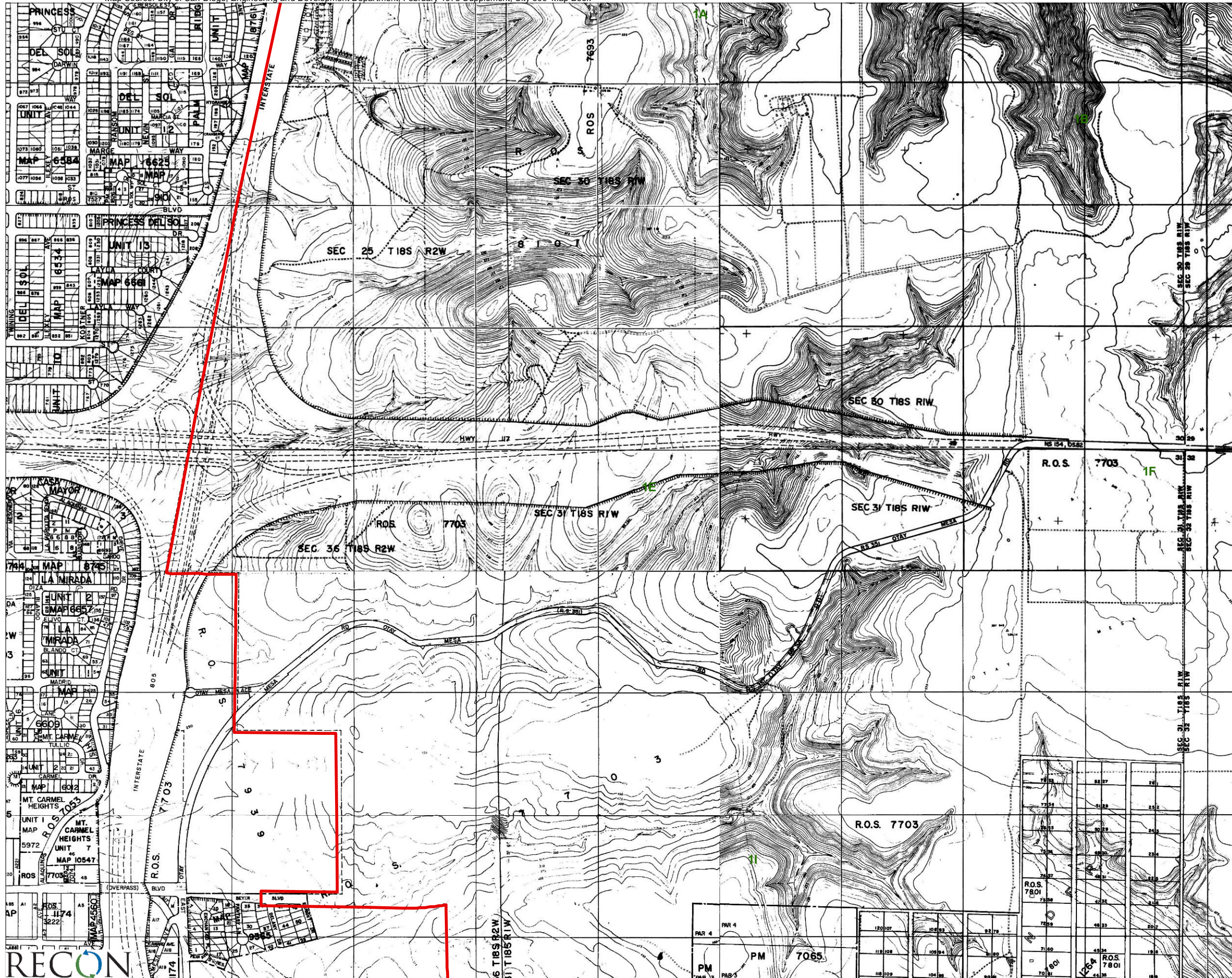



 Otay Mesa Community Plan Boundary

Locator Map with City 800 Page numbers















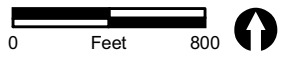
**ATTACHMENT 1D**  
 Otay Mesa Community Plan  
 Area on City 800' Map



 Otay Mesa Community Plan Boundary


Locator Map with City 800 Page numbers

154-1749	154-1761	154-1773	154-1785
 1A	 1B	 1C	 1D
 1E	 1F	 1G	 1H
 1I	 1J	 1K	 1L
130-1749	130-1761	130-1773	130-1785

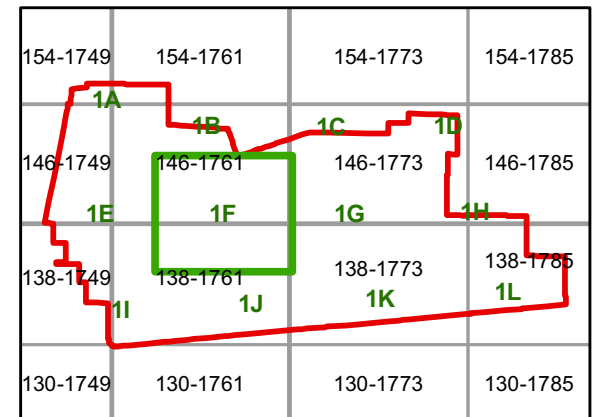


**ATTACHMENT 1E**  
 Otay Mesa Community Plan  
 Area on City 800' Map

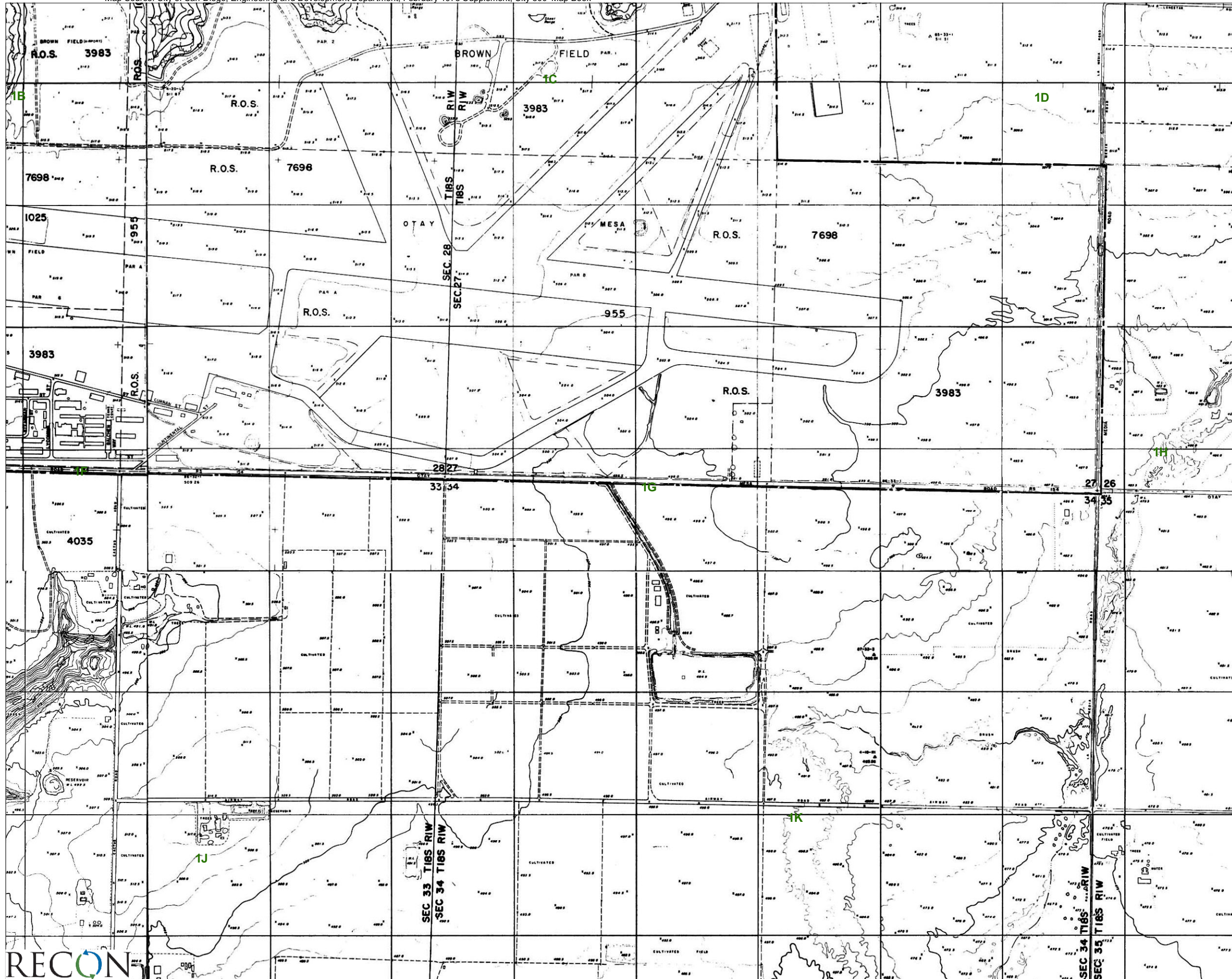



 Otay Mesa Community Plan Boundary

Locator Map with City 800 Page numbers



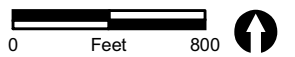
**ATTACHMENT 1F**  
 Otay Mesa Community Plan  
 Area on City 800' Map



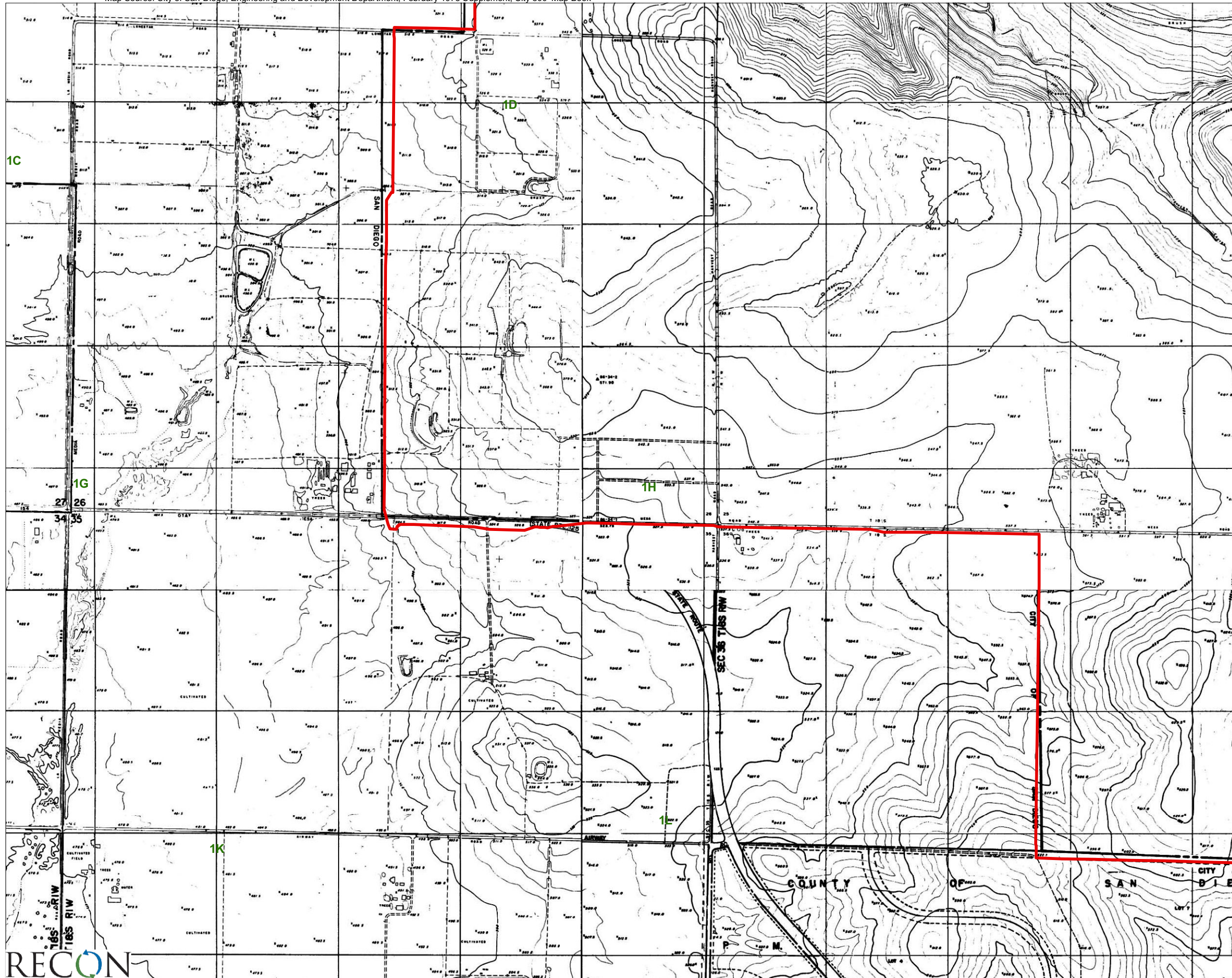
 Otay Mesa Community Plan Boundary


Locator Map with City 800 Page numbers

154-1749	154-1761	154-1773	154-1785
1A	1B	1C	1D
146-1749	146-1761	146-1773	146-1785
1E	1F	1G	1H
138-1749	138-1761	138-1773	138-1785
1I	1J	1K	1L
130-1749	130-1761	130-1773	130-1785















**ATTACHMENT 1G**  
 Otay Mesa Community Plan  
 Area on City 800' Map



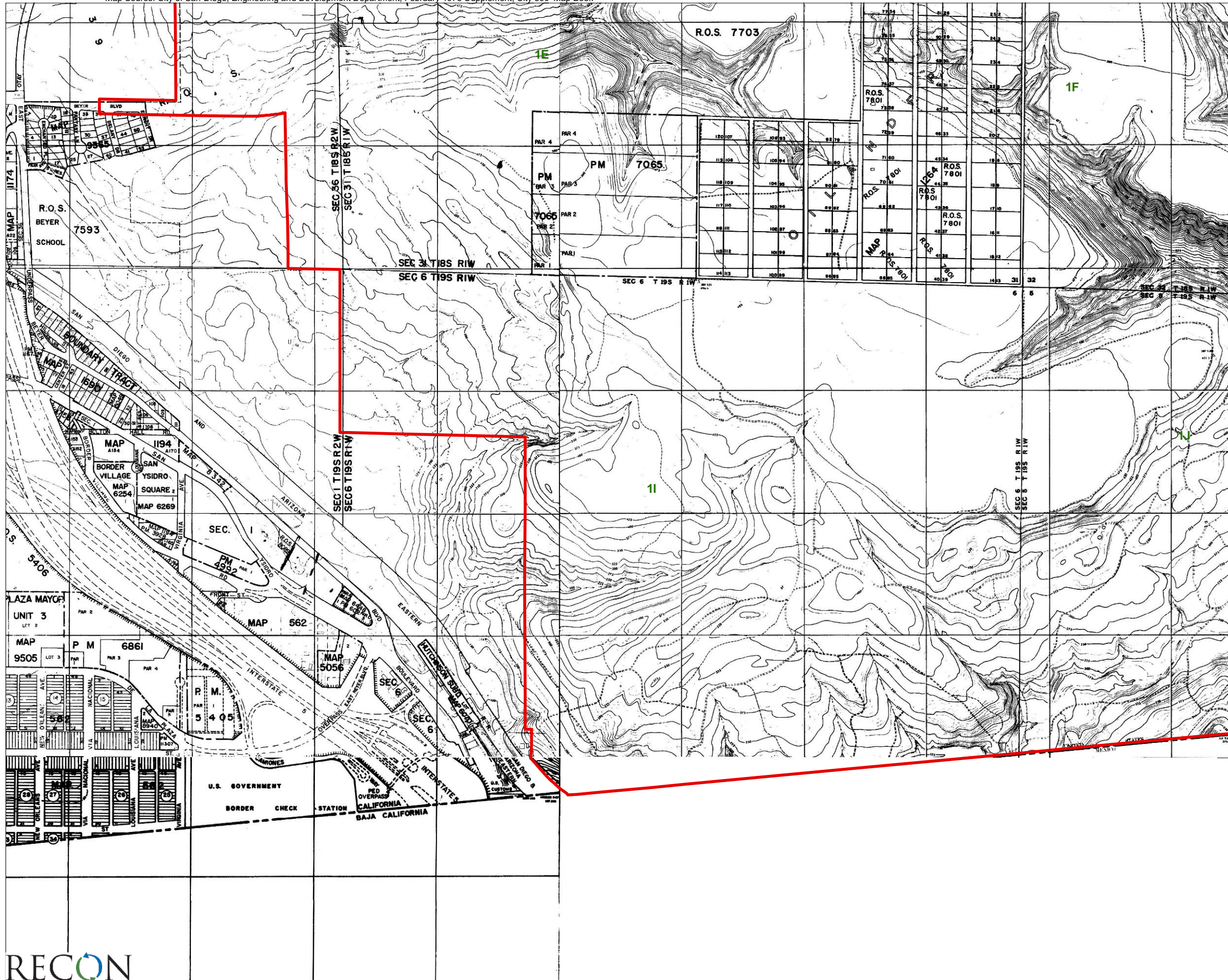
 Otay Mesa Community Plan Boundary


Locator Map with City 800 Page numbers

154-1749	154-1761	154-1773	154-1785
 1A	 1B	 1C	 1D
 1E	 1F	 1G	 1H
 1I	 1J	 1K	 1L
130-1749	130-1761	130-1773	130-1785

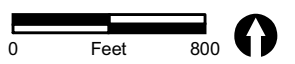
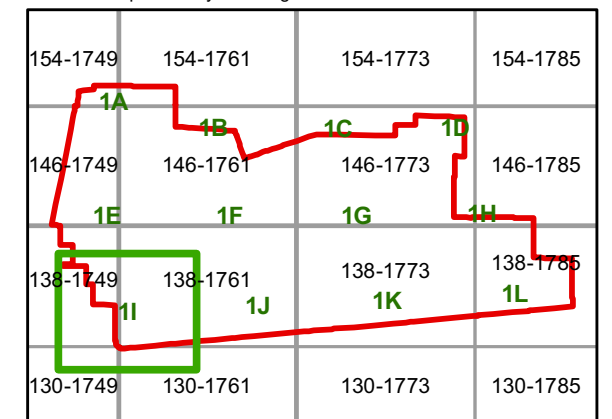


**ATTACHMENT 1H**  
 Otay Mesa Community Plan  
 Area on City 800' Map




 Otay Mesa Community Plan Boundary

Locator Map with City 800 Page numbers



**ATTACHMENT 11**  
 Otay Mesa Community Plan  
 Area on City 800' Map



 Otay Mesa Community Plan Boundary

Locator Map with City 800 Page numbers


154-1749	154-1761	154-1773	154-1785
<b>1A</b>	<b>1B</b>	<b>1C</b>	<b>1D</b>
146-1749	146-1761	146-1773	146-1785
<b>1E</b>	<b>1F</b>	<b>1G</b>	<b>1H</b>
138-1749	138-1761	138-1773	138-1785
<b>1I</b>	<b>1J</b>	<b>1K</b>	<b>1L</b>
130-1749	130-1761	130-1773	130-1785



**ATTACHMENT 1J**  
 Otay Mesa Community Plan  
 Area on City 800' Map





 Otay Mesa Community Plan Boundary

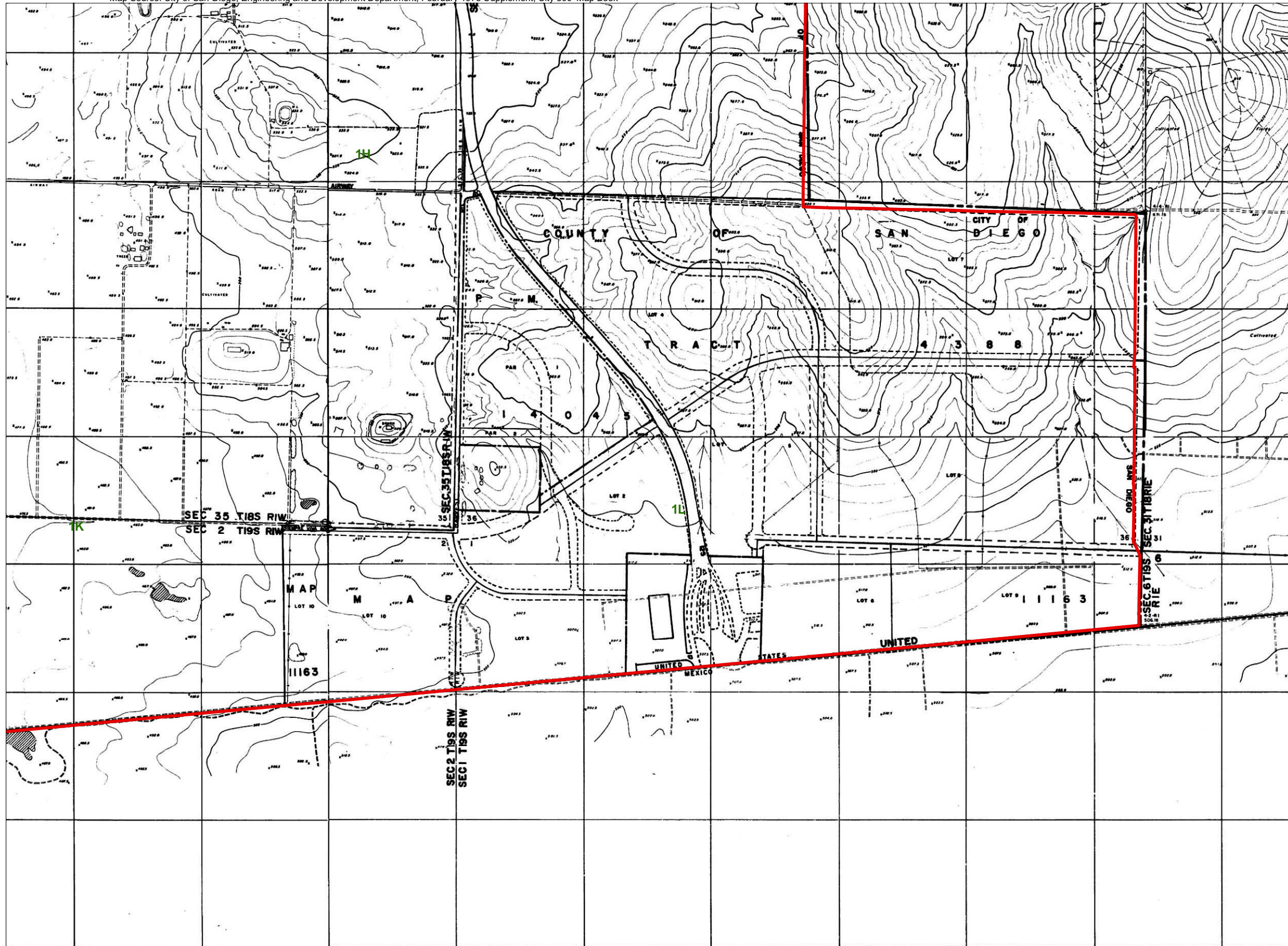
Locator Map with City 800 Page numbers


154-1749	154-1761	154-1773	154-1785
<b>1A</b>	<b>1B</b>	<b>1C</b>	<b>1D</b>
<b>1E</b>	<b>1F</b>	<b>1G</b>	<b>1H</b>
138-1749	138-1761	<b>138-1773</b>	138-1785
<b>1I</b>	<b>1J</b>	<b>1K</b>	<b>1L</b>
130-1749	130-1761	130-1773	130-1785



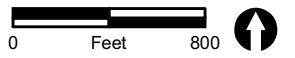
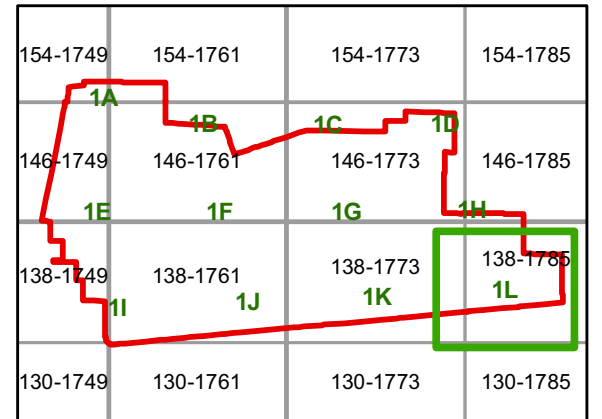
**ATTACHMENT 1K**

Otay Mesa Community Plan  
Area on City 800' Map



 Otay Mesa Community Plan Boundary

Locator Map with City 800 Page numbers



**ATTACHMENT 1L**  
Otay Mesa Community Plan  
Area on City 800' Map

**ATTACHMENT 2**  
**Literature Review**

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## ATTACHMENT 2 LITERATURE REVIEW

Information from technical biological documents prepared for different ownerships within the CPU area was incorporated into this document. These reports include (but are not limited to):

- Final Draft Technical White Paper 1: Focal Species Status Update for the City of San Diego Vernal Pool Habitat Conservation Plan. Prepared by AECOM. August 2012.
- Biotechnical Report for the Candlelight Project. Project No. 40329. Prepared by Alden Environmental Inc. July 2012.
- Appendix G; Biological Studies for Otay Tijuana Cross Border Facility Development Project Draft Environmental Impact Report. Project No. 169653. Prepared by Helix Environmental Planning, Inc. June 2011.
- Otay Mesa East Initial Study. Project No. 3159. Planning and Development Review Department. July 2003.
- Draft Biological Technical Report for Approximately 99.7 Acres of the Cucumber Ranch Assemblage, South Otay Mesa, San Diego County, California. Prepared by Glen Lukos Associates, Inc. July 2004.
- Appendix E; Biological Technical Report to the Otay Mesa Trunk Sewer Final Environmental Impact Report. Prepared by PBS&J. June 24, 2004.
- Draft Year 4 Annual Report for Dennery Canyon Vernal Pool, Coastal Sage Scrub, and Mule Fat Scrub Restoration and Preservation Plan. Prepared by RECON. July 1, 2004.
- Report of General and Focused Biological Surveys for the Spring Canyon Ranch Specific Plan including Tentative Map #61549 as Part of the Otay Mesa Community Plan, South Otay Mesa, San Diego County, California. Prepared by Glen Lukos Associates, Inc.
- Biological Technical Report, East Otay Mesa Drainage, San Diego, California. Prepared by Helix Environmental Planning, Inc.
- A Biological Resources Assessment of Two Vesting Tentative Maps on South Otay Mesa Located in the City of San Diego, San Diego County, California. Prepared by Natural Resources Consultants.
- Draft Biological Technical Report for Lonestar Ridge. Prepared by Helix Environmental Planning, Inc.
- Biological Technical Report for Candlelight Villas East. Prepared by Helix Environmental Planning, Inc. July 2012.

- Judd and Dillard Otay, LP Site Letter Report. Prepared for Mr. John Dillard by REC Consultants, Inc.
- Biological Constraints for the Otay Mesa Quad Parcel. Prepared by Helix Environmental Planning, Inc.