

OTAY CROSSINGS COMMERCE PARK

APPENDIX F

BIOLOGICAL RESOURCES REPORTS

to the

DRAFT SUPPLEMENTAL  
ENVIRONMENTAL IMPACT REPORT

EIR 93-19-006Q, TM 5405RPL<sup>7</sup>  
SCH No. 2006041039

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AUGUST 2011

**OTAY CROSSINGS COMMERCE PARK**

**BIOLOGICAL TECHNICAL REPORT  
SPA 04-006, TM5405RPL4**

August 2011

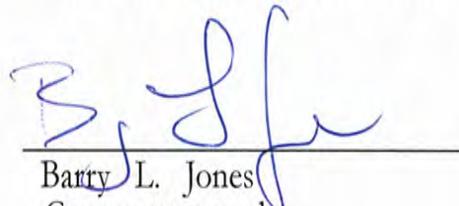
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# Otay Crossings Commerce Park Biological Technical Report

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## SUMMARY OF FINDINGS

The proposed Otay Crossings Commerce Park project site is a Tentative Map (TM) and Preliminary Grading Plan (Tract 5405) for land designated for Mixed Industrial, Rural Residential, and State Route ([SR]; i.e., SR-11) use in Subarea 2 of the East Otay Mesa Specific Plan (EOMSP). The TM would subdivide the 311.5-acre property into 56 industrial lots, with the potential SR-11 alignment and Port of Entry occurring on 2 lots and biological open space easements over portions of 5 lots. In addition to proposed on-site development, off-site road improvements will be required along portions of Otay Mesa, Alta, and Airway roads, and off-site sewer facilities will be required along Alta Road, Siempre Viva Road and Enrico Fermi Drive. Two force main sewer options are also being considered along Via De La Amistad and Siempre Viva Road.

HELIX Environmental Planning, Inc. conducted a number of biological surveys of the project site in 2000 and 2001 as part of the proposed SR-11 project, and complete surveys were updated in 2006. Survey dates referenced in the appropriate tables do not include 2005 URS or 2006 HELIX surveys (included in the respective Natural Environment studies) because the survey area included a much larger area than just the Otay Crossings project. Please refer to those respective documents for further survey details. Surveys included a general biological survey/vegetation mapping; a jurisdictional delineation; rare plant surveys; and focused surveys for the state species of special concern burrowing owl (*Athene cunicularia*), federally listed threatened coastal California gnatcatcher (*Polioptila californica californica*), federally listed endangered Quino checkerspot butterfly (*Euphydryas editha quino*; QCB), and vernal pool studies for the federally listed endangered San Diego and Riverside fairy shrimp (*Branchinecta sandiegonensis* and *Streptocephalus woottoni*, respectively). Additionally, rare plant, gnatcatcher, QCB, and burrowing owl surveys were conducted by EDAW for the County EOMSP area update, and rare plant, gnatcatcher, QCB, fairy shrimp, and burrowing owl surveys were conducted for the California Department of Transportation for SR-11.

The project site supports the following vegetation communities: tamarisk scrub, disturbed wetland, Diegan coastal sage scrub (including disturbed), non-native grassland, eucalyptus woodland, agriculture, disturbed habitat, and developed land. In addition to the vegetation communities mapped on site, native grassland occurs within areas mapped off site. Thirty-one road pools were mapped on site. Disturbed wetland, native grassland, Diegan coastal sage scrub (including disturbed), and non-native grassland are considered sensitive communities.

A total of 0.03 acre of federal (U.S. Army Corps of Engineers [Corps]) jurisdictional disturbed wetland and 0.31 acre of non-wetland Waters of the U.S. occur on site; an additional 0.01 acre of non-wetland Waters occurs in the off-site improvement areas. State (California Department of Fish and Game [CDFG]) jurisdictional areas total 1.12 acres on site, including 0.73 acre of tamarisk scrub, 0.03 acre of disturbed wetland, and 0.36 acre of streambed, with an additional 0.01 acre of streambed occurring in the off-site improvement areas. County Resource Protection Ordinance (RPO) wetlands include 0.03 acre of disturbed wetland in the southeastern corner of the site.

Seven sensitive plant species were detected during rare plant surveys: Otay tarplant (*Deinandra conjugens*), California adolphia (*Adolphia californica*), San Diego barrel cactus (*Ferocactus viridescens*), San Diego marsh-elder (*Iva hayesiana*), variegated dudleya (*Dudleya variegata*), San Diego County viguiera (*Viguiera laciniata*), and small-flowered morning glory (*Convolvulus simulans*). Additionally, eleven sensitive animal species were observed on site during project-related biological surveys: San Diego fairy shrimp, Riverside fairy shrimp, QCB, western spadefoot (*Spea hammondi*), coastal western whiptail (*Cnemidophorus tigris multiscutatus*), burrowing owl, California horned lark (*Eremophila alpestris actia*), loggerhead shrike (*Lanius ludovicianus*), northern harrier (*Circus cyaneus*), white-tailed kite (*Elanus leucurus*) and grasshopper sparrow (*Ammodramus savannarum*). Additionally, the project site lies within the territory of a golden eagle (*Aquila chrysaetos*) pair known to nest in O'Neal Canyon, located approximately 1.5 miles northeast of the project site.

On- and off-site project development and required traffic mitigation would cause direct impacts to approximately 294.1 acres. Approximately 293.1 acres of impacts would be to upland vegetation communities, comprising approximately 0.1 acre of native grassland, 1.9 acres of Diegan coastal sage scrub (including 0.3 acre of disturbed), 263.1 acres of non-native grassland, 1.0 acre of eucalyptus woodland, 0.7 acre of agriculture, 20.6 acres of disturbed habitat, and 5.7 acres of developed land.

Impacts to Corps jurisdictional areas would total 0.20 acre, including 0.19 acre of non-wetland Waters of the U.S. on site and 0.01 acre off site. Impacts to CDFG jurisdictional areas would total 0.97 acre, including on-site impacts to 0.73 acre of tamarisk scrub and 0.23 acre of streambed, as well as off-site impacts to 0.01 acre of streambed. No impacts to County RPO wetlands are proposed; however, project improvements to Alta Road would occur within the wetland buffer of off-site mule fat scrub, but no other project improvements would affect wetland buffers. Impacts associated with improvements to Alta Road are considered permitted uses within an RPO wetland under Section 86.604(a)(5) because Alta Road is a Circulation Element roadway.

All Otay tarplant, variegated dudleya, and California adolphia in the project site are outside the limits of development and would not be directly impacted; however, 72 of the 193 (37 percent) of San Diego barrel cacti and all 138 of San Diego marsh-elder, both of which are County Group B species, would be impacted. Impacts to these 2 species would exceed 20 percent of the populations on site and would therefore not conform to the County's Biological Mitigation Ordinance (BMO). The project qualifies for an exception under the BMO for these impacts. These impacts would be offset through species-specific mitigation. Four of the 9 burrowing owl locations would be directly or indirectly impacted. Locations of 2 of the 3 QCB observed on site during 2001 focused surveys also occur within the impact footprint. The project would also impact habitat occupied by Riverside fairy shrimp, San Diego fairy shrimp, western spadefoot, coastal western whiptail, California horned lark, loggerhead shrike, grasshopper sparrow, northern harrier, white-tailed kite, and golden eagle.

Potentially significant indirect impacts associated with construction activities and edge effects may also occur. Construction-related indirect impacts include fugitive dust, construction noise, animal behavioral changes, and errant construction impacts. Potential impacts due to edge

effects include decreased water quality, colonization of non-native plant species, human activity, nuisance animal species, and night lighting.

Federal and state agencies typically require no net loss of wetlands, a criterion under which mitigation includes a 1:1 creation element and often a restoration/enhancement element. Impacts to 0.73 acre of jurisdictional tamarisk scrub would require a 1:1 mitigation ratio through creation of 0.73 acre of riparian scrub. Impacts to Corps non-wetland Waters of the U.S./CDFG streambeds are generally mitigated only through creation at a 1:1 ratio. This would require creation of 0.24 acre of drainages, of which 0.20 acre must be Corps jurisdictional. Mitigation for vegetated wetland habitat and non-wetland Waters of the U.S. /streambed would occur through realignment, widening, and restoration of on-site drainages, and at an off-site location to be determined through the Corps and CDFG permitting process.

Project impacts to Tier II or III habitats would be mitigated with same or higher tier habitats. Impacts to native grassland would be mitigated at a 2:1 ratio with 0.2 acre of native grassland preservation off site. Impacts to 1.9 acres of Diegan coastal sage scrub (including disturbed) would be mitigated at a 1.5:1 ratio with preservation of 2.9 acres of Diegan coastal sage scrub on site. Because a total of 6.8 acres of Diegan coastal sage scrub would be available for mitigation, the remaining 3.9 acres would be applied to mitigation for non-native grassland. Impacts to 263.1 acres of non-native grassland require mitigation at a 1:1 ratio. This requirement would be partially offset with on-site preservation of 34.4 acres of non-native grassland, 6.4 acres of disturbed habitat that would be restored to grassland, and the remaining 3.9 acres of Diegan coastal sage scrub. The remaining non-native grassland mitigation would occur with off-site acquisition and preservation of five parcels: 1) the 69-acre O'Neal Canyon parcel; 2) the 15-acre O'Neal Canyon parcel; 3) a 62-acre parcel at the Lonestar Ridge site; 4) 20 acres of a 40-acre parcel at Lonestar Ridge; and 5) 40 acres in Ramona on the 63-acre Martz parcel. The remaining 12.4 acres of mitigation would be met through preservation of 9.2 acres of the Paragon open space parcel on Lone Star Ridge and 3.2 acres at the Martz parcel. If the Otay Crossings project goes forward concurrently with the Paragon project, the mitigation requirements will be revised based on Appendix D. The project will result in an overall mitigation ratio of 1:1.

Impacts to 72 San Diego barrel cacti shall be mitigated at a 2:1 ratio through acquisition of habitat supporting a minimum of 144 barrel cacti. Impacts to marsh-elder would be mitigated at a 2:1 ratio through acquisition of at least 276 individuals at an off site mitigation location, or through inclusion in mitigation plans for impacts to state and federal jurisdictional Waters of the U.S./CDFG streambed.

Impacts to 116 square feet of Riverside and San Diego fairy shrimp habitat will be mitigated by creation of 232 square feet of pools supporting these species. If grading would occur during the burrowing owl breeding season (February 15 through August 31), a pre-construction survey of the known active burrows would be conducted to avoid filling the burrows or injuring the owls by burrow collapse. If owls are present in the burrows during the breeding season, passive relocation or eviction shall not be allowed. No grading will occur during the breeding season for the burrowing owl without concurrence by the Wildlife Agencies that owls will not be affected by construction activities. If owls are present outside of the breeding season, passive relocation

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would be implemented for any occupied burrows within the impact footprint. Impacts to the coastal western whiptail, California horned lark, white-tailed kite, and northern harrier will be mitigated through sage scrub and grassland mitigation requirements. Impacts to QCB would be mitigated through on- and off-site preservation of occupied habitat as part of the mitigation for impacts to vegetation communities.

If construction activities must occur during the bird breeding season, no construction may occur within 300 feet of burrowing owl burrows or gnatcatcher nests, or within 500 feet of tree-dwelling raptor nests, or within 900 feet of ground dwelling raptor nests until a qualified biologist determines that they are no longer active or it is determined that noise levels would not exceed 60 dB(A)  $L_{eq}$  at the nest site. Alternatively, noise minimization measures such as noise barriers could be constructed to bring noise levels to below 60 dB(A)  $L_{eq}$ , which will reduce impacts to below a level of significance.

Noise generated by future industrial development on Lots 16, 17, 18 and 24 has the potential to exceed 60 dB during daytime hours and 50 dB during nighttime hours in the sensitive habitat located on those lots. Operational noise levels would be addressed through the dedication and enforcement of a Noise Protection Easement on Lots 16 through 18 and 24. The Noise Protection Easement would require future noise analysis within subsequent discretionary permits for the lots to ensure that noise levels would not exceed 60 dBA  $L_{eq}$  during the daytime and 50 dBA  $L_{eq}$  during the nighttime. Noise protection measures could be integrated into future industrial site plans could include proper building orientation, selection of quieter equipment, or placement of noise-producing equipment behind buffer zones, noise enclosures or parapet walls.

A Stormwater Pollution Prevention Plan that addresses site-specific requirements to minimize waterway contamination, erosion, and sedimentation has been prepared and will be implemented to insure no significant impacts resulting from contamination, erosion, and sedimentation occur as a result of project implementation. The proximity of jurisdictional waterways to the project site further supports the need to choose Best Management Practices appropriate for the site.

## **1.0 INTRODUCTION**

This report describes existing biological conditions and evaluates the biological impacts associated with development of the Otay Crossings Commerce Park project site. This information provides the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG), County of San Diego (County), project applicant, and the public with current biological data to satisfy review of the proposed project under the California Environmental Quality Act (CEQA) and other federal, state, and county regulations.

### **1.1 PROJECT LOCATION**

The project site consists of two parcels (Assessor's Parcel Numbers 648-070-03 and 648-080-27) located in the extreme southeastern portion of Otay Mesa within San Diego County (Figure 1). The property lies to the southeast of the intersection of Otay Mesa and Alta roads just north of the U.S./Mexico border. It occupies portions of Sections 31 and 32 within Township 18 South, Range 1 East of the U.S. Geological Survey 7.5-minute Otay Mesa quadrangle (Figure 2). The site is within the East Otay Mesa Specific Plan (EOMSP) area and contains areas designated in the County's Multiple Species Conservation Program (MSCP; County 1997) as Major Amendment Areas, Minor Amendment Areas, and Minor Amendment Areas Subject to Special Consideration.

### **1.2 SITE PHYSIOGRAPHY AND LAND USES**

The irregularly shaped project site consists of low rolling hills and mesas and includes several drainages that convey flows to the south. Elevations on site range from approximately 480 feet above mean sea level (amsl) at points along the southern boundary to approximately 700 feet amsl in the site's northeastern corner. Soils in the northern/northwestern portion of the site are characterized by Diablo clay, while slopes in the southern/southwestern portion are characterized by Huerhuero loam (Bowman 1973). Several dirt roads cross the site and are regularly traveled by the U.S. Border Patrol.

The subject property is undeveloped. Surrounding land uses include an auto auction lot on the northwestern boundary, industrial public uses to the west, and a mix of industrial, commercial, and residential uses across the Mexico border. The parcel to the north is currently being graded for development. Undeveloped lands extend to the east of the site into the foothills of the San Ysidro Mountains.

### **1.3 PROJECT DESCRIPTION**

The proposed project is a Tentative Map (TM) and Preliminary Grading Plan (Tract 5405) for land designated for Mixed Industrial, Rural Residential, and State Route ([SR]; i.e., SR-11) use in Subarea 2 of the EOMSP. The potential future routes for SR-11 traverse the site and the proposed future U.S. Port-of-Entry is situated on the southern portion of the site. The TM would subdivide the 311.5-acre property into 56 industrial lots ranging in size from 0.9 net acres to 95.4 net acres. Approximately 286.4 acres would be placed in lots, while 19.3 acres would contain public streets, including General Plan Circulation Element roadways (Alta Road, Otay Mesa Road, and Airway Road). The future Right of Way for SR-11 and the new Port Of Entry

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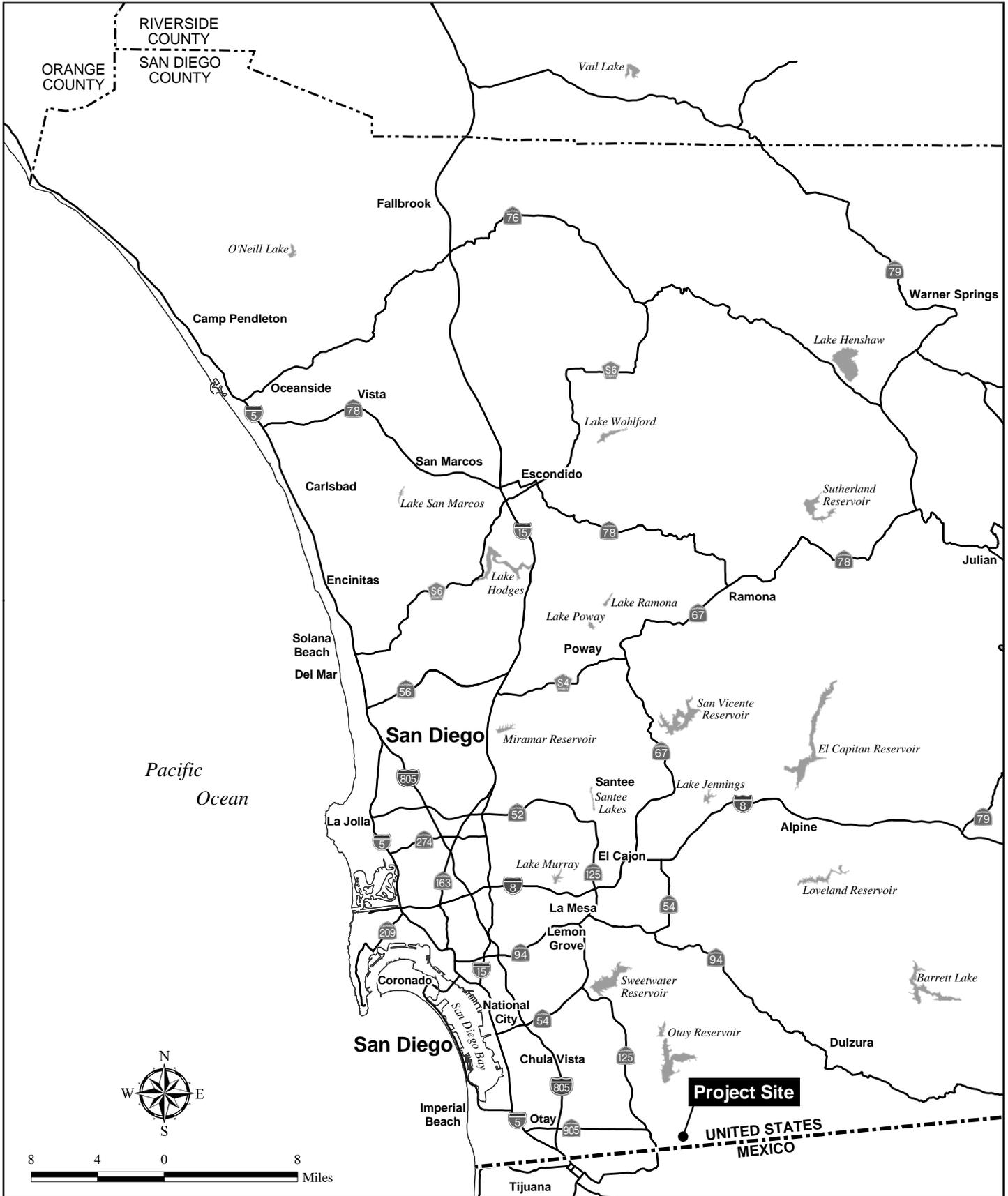
(assumes the selected western alternative) has been tentatively mapped on two of the 56 proposed lots, covering approximately 120.0 acres of the site. The portions of those lots encumbered by the potential California Department of Transportation (Caltrans) right-of-way will be restricted to temporary uses that are allowed by the EOMSP in an effort to preserve the potential right-of-way prior to SR-11 development. The biologically sensitive and steep slope areas in the northeast corners of the site are in the “G” Designator Area of the EOMSP; open space easements are identified on 5 lots to protect those sensitive resources. A total of 47.4 acres would be contained in open space easements (across five lots in the three northeast corners of the project site and along its southern boundary [i.e., portions of Lots 16, 17, 18, 19, 21, 23, 24 and 56]). Site development will occur in 2 grading phases within 5 map units and be implemented as final maps as individual lots are recorded. The Preliminary Grading Plan conforms to the EOMSP and County Grading Ordinance development guidelines.

In addition to proposed on-site development, off-site road improvements are proposed for Alta Road Airway Road, Otay Mesa Road and Siempre Viva Road, and an off-site gravity sewer line (Sewer Option A) is proposed along Alta Road, Siempre Viva Road and Enrico Fermi Drive. Additional off-site road improvements are required along Otay Mesa Road as part of the project’s traffic mitigation requirements.

A second sewer option (Sewer Option B-1) was identified in the Regional Sewer Study that would avoid the large pumped area and deep sewer construction that would otherwise be required to allow connection with the City’s trunk sewer. Under the Master Plan, topographical conditions required gravity sewer lines in Siempre Viva Road and Enrico Fermi Drive to be constructed at a depth of 25 to 40 feet. The alternative provided in the Regional Sewer Study recommends an alignment of gravity sewer lines to convey the sewer flows to a single regional pump station at the southern end of Alta Road. Instead of a second regional pump station on the Project site, gravity lines would run through the neighboring parcel more directly to the single regional pump station to then tie into the City’s trunk sewer system. A private pump station at the POE would still be required to convey flows to the gravity system, but would then flow downstream via gravity. From the regional pump station at Alta Road, flow would be conveyed through an eight-inch force main along Via de la Amistad to connect with the existing connection to the City’s trunk sewer. Alternatively, the force main could run from the pump station along Siempre Viva road to then be conveyed by an 18-inch gravity line to tie into the City’s trunk sewer (Sewer Option B-2).

## 2.0 METHODS

HELIX Environmental Planning, Inc. (HELIX) conducted a number of biological surveys of the project site in 2000 and 2001 as part of the proposed SR-11 project. The study area included the entire property; many of these surveys were updated in 2005, and complete surveys were updated in 2006 (HELIX 2006a). Survey dates referenced in the appropriate tables do not include 2005 URS or 2006 HELIX surveys (included in the respective Natural Environment studies) because the survey area included a much larger area than just the Otay Crossings project. Please refer to those respective documents for further survey details. Surveys included a general biological survey/vegetation mapping; jurisdictional delineation; rare plants; and focused surveys for the CDFG species of special concern burrowing owl (*Athene cunicularia*), federally listed

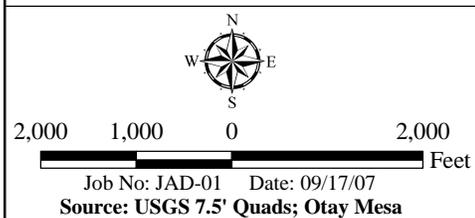
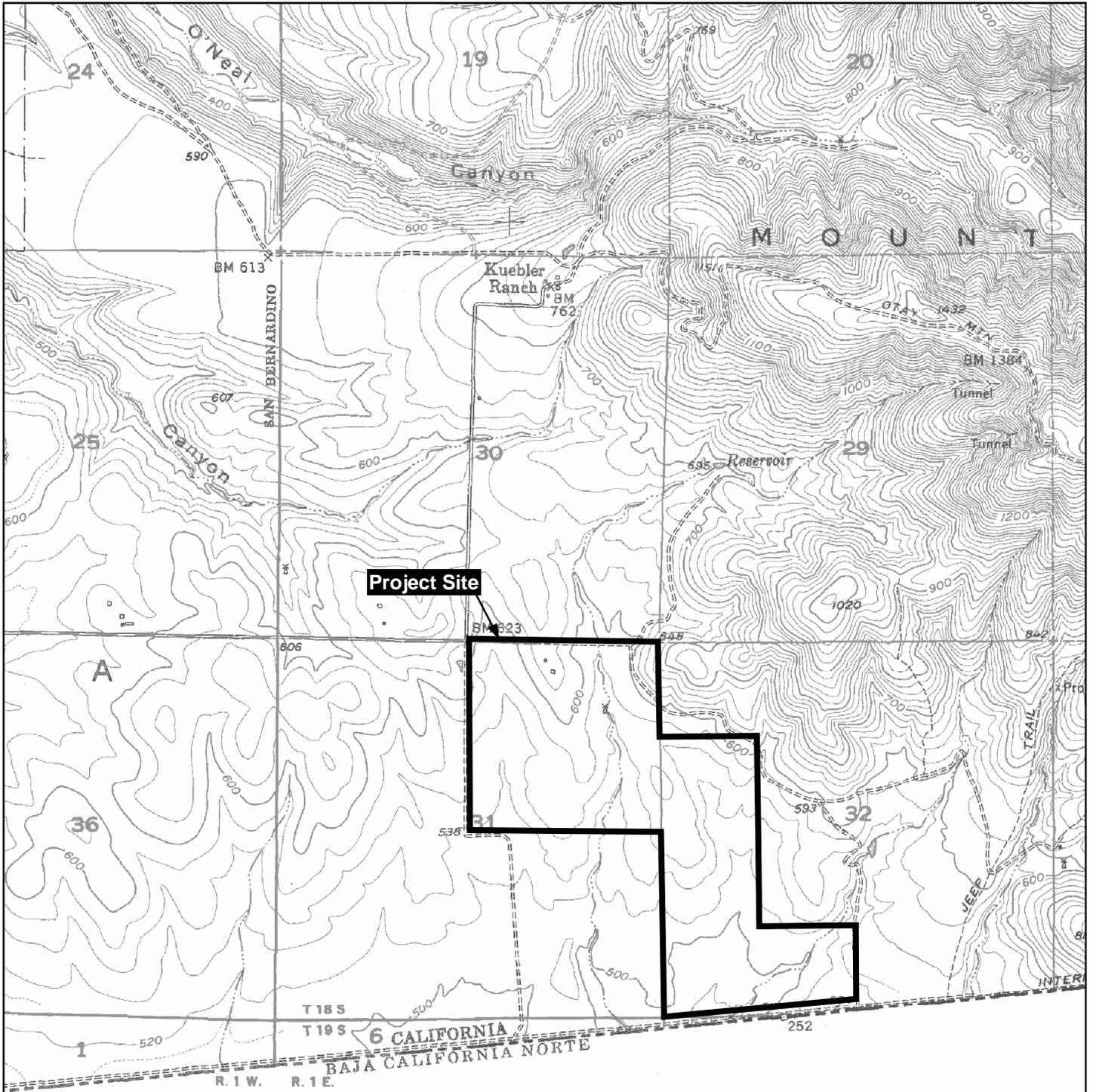


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# Regional Location Map

OTAY CROSSINGS COMMERCE PARK

Figure 1



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## Project Location Map

OTAY CROSSINGS COMMERCE PARK

Figure 2

threatened coastal California gnatcatcher (*Polioptila californica californica*), federally listed endangered Quino checkerspot butterfly (*Euphydryas editha quino*; QCB), and vernal pool studies for the federally listed endangered San Diego and Riverside fairy shrimp (*Branchinecta sandiegonensis* and *Streptocephalus woottoni*, respectively). Additionally, rare plant, gnatcatcher, QCB, and burrowing owl surveys were conducted for the County EOMSPA update (EDAW 2001a and 2001b), and rare plant, gnatcatcher, QCB, fairy shrimp, and burrowing owl surveys were conducted for Caltrans for SR-11 (URS 2005).

## 2.1 GENERAL BIOLOGICAL SURVEY

A general biological survey was conducted on April 25, 2000 by HELIX biologist W. Larry Sward and subconsultant Fred Sproul (Table 1a). Vegetation within the property and 100 feet beyond the project limits was mapped in the field on a 1"=200' scale topographic map of the site with the aid of a January 2000 aerial photograph at the same scale. The entire site was surveyed on foot with the aid of binoculars and all detected plant and animal species were recorded. Animal identifications were made in the field by direct, visual observation or indirectly by detection of calls, burrows, tracks, or feces. All plant identifications were made in the field or in the lab through comparison with voucher specimens or photographs. General biological data, including vegetation mapping and species inventories, have been updated opportunistically based on results of subsequent surveys. Vegetation mapping of off-site areas proposed for development was conducted by HELIX biologists Keli Balo and Jasmine Watts on May 27, 2005.

<b>Date</b>	<b>Personnel</b>	<b>Purpose(s)/Survey Type(s)</b>
April 25, 2000	Justin Fischbeck, W. Larry Sward	General plant and animal, vegetation mapping, rare plants
April 26, 2000	Justin Fischbeck, W. Larry Sward	Jurisdictional delineation
April 28, 2000	Peter Allen, Greg Mason, W. Larry Sward	Jurisdictional delineation
May 24, 2000	Amy Mattson, W. Larry Sward, Sally Trnka	Rare plants
October 24, 2000	W. Larry Sward	Vegetation mapping, jurisdictional delineation
May 26, 2005	Amy Mattson, Dale Ritenour, Sally Trnka, Jasmine Watts	Rare plants
May 27, 2005	Keli Balo, Jasmine Watts	Off-site vegetation mapping, rare plants

## 2.2 JURISDICTIONAL DELINEATION

A delineation of jurisdictional areas on the project site was performed by HELIX biologists on April 26 and 28, 2000, and updated on October 24, 2000 (Table 1a). Prior to conducting fieldwork, aerial photographs (1"=400' scale), topographic maps (1"=100' scale), and the Soil

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Survey of the San Diego Area (Bowman 1973) were reviewed to determine the location of potential jurisdictional areas that could be affected by the project.

All areas with depressions, drainage channels, or wetland vegetation within the proposed impact area were evaluated for the presence of U.S. Army Corps of Engineers (Corps), CDFG, and County Resource Protection Ordinance (RPO) jurisdictional wetlands as well as Waters of the U.S. and CDFG streambeds in accordance with applicable guidelines (Environmental Laboratory 1987; Studt 1991; Williams 1992). Each area was delineated according to three criteria: vegetation, hydrology, and soils. Wetland hydrology was evaluated by the presence of surface water, general drainage patterns, watermarks, drift lines, debris, soil texture, sediment deposits, and a positive FAC neutral test. Suspected jurisdictional areas were traversed within or along the drainage, and the width of the ordinary high water mark (OHWM) and/or wetland and riparian habitat was measured periodically. Suspected jurisdictional areas, which after closer inspection were found to be non-jurisdictional, were also noted.

Dominant and non-dominant vegetation elements were noted in accordance with the delineation manual guidelines. Plants were identified according to Hickman, ed. (1993), although because of the timing of the surveys, some of the vegetation present was dormant or senescent. Indicator status was assigned to each dominant species using the USFWS Branch of Habitat Assessment's National List of Plant Species that Occur in Wetlands (USFWS 1996a). Wetland hydrology was evaluated by the presence of surface water, general drainage patterns, water marks, drift lines, debris and sediment deposits. Wetland soils were noted by low chromas (Kollmorgen 1994).

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

Non-wetland Waters of the U.S. under Corps jurisdiction exist in areas exhibiting hydrologic indicators but lacking sufficient hydrophytic vegetation and/or hydric soils indicators. Non-wetland areas encompassed by the OHWM were measured and vegetation (if present) was noted.

Pursuant to a January 2001 Supreme Court decision, the Corps does not (under certain circumstances) take jurisdiction over Waters of the U.S. that are "isolated" or areas not connected to downstream Waters of the U.S. (U.S. Supreme Court 2001; California Regional Water Quality Control Board 2001). The jurisdictional delineation was verified for Waters of the U.S. by Stacey Jensen of the Corps on March 30, 2006.

### **2.2.2 California Department of Fish and Game**

Boundaries of wetlands under CDFG jurisdiction were delineated based on the presence of riparian vegetation and/or regular surface flow. Streambeds within CDFG jurisdiction were delineated based on the definition of streambed as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supporting fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports riparian vegetation" (Title 14, Section 1.72). The CDFG jurisdictional habitat includes all riparian shrub or tree canopy and may extend beyond the banks of a stream.

## **HELIX**

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### **2.2.3 County RPO Wetlands**

County jurisdictional wetlands are defined by the County RPO (County 1991) pursuant to CEQA compliance. Under the RPO, wetlands are defined as all lands that are transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or where the land is covered by water. All lands having one or more of the following attributes are considered wetlands:

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

## **2.3 FOCUSED SURVEYS**

### **2.3.1 Rare Plants**

Rare plant surveys were originally conducted on the project site by HELIX on May 24, 2000 concurrently with the general biological survey and were updated on May 26 and 27, 2005 (Table 1a). Focused surveys were also conducted by URS in 2005 and by HELIX in 2006 as part of the SR-11 alignment study. Particular attention was paid to federally or state listed plants: those on the County Sensitive Plant List (County 1997) and narrow endemic species potentially occurring on site. The entire site was traversed by foot and all habitat areas were inspected for the presence of rare plant species. When encountered, sensitive plants were counted and mapped on aerial photographs or topographic maps of the site. Because of several data sets from multiple years, data were reviewed, and a determination was made where overlap occurred between years versus where new data points were observed. Data presented in this report represent maximum population estimates for species over the five-year study period.

### **2.3.2 Burrowing Owl**

Following survey guidelines (CDFG 1995), a burrowing owl breeding season survey was conducted on June 16, 2000 by HELIX biologists Peter Allen, Justin Fischbeck, and Scott Taylor, and an updated breeding season survey was conducted on May 25, 2005 by HELIX biologists Heather Haney and Stacy Nigro (Table 1b). Focused surveys were also conducted by URS in 2005 and by HELIX in 2006 as part of the SR-11 alignment study. The survey area focused on areas with potential to support owl burrows or foraging habitat and included the entire property, as well as off-site areas within 500 feet. Areas in the project vicinity that contain potential burrowing owl habitat include grasslands, Diegan coastal sage scrub, and disturbed areas, where vegetation is sufficiently open to support burrows. Suitable habitat was examined with the aid of binoculars by walking approximately parallel transects, with particular attention paid to any areas along fence lines and where rodent activity was suspected. Because of several data sets from multiple years, data were reviewed, and a determination was made where overlap

occurred between years verses where new data points were observed. Data presented in this report represent maximum population estimates for species over the five-year study period.

<b>Table 1b BURROWING OWL SURVEY INFORMATION</b>			
<b>Date</b>	<b>Personnel</b>	<b>Survey Time</b>	<b>Weather Conditions</b>
June 16, 2000	Peter Allen, Scott Taylor, Justin Fischbeck	--	Overcast-clear, 63-78°F, wind 0-2 mph
May 25, 2005	Heather Haney, Stacy Nigro	0730-1320	Cloudy, 66-75°F, wind 0-7 mph

### **2.3.3 Coastal California Gnatcatcher**

Coastal California gnatcatcher surveys conducted by HELIX in 2000 (HELIX 2000a; Table 1c) and 2006 as well as URS (2005) followed survey guidelines for the species prepared by the USFWS (1997). Three surveys were conducted on foot one week apart in appropriate gnatcatcher habitat as well as immediately surrounding habitats (100-foot buffer). Taped vocalizations of the gnatcatcher were played intermittently. Gnatcatchers were mapped on a 1"=200' scale topographic map with the aid of a January 2000 aerial photograph at the same scale. Other animal species observed on site were noted and incorporated into the species list for this report. Because of several data sets from multiple years, data were reviewed, and a determination was made where overlap occurred between years verses where new data points were observed. Data presented in this report represent maximum population estimates for species over the five-year study period.

<b>Table 1c COASTAL CALIFORNIA GNATCATCHER SURVEY INFORMATION</b>			
<b>Date</b>	<b>Personnel</b>	<b>Survey Time</b>	<b>Weather Conditions</b>
May 10, 2000	Peter Allen, Scott Taylor	0700-1025	Overcast/partly cloudy, 59-70°F, wind 0-2 mph
May 17, 2000	Peter Allen	0653-1135	Clear, 54-70°F, wind 0-10 mph
May 24, 2000	Peter Allen	0655-1130	Overcast, 61- 65°F, wind 0-5 mph

### **2.3.4 Quino Checkerspot Butterfly**

QCB protocol surveys were conducted by EDAW in 2001 pursuant to then-current protocol. Updated surveys were conducted in accordance with USFWS protocol (2002) by HELIX biologists and subconsultant John Lovio between March 18 and April 15, 2005 (HELIX 2005; Table 1d). Focused surveys were also conducted by URS in 2005 and HELIX in 2006 as part of the SR-11 alignment study. Surveys consisted of walking roughly parallel transects through

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appropriate habitat and identifying butterflies with the aid of binoculars. Larval host plants (e.g., dwarf plantain [*Plantago erecta*] and purple owl's clover [*Castilleja exserta*]) were mapped, and potential nectaring resources (e.g., common goldfields [*Lasthenia californica*] and popcornflower [*Cryptantha* spp.]) were noted during surveys. Because of several data sets from multiple years, data were reviewed, and a determination was made where overlap occurred between years verses where new data points were observed. Data presented in this report represent maximum population estimates for species over the five-year study period.

**Table 1d**  
**QUINO CHECKERSPOT BUTTERFLY SURVEY INFORMATION**

<b>Date</b>	<b>Personnel</b>	<b>Survey Time*</b>	<b>Weather Conditions*</b>
March 18, 2005	Roger Ditrick, John Lovio, Brian Parker	1030-1615	Mostly cloudy-overcast, 60-70°F, wind 0-7 mph
March 21, 2005	Derek Langsford, John Lovio, Scott Taylor	1045-1645	Clear-patchy, 64-70°F, wind 0-6 mph
March 25, 2005	Roger Ditrick, Derek Langsford, John Lovio	1445-1645	Clear-partly cloudy, 60-63°F, wind 4-8 mph
March 31, 2005	Deborah Leonard, Scott Taylor, Amy Mattson, Sally Trnka	0935-1500	Clear, 75-80°F, wind 3-8 mph
April 11, 2005	Amy Mattson, Brian Parker, Dale Ritenour, Sally Trnka	1020-1530	Clear, 68-76°F, wind 0-7 mph
April 15, 2005	Deborah Leonard, John Lovio, Brian Parker, Sally Trnka	1000-1530	Clear, 68-76°F, wind 0-8 mph

\*Survey times and conditions differed between surveyors; conditions presented represent only the lowest and highest numbers recorded

### **2.3.5 Fairy Shrimp**

Dry season fairy shrimp sampling was conducted in 2000 (HELIX 2000b) according to established 1996 USFWS protocol (USFWS 1996b). Soil collection was conducted between January 18 and June 7, 2001 by HELIX biologists Mr. Sward, Sally Trnka, and Ted Grantham as well as subconsultant Renée Owens (Table 1e; HELIX 2001a and 2001b). Approximate depth, area, and habitat condition of each sampled basin or pool was noted and recorded. Soil samples were prepared by dissolving in water and sieving through 787-, 355-, and 212- $\mu$ m pore size screens to separate cysts from target fairy shrimp species. Any cysts observed were identified to genus level based on surface characteristics.

**Table 1e  
FAIRY SHRIMP SURVEY INFORMATION**

<b>Date</b>	<b>Personnel</b>	<b>Fairy Shrimp Survey Type</b>
July 6, 2000	Greg Mason, D. Christopher Rogers	Dry season
January 18 to June 7, 2001	Ted Grantham, Renée Owens, W. Larry Sward, Sally Trnka	Wet season; basin/pool mapping
March 23, 2005	W. Larry Sward	Wet season
April 18, 2005	Dale Ritenour	
May 3, 2005	Dale Ritenour	
May 31, 2005	Dale Ritenour	

HELIX biologists Mr. Sward, Dale Ritenour, and assistant Ms. Nigro conducted wet season fairy shrimp surveys during the 2004-05 rainy season (Table 1e). On-site basins were surveyed on March 23, April 18, and May 3, 2005. Focused surveys were also conducted by URS in 2005 and HELIX in 2006 as part of the SR-11 alignment study. Samples were taken in water-holding basins using fine mesh aquarium nets. Fairy shrimp were identified in the field and immediately returned to their pool of origin. Care was taken to ensure that the nets were cleaned after each basin was sampled. Basin depth, area, water temperature, air temperature, habitat condition, and species present were noted and recorded. Because of several data sets from multiple years, data were reviewed, and a determination was made where overlap occurred between years verses where new data points were observed. Data presented in this report represent maximum population estimates for species over the five-year study period.

## **2.4 NOMENCLATURE**

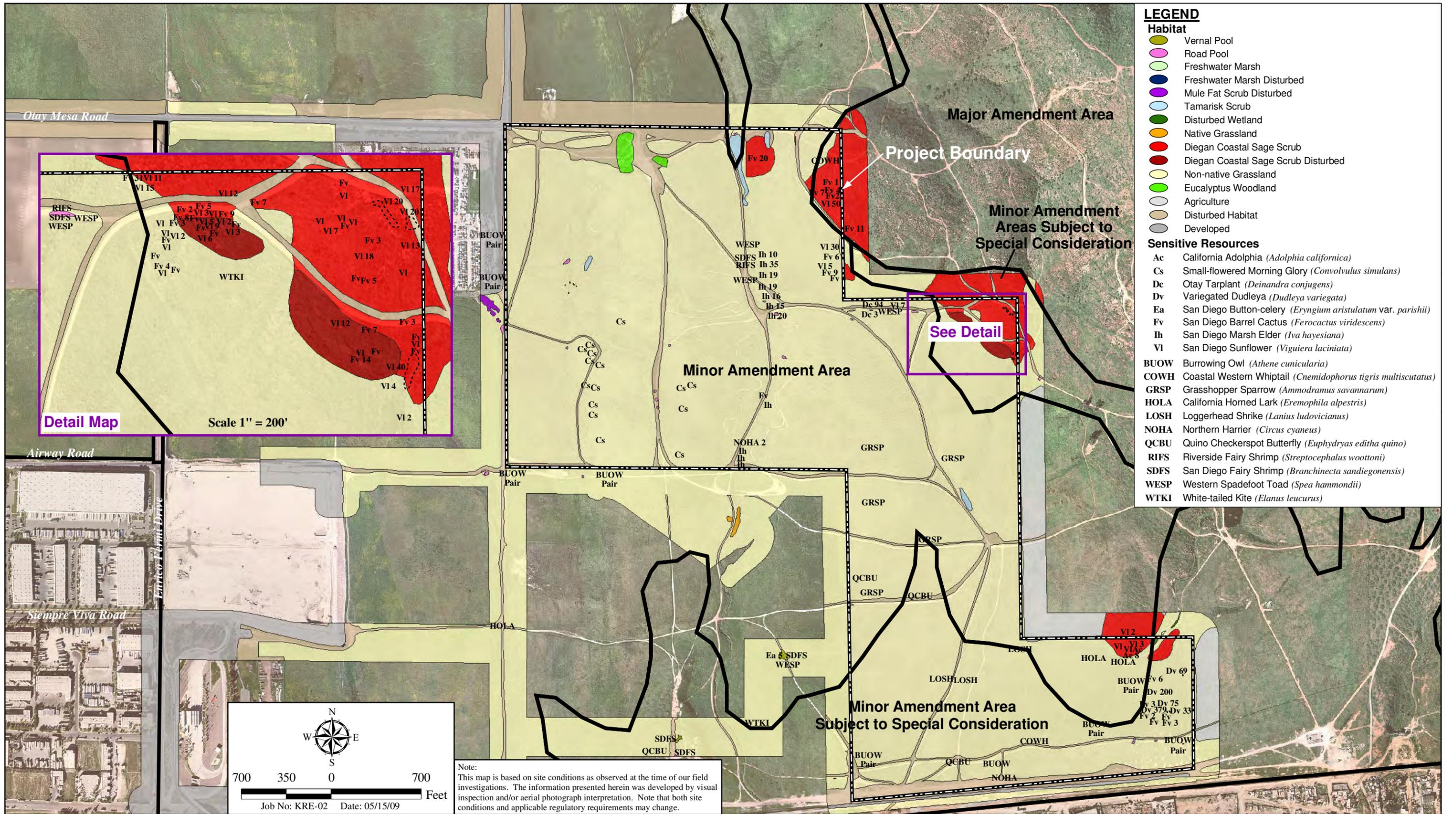
Nomenclature used in this report comes from Holland (1986) and Oberbauer (2005) for vegetation community categories, Hickman, ed. (1993) or the California Native Plant Society (CNPS; 2007) for plants, Emmel and Emmel (1973) for butterflies, Crother (2001) for amphibians and reptiles, American Ornithologists' Union (2007) for birds, and Baker et al. (2003) for mammals.

## **3.0 RESULTS**

### **3.1 VEGETATION COMMUNITIES**

The project site supports the following vegetation communities: tamarisk scrub, disturbed wetland, Diegan coastal sage scrub (including disturbed), non-native grassland, eucalyptus woodland, agriculture, disturbed habitat, and developed land (Figure 3; Table 2). Additionally, a number of road pools occur within other vegetation communities on site (also see Section 3.1.8). Habitats mapped within the off site improvement area include native grassland, non-native grassland, agriculture, disturbed habitat, and developed land. Habitats within the off site gravity lines and force main sewer alternatives include vernal pools, non-native grassland, disturbed

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## Vegetation and Sensitive Species

OTAY CROSSINGS COMMERCE PARK

Figure 3a



## Vegetation and Sensitive Species - Off-site Road and Sewer Improvements

OTAY CROSSINGS COMMERCE PARK

habitat and developed land. With permission from the Paragon Management Company, LLC, additional information for off-site biological resources is provided from the Biological Technical Report for Otay Business Park (HELIX 2006c).

<b>Table 2</b>		
<b>EXISTING VEGETATION COMMUNITIES</b>		
<b>VEGETATION COMMUNITY*</b>	<b>ACREAGE†</b>	
	<b>On-site</b>	<b>Off-site‡</b>
<b>Wetlands</b>		
Tamarisk scrub (63810)	0.97	0.00
Disturbed wetland (11300)	0.03	0.00
<b>Tier I</b>		
Native grassland (42100)	0.0	0.1
<b>Tier II</b>		
Diegan coastal sage scrub (including disturbed; 32500)	8.7	0.1
<b>Tier III</b>		
Non-native grassland (42200)	278.5	19.0
<b>Tier IV</b>		
Eucalyptus woodland (11100)	1.0	0.0
Agriculture (18000)	<0.1	0.7
Disturbed habitat (11300)	22.2	5.0
Developed (12000)	<0.1	5.7
<b>TOTAL</b>	<b>311.5</b>	<b>30.6</b>

\* Vegetation codes are from Holland (1986) or Oberbauer (2005).

† All wetland areas are presented in acre(s) rounded to the nearest 0.01; upland areas are rounded to the nearest 0.1.

‡ Off-site acreages under Sewer Option A; Sewer Options B-1 and B-2 would each include an additional 4.4 acres of impacts.

### **3.1.1 Vernal Pool**

Vernal pools are highly specialized communities formed under specific physical conditions, including a subsurface hardpan or claypan that inhibits the downward percolation of water, and a topography characterized by a series of low hummocks (mima mounds) and depressions (vernal pools). Under these conditions, water collects in the depressions during the rainy season, gradually evaporating following the rain. In addition to holding water, vernal pools support one or more of the plant species listed in the Corps vernal pool plant indicator species list (Corps 1997). Among other potentially occurring animal species within vernal pools, San Diego fairy shrimp and Riverside fairy shrimp are federally listed as endangered. Vernal pools are a Tier I habitat under the Biological Mitigation Ordinance (BMO) because they support a number of sensitive plant and animal species, are limited in distribution, and/or are declining in area.

No vernal pools occur on site. Two vernal pools occur within the off-site Sewer Options B-1 and B-2 alignments.

### **3.1.2 Tamarisk Scrub**

Tamarisk scrub is a shrubby vegetation type dominated by its namesake (*Tamarix* sp.), a non-native species that replaces native vegetation subsequent to major disturbance. Because of its deep root system and high evapotranspiration rates, tamarisk can substantially lower the water table to below the root zone of native species, thereby competitively excluding them. As a prolific seeder, it is able to rapidly replace native species. Four small stands of tamarisk scrub occur on site: 2 occur in drainages in the northern part of the site and the other 2 occur as isolated stands within non-native grassland. Approximately 0.97 acre of tamarisk scrub occurs on site, of which 0.73 acre occurs along drainages.

### **3.1.3 Disturbed Wetland**

This community is dominated almost exclusively by exotic wetland species within areas that have undergone periodic disturbances. Characteristic species include cocklebur (*Xanthium strumarium*), curly dock (*Rumex crispus*), broom baccharis (*Baccharis sarothroides*), and tamarisk. A total of 0.03 acre of disturbed wetland occurs on site within a drainage in the southeastern corner of the property.

### **3.1.4 Native Grassland**

Native grassland is a community dominated by perennial native grasses. The majority of native grasslands in California have been displaced by non-native grassland dominated by introduced annual species; however, native grasslands persist in areas as small isolated islands. Approximately 0.1 acre of native grassland occurs alongside a drainage in the off-site improvement areas. These patches are dominated by saltgrass (*Distichlis spicata*) intermingled with upland non-native grasses such as oats (*Avena* spp.).

### **3.1.5 Diegan Coastal Sage Scrub (including disturbed)**

Coastal sage scrub is one of the two major shrub types that occur in California. This habitat type occupies xeric sites characterized by shallow soils. Sage scrub is dominated by subshrubs whose leaves abscise during drought. The Diegan coastal sage scrub on site contains a diverse suite of plant species including California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), coyote brush (*Baccharis pilularis*), and laurel sumac (*Malosma laurina*). Approximately 8.7 acres of Diegan coastal sage scrub (including 0.9 acre of disturbed) occurs in patches on three hills in the eastern portion of the site and 0.1 acre occurs in the off-site improvement areas.

### **3.1.6 Non-native Grassland**

Non-native grassland areas may have supported native grassland in the past, but have been overrun by exotic, introduced annuals. The flora of non-native grasslands includes a dense to

sparse cover of introduced grasses and often numerous species of showy-flowered, native, annual forbs (Holland 1986). This habitat is often associated with deep, fine-textured soils with some clay content. Introduction of exotic grasses in California due to grazing and agricultural practices, coupled with severe droughts, has contributed to the conversion of native grasslands to non-native grassland (Jackson 1985). Whereas native grasslands supported mostly perennials, such as needlegrass (*Nasella* sp.), non-native grasslands (including those on site) support mostly annuals. Regardless of species composition, grasslands throughout the County serve as valuable raptor foraging habitat and may have additional value if they support native forbs. Characteristic species of the non-native grasslands on site include oats (*Avena* spp.), red brome (*Bromus madritensis* ssp. *rubens*), ripgut (*Bromus diandrus*), ryegrass (*Lolium* sp.), and mustard (*Brassica* sp.). Portions of the site, especially in the central and northeastern areas, are dominated by mustard. Non-native grassland is the dominant vegetation community on site, covering approximately 278.5 acres. An additional 19.0 acres of non-native grassland occurs in the off-site improvement areas.

### **3.1.7 Eucalyptus Woodland**

Eucalyptus woodland is dominated by eucalyptus (*Eucalyptus* sp.), an introduced tree species. This species is often planted purposely but can also spread under appropriate conditions. Approximately 1.0 acre of eucalyptus woodland occurs on site.

### **3.1.8 Agriculture**

A small portion of an off-site agricultural field is mapped within the property boundary in the eastern portion of the site, comprising less than 0.1 acre. Approximately 0.7 acre of agriculture is mapped in the off-site improvement areas.

### **3.1.9 Disturbed Habitat**

Disturbed habitat supports either no vegetation or a cover of non-native weedy species that are adapted to a regime of frequent disturbance. Many of the characteristic species of this habitat are also indicator species of annual grasslands, although disturbed areas tend to be dominated more by forbs than grasses. Characteristic species include mustard, star thistle (*Centaurea melitensis*), fennel (*Foeniculum vulgare*), and Russian thistle (*Salsola tragus*). Disturbed areas, namely dirt roads associated with Border Patrol activities, cover approximately 22.2 acres on site, and an additional 5.0 acres occur in the off-site improvement areas.

A total of 31 water-holding basins were mapped within disturbed habitat on site. A basin is considered a vernal pool if it supports plants identified as vernal pool species by Zedler (1987). Natural basins that support no vernal pool species or that occur in drainages are defined as road pools. As a result, the site currently supports 31 road pools totaling 0.20 acre. Four road pools, totaling 0.04 acre, occur in the off-site road improvement areas.

### 3.1.10 Developed

Developed areas include paved roads and existing developments with industrial or commercial land uses on site. The project site contains less than 0.1 acre of developed land, and an additional 5.7 acres occur in the off-site improvement areas.

### 3.2 JURISDICTIONAL AREAS

Corps jurisdictional areas comprise 0.34 acre on site and 0.01 acre within the off-site improvement areas. In total, 0.03 acre of disturbed wetland and 0.32 acre of non-wetland Waters of the U.S. were mapped for the project (Figure 4a; Table 3). Jurisdictional areas were mapped in the off-site force main sewer options.

<b>JURISDICTIONAL AREA</b>	<b>CORPS</b>		<b>CDFG</b>		<b>COUNTY</b>	
	<b>On Site</b>	<b>Off Site</b>	<b>On Site</b>	<b>Off Site</b>	<b>On Site</b>	<b>Off Site</b>
Tamarisk scrub	0.00	0.00	0.73	0.00	0.00	0.00
Disturbed wetland	0.03	0.00	0.03	0.00	0.03	0.00
Non-wetland Waters of the U.S./ Streambed	0.31	0.01	0.36	0.01	0.00	0.00
<b>TOTAL</b>	<b>0.34</b>	<b>0.01</b>	<b>1.12</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>

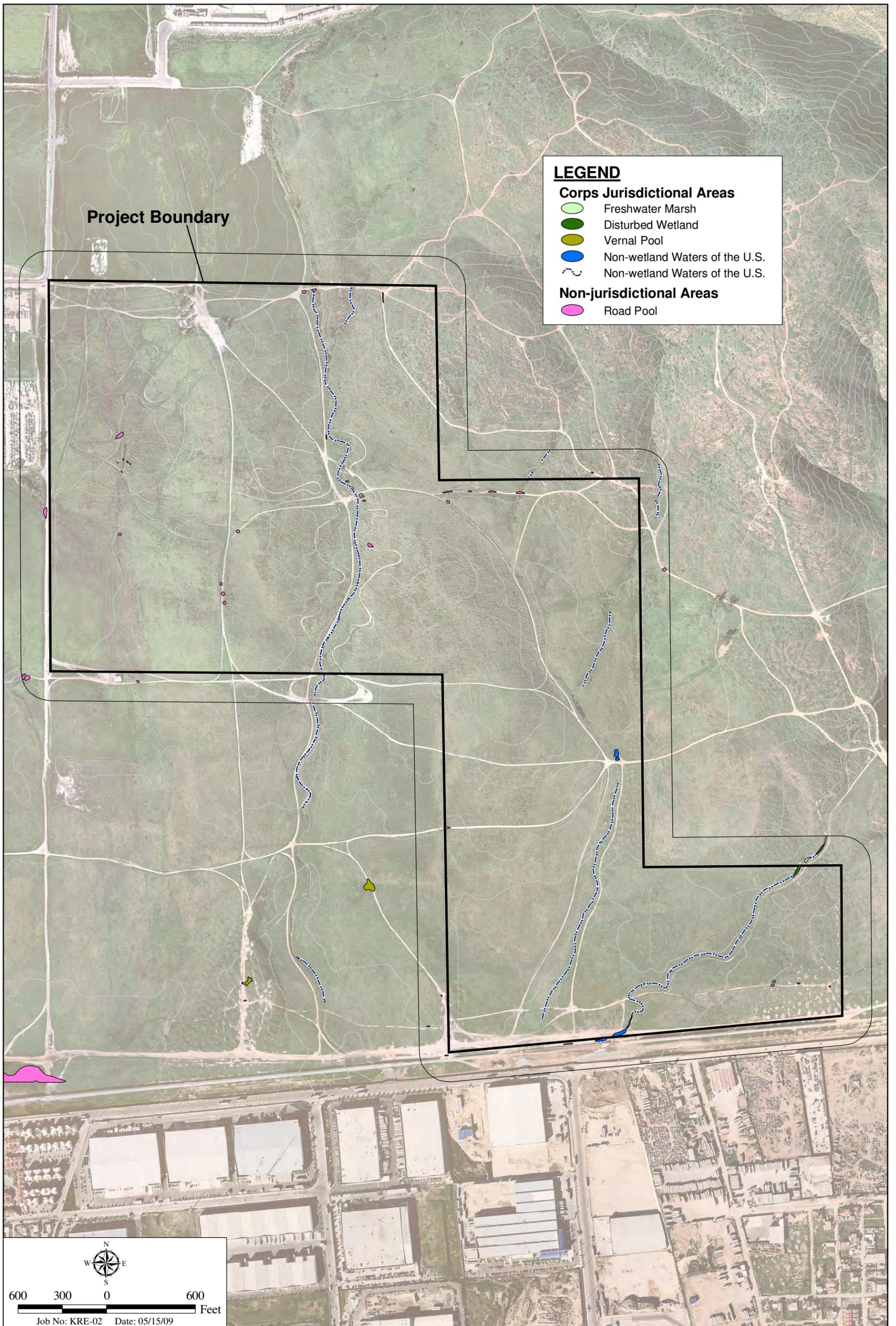
\*Areas are presented in acre(s) rounded to the nearest 0.01.

State (CDFG) jurisdictional areas comprise 1.12 acres on site and 0.01 acre within the off-site improvement areas (Figure 4b). In total, 0.73 acre of tamarisk scrub, 0.03 acre of disturbed wetland, and 0.37 acre of streambeds were mapped as CDFG habitat for the project (HELIX 2006b). An additional 0.24 acre of tamarisk scrub occurring on site was not considered jurisdictional to CDFG, as these areas do not occur along CDFG streambeds.

County RPO wetlands include 0.03 acre of disturbed wetland in the southeastern corner of the site (Figure 4c). In addition, the off-site improvement area along Alta Road contains a portion of the wetland buffer for a small stand of disturbed mule fat scrub (RPO wetland) occurring off site but outside of the road improvements area (Figure 4c).

As noted on page 5, the County RPO definition for a vegetated wetland habitat states that it must periodically support a predominance of hydrophytes (plants whose habitat is water or very wet places), the substratum must be predominantly undrained hydric soils, or the substratum is predominantly non-soil and such lands contribute substantially to the biological functions or values of wetlands in the drainage system. Based on these requirements, the tamarisk scrub is not an RPO wetland.

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**LEGEND**

**Corps Jurisdictional Areas**

- Freshwater Marsh
- Disturbed Wetland
- Vernal Pool
- Non-wetland Waters of the U.S.
- - - Non-wetland Waters of the U.S.

**Non-jurisdictional Areas**

- Road Pool

**Project Boundary**

600 300 0 600 Feet

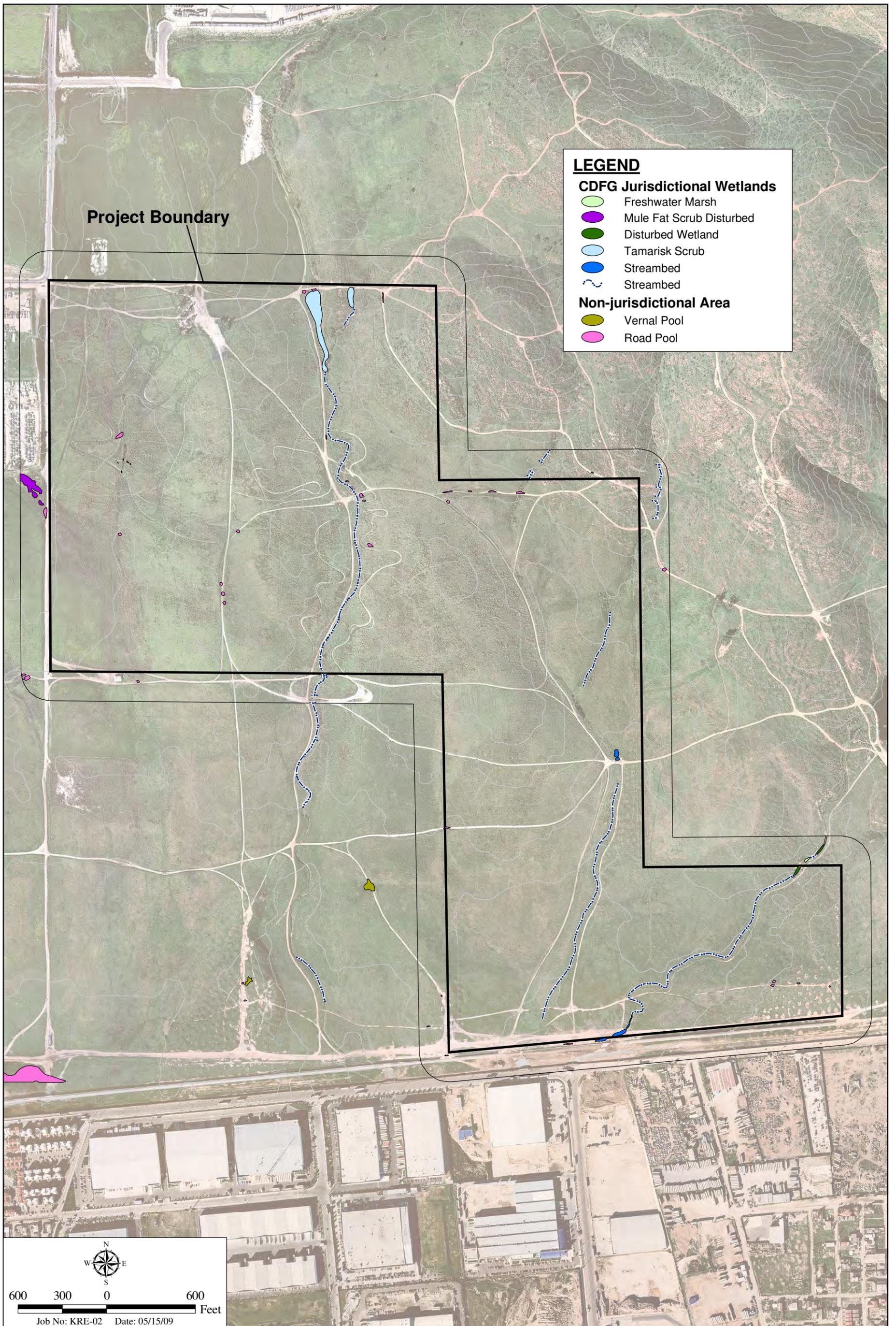
Job No: KRE-02 Date: 05/15/09

**Corps Jurisdictional Delineation**

OTAY CROSSINGS COMMERCE PARK

Figure 4a

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**LEGEND**

**CDFG Jurisdictional Wetlands**

- Freshwater Marsh
- Mule Fat Scrub Disturbed
- Disturbed Wetland
- Tamarisk Scrub
- Streambed
- - - Streambed

**Non-jurisdictional Area**

- Vernal Pool
- Road Pool

**Project Boundary**

600 300 0 600 Feet

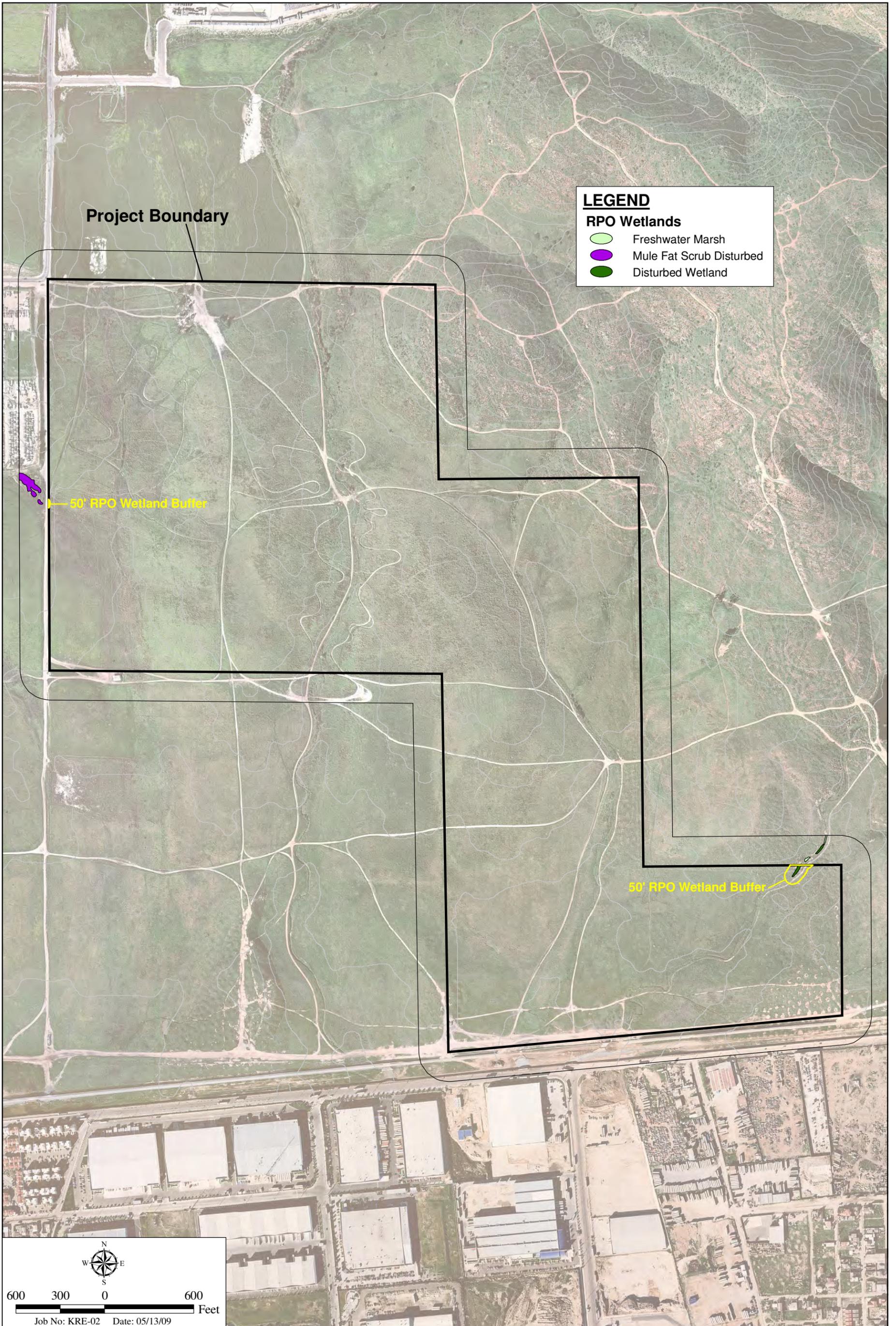
Job No: KRE-02 Date: 05/15/09

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**CDFG Jurisdictional Delineation**

OTAY CROSSINGS COMMERCE PARK

Figure 4b



**RPO Wetlands**

OTAY CROSSINGS COMMERCE PARK

Figure 4c

Tamarisk scrub generally occurs in monotypic stands, dominated by salt-cedar (*Tamarix parviflora* or *T. ramosissima*). The tamarisk scrub on site is characterized as a nearly monotypic cover of the non-native, invasive small-flowered tamarisk, which is on the California Invasive Plant Council (Cal-IPC) List A, reserved for the most invasive wildland pest plants, documented as aggressive invaders that displace natives and disrupt natural habitats. Tamarisk is opportunistic and can survive in upland areas with little or no surface water contribution. It is commonly found in wetland and riparian areas, but its survival does not require wetland hydrology due to its deep taproot, which can draw on groundwater. It is considered a facultative phreatophyte which means that its roots extend deeply into the soil and depend on ground water for water supply. Because of its facultative nature, however, salt cedar can potentially obtain water from other sources, i.e. through sending out adventitious roots (Di Tomaso 1996). Contrary to hydrophytes, phreatophytes are not restricted to saturated and inundated soils. Because it can live outside of wetland situations, tamarisk is not a true hydrophyte and its presence does not necessarily indicate wetland habitat. As defined by the USFWS, wetlands are lands where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface. The single feature that most wetlands share is soil or substrate that is at least periodically saturated with or covered by water. The water creates severe physiological problems for all plants and animals except those that are adapted for life in water or in saturated soil. The USFWS provides further evidence that tamarisk is not a hydrophyte; they rate this species as facultative (having equal probability of occurring in wetlands and uplands). Conversely, hydrophytes almost always (99 percent probability) occur in wetlands.

The substratum in the tamarisk scrub does not contain hydric soils, and there are no RPO wetlands downstream of the tamarisk scrub. Based on these factors, tamarisk scrub should not be considered an RPO wetland because the species that dominate this habitat are phreatophytes and not hydrophytes, there are no hydric soils, and the tamarisk scrub does not contribute to functions and values of downstream wetlands.

### **3.3 PLANT SPECIES**

A total of 98 plant species were observed on the project site and are included in Appendix A.

### **3.4 ANIMAL SPECIES**

A total of 55 animal species, including 18 invertebrates, 1 amphibian, 4 reptiles, 29 birds, and 3 mammals, were observed on the project site and are included in Appendix B.

### **3.5 SENSITIVE RESOURCES**

Sensitive resources are defined as: (1) habitat areas or vegetation communities that are unique, of relatively limited distribution, or of particular value to wildlife; and (2) species that have been given special recognition by federal, state, or local government agencies and organizations due to limited, declining, or threatened populations.

### **3.5.1 Sensitive Vegetation Communities and Wetlands**

Sensitive communities include those that have been depleted, are naturally uncommon, or support sensitive species. Within the project site and in the off-site improvement areas, disturbed wetland, native grassland, Diegan coastal sage scrub (including disturbed), and non-native grassland are considered County sensitive. Although it is not considered sensitive, eucalyptus woodland has potential to support nesting raptors, which are protected under the federal Migratory Bird Treaty Act (MBTA). In addition, any impacts to wetland habitat or Waters of the U.S. must be reviewed in the context of a Corps 404 Permit and/or a California Fish and Game Code Section 1602 Streambed Alteration Agreement application and the County RPO. All Corps, CDFG, and County jurisdictional areas are considered sensitive and would require mitigation if impacted.

### **3.5.2 Sensitive Plant Species**

Seven sensitive plant species were observed during rare plant surveys on site (Figure 3): Otay tarplant (*Deinandra conjugens*), California adolphia (*Adolphia californica*), San Diego barrel cactus (*Ferocactus viridescens*), San Diego marsh-elder (*Iva hayesiana*), variegated dudleya (*Dudleya variegata*), San Diego County viguiera (*Viguiera laciniata*), and small-flowered morning glory (*Convolvulus simulans*). Additionally, sensitive plant species known from the project vicinity are assessed for potential to occur on site in Table 4, which follows the sensitive plant species discussions below.

#### **Otay tarplant (*Deinandra conjugens*)**

**Listing:** FT/SE; CNPS List 1B.1; MSCP Narrow Endemic (NE); County Group A

**Distribution:** Southern San Diego County and northwestern Baja California, Mexico (Baja). In San Diego County, occurs in scattered localities from the Sweetwater Reservoir to the Mexican border.

**Habitat:** Clay soils in coastal sage scrub; valley and foothill grasslands

**Status on site:** Approximately 97 individuals observed in two patches in the northeastern portion of the site in 2000; however, no individuals detected during the rare plant survey in 2005

#### **California adolphia (*Adolphia californica*)**

**Listing:** --/--; CNPS List 2.1; County Group B

**Distribution:** Below 1,000 feet in elevation in western San Diego County and northwestern Baja

**Habitat:** Clay soils in dry canyons and washes in coastal sage scrub and chaparral

**Status on site:** Four individuals observed in non-native grassland in the north-central portion of the site and three individuals observed in coastal sage scrub in the southeastern portion of the site

#### **San Diego barrel cactus (*Ferocactus viridescens*)**

**Listing:** --/--; CNPS List 2.1; County Group B

**Distribution:** San Diego County and Baja

**Habitat:** Dry slopes in coastal sage scrub

**Status on site:** Patches ranging in size from 1 to 27 individuals scattered within coastal sage scrub in the eastern portion of the site with a total of 193 individuals

#### **San Diego marsh-elder (*Iva hayesiana*)**

**Listing:** --/--; CNPS List 2.2; County Group B

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**Distribution:** San Diego County and Baja

**Habitat:** Low-lying, moist, or alkaline places along coast; has been reported along intermittent streams

**Status on site:** Approximately 138 individuals observed along a drainage in the northern-central portion of the site

**Variegated dudleya (*Dudleya variegata*)**

**Listing:** --/--; CNPS List 1B.2; MSCP Narrow Endemic; County Group A

**Distribution:** San Diego and Baja

**Habitat:** Valley and foothill grassland, chaparral, coastal scrub, cismontane woodland, and vernal pools below 1,800 feet

**Status on site:** Approximately 756 individuals found within non-native grassland in the southeastern portion of the site

**San Diego County viguiera (*Viguiera laciniata*)**

**Listing:** --/--; CNPS List 4.2; County Group D

**Distribution:** San Diego County and Baja

**Habitat:** Diegan coastal sage scrub

**Status on site:** Approximately 252 individuals found in scattered patches throughout coastal sage scrub habitat and non-native grassland in the eastern portion of the site

**Small-flowered morning glory (*Convolvulus simulans*)**

**Listing:** --/--; CNPS List 4.2; County Group D

**Distribution:** Southern and central California

**Habitat:** Diegan coastal sage scrub and grassland

**Status on site:** Approximately 15 individuals found in non-native grassland in the northwestern portion of the site

<b>SPECIES</b>	<b>LISTING OR SENSITIVITY*</b>	<b>POTENTIAL TO OCCUR</b>
California Orcutt grass ( <i>Orcuttia californica</i> )	FE/SE CNPS List 1B.1 County Group A MSCP Covered	Low. Vernal pool species. Would have been observed if present.
Otay Mesa mint ( <i>Pogogyne nudiuscula</i> )	FE/SE CNPS List 1B.1 County Group A MSCP Covered	Low. Otay Mesa vernal pool species. Would have been observed if present.

**Table 4 (cont.)  
COUNTY SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR**

<b>SPECIES</b>	<b>LISTING OR SENSITIVITY*</b>	<b>POTENTIAL TO OCCUR</b>
San Diego button-celery ( <i>Eryngium aristulatum</i> var. <i>parishii</i> )	FE/SE CNPS List 1B.1 County Group A MSCP Covered	Low. Perennial herb occurring in coastal scrub, grassland, marsh, vernal pools, and in mesic soils along the coast. Range includes Riverside and San Diego counties and Baja. Would have been observed if present.
Willow monardella ( <i>Monardella linoides</i> ssp. <i>viminea</i> )	FE/SE CNPS 1B.1 CA Endemic MSCP NE County Group A	Low. Perennial herb typically associated with drainages in chaparral or coastal sage scrub. Would have been observed if present.
San Diego thorn-mint ( <i>Acanthomintha</i> <i>ilicifolia</i> )	FT/SE CNPS List 1B.1 MSCP NE County Group A	Low. Occurs on clay lenses in open areas within grasslands. Would have been observed if present.
San Diego ambrosia ( <i>Ambrosia pumila</i> )	FE/-- CNPS List 1B.1 MSCP NE County Group A	Low. Occurs in disturbed areas within chaparral, coastal sage scrub, and grasslands. Would have been observed if present.
Spreading navarretia ( <i>Navarretia fossalis</i> )	FT/-- CNPS List 1B.1 County Group A	Low to moderate. Vernal pool species with limited number of populations. Would likely have been observed if present, although likelihood of detection varies from year to year.
Dehesa nolina ( <i>Nolina interrata</i> )	--/SE CNPS List 1B.1 MSCP NE County Group A	Low. Occurs in mafic chaparral such as gabbroic conditions, none of which occurs on site. Would have been observed if present.
Dunn's mariposa lily ( <i>Calochortus dunnii</i> )	--/SR CNPS List 1B.2 MSCP NE County Group A	Low. Typically associated with gabbro soils and chaparral habitats. The site is below elevation range of this species and lacks appropriate habitat.
Snake cholla ( <i>Opuntia parryi</i> var. <i>serpentina</i> )	--/-- CNPS List 1B.1 MSCP NE County Group A	Low. Chaparral and coastal sage scrub from Point Loma south to Chula Vista and Baja. Would have been observed if present.
Heart-leaved pitcher sage ( <i>Lepechinia</i> <i>cardiophylla</i> )	--/-- CNPS List 1B.2 MSCP NE County Group A	Low. Occurs in thick chaparral and known in California from only 10 sites. Would have been observed if present.

**Table 4 (cont.)  
COUNTY SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR**

<b>SPECIES</b>	<b>LISTING OR SENSITIVITY*</b>	<b>POTENTIAL TO OCCUR</b>
Gander's pitcher sage ( <i>Lepechinia ganderi</i> )	--/-- CNPS List 1B.3 MSCP NE County Group A	Low. Occurs in chaparral understory and only known from a few inland sites. Would have been observed if present.
Parry's tetraococcus ( <i>Tetraococcus dioicus</i> )	--/-- CNPS List 1B.2 MSCP Covered County Group A	Low in coastal sage scrub. Would have been observed if present.
Tecate cypress ( <i>Cupressus forbesii</i> )	--/-- CNPS List 1B.1 County Group A	Low. Evergreen tree occurring in southern mixed chaparral and southern interior cypress forest. Appropriate habitat absent. Would have been observed if present.
San Diego goldenstar ( <i>Muilla clevelandii</i> )	--/-- CNPS List 1B.1 County Group A	Moderate. Occurs in coastal sage scrub east of the site. Would have been observed during rare plant surveys if present on site.
Nuttall's scrub oak ( <i>Quercus dumosa</i> )	--/-- CNPS List 1B.1 County Group A	Low. Shrub occurring in chaparral and coastal sage scrub. Would have been observed if present.
Summer holly ( <i>Comarostaphylos diversifolia</i> ssp. <i>diversifolia</i> )	--/-- CNPS List 1B.2 County Group A	Low. Large shrub occurring in chaparral. Habitat absent from the site. Would have been observed if present.
Orcutt's brodiaea ( <i>Brodiaea orcuttii</i> )	--/-- CNPS List 1B.1 County Group A	Low. Occurs in vernal pools and ephemeral streams and seeps in Riverside and San Bernardino counties south to Baja. Would have been observed if present.
Shaw's agave ( <i>Agave shawii</i> )	--/-- CNPS List 2.1 MSCP NE County Group B	Low. Occurs in coastal sage scrub and coastal bluff scrub. Would have been detected if present.
Palmer's goldenbush ( <i>Ericameria palmeri</i> ssp. <i>palmeri</i> )	--/-- CNPS List 2.2 MSCP NE County Group B	Low to moderate. Evergreen shrub occurring in coastal sage scrub. Would have been observed if present.
Orcutt's bird's-beak ( <i>Cordylanthus orcuttianus</i> )	--/-- CNPS List 2.1 R-E-D 3-3-1 MSCP Covered County Group B	Low. Annual species occurring in coastal sage scrub. Would have been observed if present.

**Table 4 (cont.)  
COUNTY SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR**

<b>SPECIES</b>	<b>LISTING OR SENSITIVITY*</b>	<b>POTENTIAL TO OCCUR</b>
Orcutt's dudleya ( <i>Dudleya attenuata</i> ssp. <i>orcuttii</i> )	--/-- CNPS List 2.1 County Group B	Low. Coastal bluff scrub, chaparral, and coastal sage scrub. Would have been observed if present.
Wart-stemmed ceanothus ( <i>Ceanothus verrucosus</i> )	--/-- CNPS List 2.2 MSCP Covered County Group B	Low. Shrub occurring in chaparral. Would have been observed if present.
Golden-spined cereus ( <i>Bergerocactus emoryi</i> )	--/-- CNPS List 2.2 County Group B	Low. Stem succulent occurring in sandy substrate in chaparral and coastal scrub. Known to occur in Otay Mesa area. Would have been observed if present.
Munz's sage ( <i>Salvia munzii</i> )	--/-- CNPS List 2.2 County Group B	Moderate. South foothill and coastal region of San Diego County below 1,500 feet amsl. Known off site to north. Would have been observed if present.
Little mouseltail ( <i>Myosurus minimus</i> ssp. <i>apus</i> )	--/-- CNPS List 3.1 County Group A	Low to moderate. Inconspicuous species of vernal pools. Would have been observed if present.
Short-lobed broomrape ( <i>Orobanche parishii</i> ssp. <i>brachyloba</i> )	--/-- CNPS List 4.2 County Group A	Low. Parasitic herb occurring in sandy substrate in coastal bluff scrub and dunes. Known populations in Channel Islands, San Luis Obispo, and San Diego counties as well as Baja. Appropriate habitat does not occur on site.
Palmer's grapplinghook ( <i>Harpagonella palmeri</i> )	--/-- CNPS List 4.2 County Group B	Low in chaparral and grassland with clay soil. Would have been observed if present.
Graceful tarplant ( <i>Holocarpha virgata</i> ssp. <i>elongata</i> )	--/-- CNPS List 4.2 CA Endemic County Group D	Moderate. Annual species of chaparral, cismontane woodlands, coastal sage scrub, and grasslands.
Western dichondra ( <i>Dichondra occidentalis</i> )	--/-- CNPS List 4.2 County Group D	Moderate. Occurs in coastal sage scrub northeast of the site.

\*Refer to Appendix C for a listing and explanation of status and sensitivity codes

### **3.5.3 Sensitive Animal Species**

Eleven sensitive animal species have been observed/detected on site since 2000 (Figure 3); additionally, the project site is within the territory of a golden eagle (*Aquila chrysaetos*) pair.

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The sensitivity, distribution, and typical habitats for sensitive species observed on site are described below. Additionally, sensitive animal species that were not detected have potential to occur on site and are listed in Table 5 immediately following the sensitive species information. It should be noted that the vernal pools previously occurring along the southern project boundary and supporting San Diego and Riverside fairy shrimp were impacted by the border fence project and these vernal pools and fairy shrimp locations are no longer present on site and are not included in the discussions below.

**San Diego fairy shrimp (*Branchinecta sandiegonensis*)**

**Listing:** FE/--; MSCP NE

**Distribution:** San Diego County

**Habitat:** Seasonal pools that occur in tectonic swales or earth slump basins and other areas of shallow and standing water, often in patches of grassland and agriculture interspersed in coastal sage scrub and chaparral

**Status on site:** Detected in two road pools in the northern and northeastern portions of the site during 2005 and 2006 surveys (Figure 3)

**Riverside fairy shrimp (*Streptocephalus woottoni*)**

**Listing:** FE/--; MSCP NE

**Distribution:** Currently known from vernal pools and other ephemeral basins in Riverside, Orange, and San Diego counties; northern Baja

**Habitat:** Typically deep vernal pools and seasonal wetlands at least 30 cm deep (Simovich 1990)

**Status on site:** Detected in two road pools in the northern and northeastern portions of the site during 2005 and 2006 surveys (Figure 3)

**Quino checkerspot butterfly (*Euphydryas editha quino*)**

**Listing:** FE/--

**Distribution:** Fifty years ago, species was described as one of the most common butterflies in the county (Murphy 1990). Currently, populations are known to exist only as several (probably isolated) colonies in southwestern Riverside County, extreme northern San Diego County, southern San Diego County, and northern Baja.

**Habitat:** Generally occurs in grasslands and open sage scrub, particularly where larval host plants, including dwarf plantain, white snapdragon (*Antirrhinum coulterianum*), or purple owl's clover, are abundant

**Status on site:** No QCB detected on site during 2005 or 2006 protocol surveys; however, three individuals reported in 2000 within non-native grassland in the southern portion of the site.

**Western spadefoot (*Spea hammondi*)**

**Listing:** --/SSC,

**Distribution:** Throughout the Central Valley and San Francisco Bay area south along the coast to northwestern Baja California

**Habitat:** Occurs in open coastal sage scrub, chaparral, and grassland, along sandy or gravelly washes, floodplains, alluvial fans, or playas. Requires temporary pools for breeding and friable soils for burrowing. Generally excluded from areas with bullfrogs (*Rana catesbiana*) or crayfish (*Procambarus* sp.).

**Status on site:** Observed in five road pools in the northeastern portion of the site

**Coastal western whiptail (*Cnemidophorus tigris multiscutatus*)**

**Listing:** --/--

**Distribution:** Ventura County south in cismontane California to south-central Baja

**Habitat:** Open coastal sage scrub, chaparral, and woodlands. Frequently found along the edges of dirt roads traversing its habitats. Important habitat components include open, sunny areas, shrub cover with accumulated leaf litter, and an abundance of invertebrate prey, particularly termites (*Reticulitermes* sp.).

**Status on site:** One individual was observed in the southeastern portion of the site and one in the northeastern corner. Likely occurs throughout the coastal sage scrub areas on site

**Burrowing owl (*Athene cunicularia*)**

**Listing:** --/SSC (burrow sites); MSCP NE; MSCP Covered

**Distribution:** Lower British Columbia to Manitoba, Canada; central and western U.S. south to northern Mexico and Baja

**Habitat:** Open areas such as grasslands, pastures, coastal dunes, desert scrub, and agriculture fields edges

**Status on site:** Nine individual owls and at least one active burrow were mapped on site (largely in the southern portion) during focused surveys in 2000. A pair with young was observed along Alta Road in the northwestern portion in 2004, and two nesting pairs were observed in the southeastern portion, a pair was observed adjacent to the auction lot just off site to the west, and a pair and juvenile were observed south of the auction lot off site to the west. In 2006, eight and possibly nine pairs were observed along the southern and western edges of the project boundary. Four pairs had burrows immediately off site and are assumed to use at least a portion of the site as their territory. No owls were observed in the central and eastern portions of the site during multiple surveys (Figure 3). The applicant has asserted that because of the lack of owl observations in the northeastern portion of the site during hundreds of hours of field time by biologists experienced with burrowing owl observations, and more importantly because of the density and height of the non-native grassland and high weedy component in these areas, these portions of the site should not be considered occupied burrowing owl habitat. The County is analyzing the project based on the assumption that the entire site is considered occupied burrowing owl habitat.

**California horned lark (*Eremophila alpestris actia*)**

**Listing:** --/SSC

**Distribution:** Coastal slopes and lowlands from Sonoma County to northern Baja

**Habitat:** Sandy beaches, agricultural fields, grassland, and open areas

**Status on site:** Two individuals were observed in non-native grassland in southeastern portion of site

**Loggerhead shrike (*Lanius ludovicianus*)**

**Listing:** --/SSC

**Distribution:** Widespread but declining throughout North America; winters in Central America

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**Habitat:** Open habitats including grasslands, shrublands, and ruderal areas with adequate perching locations

**Status on site:** Two individuals observed within non-native grassland in 2005; however, eight individuals and one active nest observed in 2000. Observed throughout lower portions of site in 2006

**Northern harrier (*Circus cyaneus*)**

**Listing:** --/SSC; MSCP Covered

**Distribution:** Widespread throughout temperate regions of North America and Eurasia. Winters and migrates throughout California from below sea level in Death Valley to 9,800 feet. Known breeding areas in San Diego County include Torrey Pines, Tijuana River Valley, and Camp Pendleton.

**Habitat:** Coastal, salt, and freshwater marshlands; grasslands; prairies

**Status on site:** Two individuals of undetermined sex were observed on site: one within non-native grassland in the central portion of the site and another in non-native grassland along the southern property boundary

**Grasshopper sparrow (*Ammodramus savannarum*)**

**Listing:** --/SSC

**Distribution:** Occurs from southern Canada through much of Mexico

**Habitat:** Restricted to grasslands (particularly native) dominated by bunchgrasses (*Nassella* spp.)

**Status on site:** One individual detected in 2005 within non-native grassland in the central portion of the site. Five individuals observed in 2006 in the lower half of the site

**White-tailed kite (*Elanus leucurus*)**

**Listing:** --/--

**Distribution:** Breeds in the Pacific U.S. and winters in South America

**Habitat:** Nests in riparian or oak woodlands adjacent to grasslands supporting small mammals

**Status on site:** Observed in non-native grassland near Diegan coastal sage scrub in a portion of the site planned for preservation

**Golden eagle (*Aquila chrysaetos*)**

**Listing:** Nesting and wintering; --/SSC; MSCP Rare and NE; MSCP Covered

**Distribution:** Breeds from Alaska east across northern Canada south to Mexico, Canadian prairie provinces, and Labrador. Winters in southern part of breeding range and in much of U.S., except the southeast.

**Habitat:** Forage in grassy and open, shrubby habitats. Nest most often on cliffs, less often in trees. Tend to require places of solitude and are usually found at a distance from human habitation.

**Status on site:** None observed during project-related surveys of the project site. Although site does not support suitable nesting habitat, appropriate foraging habitat is abundant within the on-site non-native grassland. Moreover, the entire project site lies within golden eagle territory, and a portion of the site lies within the foraging range of a pair reported to nest in O'Neal Canyon approximately 1.5 miles to the northeast. Because other golden eagle pairs are known to nest to the north and east of the O'Neal Canyon pair, the primary foraging area of the O'Neal Canyon pair is largely restricted to Otay Mesa.

In addition to burrowing owl nests observed in 2005, one active red-tailed hawk (*Buteo jamaicensis*) nest was observed in eucalyptus woodland in the northwestern portion of the site. Several other raptor species have been observed in vicinity of the project site, including golden eagle (*Aquila chrysaetos*), northern harrier, and American kestrel (*Falco sparverius*). Although no additional nests were detected, there is high potential for raptor species to nest in the stands of eucalyptus trees on site (or in grasslands, for northern harrier). Active raptor nests are protected from impacts by the federal MBTA.

<b>Table 5</b>		
<b>COUNTY SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR</b>		
<b>SPECIES</b>	<b>LISTING OR SENSITIVITY*</b>	<b>POTENTIAL TO OCCUR</b>
<b>INVERTEBRATES</b>		
Harbinson dun skipper ( <i>Euphyes vestris harbisoni</i> )	--/-- MSCP Covered	Low. Host plant San Diego sedge ( <i>Carex spissa</i> ) was not observed on site.
Thorne's hairstreak butterfly ( <i>Mitoura thornei</i> )	--/-- MSCP Covered	Low. Closely associated with food plant Tecate cypress ( <i>Cupressus forbesii</i> ) and closed cone forest habitats. Appropriate habitat not present within or near the site.
Hermes copper ( <i>Lycaena hermes</i> )	--/--	Low. Host plant spiny redberry ( <i>Rhamnus crocea</i> ) was not observed.
<b>VERTEBRATES</b>		
<b>Reptiles/Amphibians</b>		
Arroyo southwestern toad ( <i>Bufo californicus</i> )	FE/SSC MSCP Covered	Low. Found in washes, streams, and arroyos in semiarid areas. Prefer shallow pools and open, sandy stream terraces or sand bars with cottonwoods, willows, or sycamores. Appropriate habitat absent.
Orange-throated whiptail ( <i>Cnemidophorus hyperythrus beldingi</i> )	--/SSC, Fully Protected MSCP Covered	High. Prefers washes and other sandy areas with patches of brush and rocks for cover. Habitats include low-elevation coastal sage scrub, chaparral, and valley-foothill hardwood forests.
Coast horned lizard ( <i>Phrynosoma coronatum</i> )	--/SSC, Fully Protected	Moderate to high. Prefers friable, rocky, or shallow soils in coastal sage scrub and chaparral in arid and semi-arid climates.
Coastal rosy boa ( <i>Lichanura trivirgata roseofusca</i> )	--/SSC	Low to moderate. Generally occurs in coastal sage scrub, particularly where rock outcrops are common. Marginally suitable habitat occurs on site.

**Table 5 (cont.)  
COUNTY SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR**

SPECIES	LISTING OR SENSITIVITY*	POTENTIAL TO OCCUR
<b>VERTEBRATES</b>		
<b>Reptiles/Amphibians</b>		
Silvery legless lizard ( <i>Anniella nigra argentea</i> )	--/SSC	Low. Burrows in loose soils, sandy washes, or leaf litter. Occurs in moist habitats of chaparral, pine, and oak woodlands, and riparian streamside growth. Appropriate habitat limited on site.
Red-diamond rattlesnake ( <i>Crotalus exsul</i> )	--/SSC	Moderate. Common snake in coastal sage scrub.
Coronado Island skink ( <i>Eumeces skiltonianus interparietalis</i> )	--/SSC	Moderate. Prefers coastal sage scrub, grassland, and ruderal habitats.
Coast western patch-nosed snake ( <i>Salvadora hexalepis virgultea</i> )	--/SSC	Moderate. Preferred food source (whiptails) occur in coastal sage scrub on site.
<b>Birds</b>		
Peregrine falcon ( <i>Falco peregrinus</i> )	FE/SE MSCP Covered	Low. Rare fall and winter visitor. Prefers various coastal habitats for foraging and breeding.
Least Bell's vireo ( <i>Vireo bellii pusillus</i> )	FE/SE MSCP Covered	Low. Prefers riparian habitats. Although species has very high sensitivity, surveys not recommended based on site's low habitat quality and quantity. Would have been observed if present.
Southwestern willow flycatcher ( <i>Empidonax traillii extimus</i> )	FE/-- MSCP Covered	Low. Prefers riparian habitats. On-site habitat not extensive enough or appropriate as breeding habitat. May occur as a migrant. Would have been observed if present.
Coastal California gnatcatcher ( <i>Polioptila californica californica</i> )	FT/SSC MSCP Covered	Low. Not observed during focused surveys within suitable habitat on site. Although reported east of the project site, would likely have been observed if present.
Cooper's hawk ( <i>Accipiter cooperii</i> )	--/SSC MSCP Covered	Low. Would have been observed if present. Could occur in riparian habitats within the site and forage on site.
Tricolored blackbird ( <i>Agelaius tricolor</i> )	--/SSC	Low. Occurs mostly in coastal lowland grasslands and wetlands. Would have been observed if present.

**HELIX**

**Table 5 (cont.)  
COUNTY SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR**

SPECIES	LISTING OR SENSITIVITY*	POTENTIAL TO OCCUR
<b>VERTEBRATES (cont.)</b>		
<b>Birds (cont.)</b>		
Southern California rufous-crowned sparrow ( <i>Aimophila ruficeps canescens</i> )	--/SSC	Moderate. Occurs within sage scrub and grassland habitats.
Bell's sage sparrow ( <i>Amphispiza belli belli</i> )	--/SSC	Moderate. Occurs in sunny, dry stands of coastal sage scrub and chaparral. Observed off site to the east.
San Diego cactus wren ( <i>Campylorhynchus brunneicapillus sandiegonensis</i> )	--/SSC	Low. Occurs in large stands of <i>Opuntia</i> and other cactus species. Preferred habitat not present. Would have been observed if present.
Prairie falcon ( <i>Falco mexicanus</i> )	--/SSC	Moderate. Has been observed in project vicinity.
Long-billed curlew ( <i>Numenius amaericanus</i> )	--/SSC	Moderate. Occasionally observed in wet areas in project vicinity.
<b>Mammals</b>		
Pacific pocket mouse ( <i>Perognathus longimembris pacificus</i> )	FE/SSC	Low. Coastal sage scrub, but more often in sandy washes. Known currently from one location in Orange County and one on Camp Pendleton. Site outside of species' known range.
Pallid bat ( <i>Antrozous pallidus pacificus</i> )	--/SSC	Low. Roosts in caves, mines, bridges, crevices, and abandoned buildings and trees. Appropriate roosting habitat absent. Could forage throughout the site, but few potential roosting sites exist. Focused surveys not warranted.
Dulzura California pocket mouse ( <i>Chaetodipus californicus femoralis</i> )	--/SSC	Low. Dense chaparral, but occasionally other shrublands. Appropriate habitat absent.
Spotted bat ( <i>Euderma maculatum</i> )	--/SSC	Low likelihood to roost on site (prefers cliffs) but could forage on site. Occasionally enters buildings or caves and occurs in arid country.
Yuma myotis ( <i>Myotis yumanensis</i> )	--/--	Low. Arid areas. Roosts in buildings, mines, caves, and crevices, which are absent.

**Table 5 (cont.)**  
**COUNTY SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR**

SPECIES	LISTING OR SENSITIVITY*	POTENTIAL TO OCCUR
<b>VERTEBRATES (cont.)</b>		
<b>Mammals (cont.)</b>		
San Diego pocket mouse ( <i>Chaetodipus fallax fallax</i> )	--/SSC	Low. Prefers open, sandy land with weeds, which does occur on site. Trapping necessary for detection but not warranted due to the species' low sensitivity.
Greater western mastiff bat ( <i>Eumops perotis californicus</i> )	--/SSC	Low. Appropriate habitat absent. In chaparral and oak woodland with coast live oaks and in arid, rocky areas. Roosts on or in buildings, crevices in cliffs, and in trees and tunnels.
San Diego black-tailed jackrabbit ( <i>Lepus californicus bennettii</i> )	--/SSC	High. Likely occurs on site.
San Diego desert woodrat ( <i>Neotoma lepida intermedia</i> )	--/SSC	Moderate. Nests are usually observed if present but may have escaped view in thicker, vegetated areas. Trapping necessary for detection but not warranted due to the species' low sensitivity.
Southern grasshopper mouse ( <i>Onychomys torridus ramona</i> )	--/SSC	Moderate. Species not restrictive in its habitat requirements. Trapping necessary for detection but not warranted due to low sensitivity.
Townsend's big-eared bat ( <i>Plecotus townsendii pallescens</i> )	--/SSC	Low. Roosts in caves, mine tunnels, and buildings. Appropriate habitat absent.

\*Refer to Appendix C for a listing and explanation of status and sensitivity codes

### **3.5.4 Wildlife Corridors**

Wildlife corridors represent areas where wildlife movement is concentrated due to natural or artificial constraints. Local corridors such as hillsides and tributary drainages provide access to resources such as food, water, and shelter. Animals can use these corridors to travel among different habitats (i.e., riparian and upland habitats) that they may use at different points throughout their life history. Regional corridors link two or more large areas of open space, providing avenues for movement, dispersal, and migration as well as contact between otherwise distinct populations of wildlife, including large mammals such as mule deer, bobcats, and mountain lions.

The project site is located in a portion of Otay Mesa characterized by non-native grassland that was historically in agriculture. Large areas of non-native grassland bound the site to the west, north, and east, and the International Border is located just south of the site. Industrial and commercial development occurs further to the west. The project site and immediate vicinity are subject to frequent patrolling by the Border Patrol, as well as off-road vehicle use, and as a landing site for parachuters. There is no connection for wildlife movement into Mexico, as (1) the border fence greatly inhibits wildlife movement, and (2) the City of Tijuana is entirely developed in the areas south of the project site. The project site does not support any riparian corridors that might be used for wildlife movement, nor does it connect to any such corridors off site. Although the site itself supports habitat that could be used by a wide variety of species, including coyote, bobcat, skunks, raccoons, and jackrabbits, it wouldn't be considered a wildlife corridor since the site does not concentrate animal movement and direct it toward any particular resource. Given the relatively disturbed nature of the site, animal movement in the vicinity would likely be concentrated in routes through the hills to the east and northeast of the project site, toward O'Neal Canyon. No local or regional wildlife corridors are identified on site.

## **4.0 REGIONAL CONTEXT AND EVALUATION**

### **4.1 REGIONAL CONTEXT**

The project site is within the South County Segment of the County's MSCP Subarea Plan and contains areas designated as MSCP Major Amendment Areas, Minor Amendment Areas, and Minor Amendment Areas Subject to Special Considerations. The site is identified as an area requiring on-site conservation if specific resources (i.e., vernal pools, Group A and B plant species) are observed. The site does not function as a wildlife corridor for the region because it is largely open and disturbed, and it does not link large areas of open space.

### **4.2 FEDERAL GOVERNMENT**

Administered by the USFWS, the federal Endangered Species Act (ESA) provides the legal framework for the listing and protection of species (and their habitats) identified as being endangered or threatened with extinction. Actions that jeopardize endangered or threatened species and the habitats upon which they rely are considered a "take" under the ESA. Section 9(a) of the ESA defines take as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture,

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or collect, or attempt to engage in any such conduct.” “Harm” and “harass” are further defined in federal regulations and case law to include actions that adversely impair or disrupt a listed species’ behavioral patterns.

Sections 4(d), 7, and 10(a) of the federal ESA regulate actions that could jeopardize endangered or threatened species. Section 7 describes a process of federal interagency consultation for use when federal actions may adversely affect listed species. A biological assessment is required for any major construction activity if it may affect listed species. In this case, take can be authorized via a letter of biological opinion, issued by the USFWS for non-marine related listed species issues. A Section 7 consultation is required when there is a nexus between federally listed species’ use of the site and impacts to Corps jurisdictional areas. Section 10(a) allows issuance of permits for “incidental” take of endangered or threatened species. The term ‘incidental’ applies if the taking of a listed species is incidental to and not the purpose of an otherwise lawful activity. The MSCP is the Section 10(a) permit for this portion of San Diego County, including the subject property, although it does not include coverage for take of endangered species with Corps jurisdiction. Take for endangered species within Corps jurisdiction would require a Section 7 consultation or the preparation of a separate HCP under Section 10(a).

All migratory bird species that are native to the U.S. or its territories are protected under the MBTA, as amended under the MBTA of 2004 (FR Doc. 05-5127). This law is generally protective of migratory birds but does not actually stipulate the type of protection required. In common practice, USFWS places restrictions on disturbances allowed near active nests of raptors, such as red-tailed hawks and burrowing owls.

Federal wetland regulation (non-marine issues) is guided by the Rivers and Harbors Act of 1899 and the Clean Water Act. The Rivers and Harbors Act deals primarily with discharges into navigable waters, while the purpose of the Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of all Waters of the U.S. Permitting for projects filling Waters of the U.S. (including wetlands and vernal pools) is overseen by the Corps under Section 404 of the Clean Water Act. Projects may be permitted on an individual basis or may be covered under one of several approved nationwide permits. Individual permits are assessed individually based on the type of action, amount of fill, etc. Individual permits typically require substantial time (often longer than six months) to review and approve, while nationwide permits are pre-approved if a project meets appropriate conditions. It is currently assumed that a Nationwide 39 Section 404 Permit would be needed for the project.

### **4.3 STATE OF CALIFORNIA**

The California ESA is similar to the federal ESA in that it contains a process for listing of species and regulating potential impacts to listed species. Section 2081 of the California ESA authorizes CDFG to enter into a memorandum of agreement for take of listed species for scientific, educational, or management purposes. The MSCP is the regional 2081 for this portion of the County, including the subject property.

The Native Plant Protection Act (NPPA) enacted a process by which plants are listed as rare or endangered. The NPPA regulates collection, transport, and commerce in plants that are listed.

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The golden eagle and white-tailed kite are considered State Fully Protected Species. Fully Protected species may not be taken or possessed at any time and no state licenses or permits may be issued for their take except for collecting these species necessary for scientific research and relocation of the bird species for the protection of livestock (Fish and Game Code Sections 3511, 4700, 5050, and 5515).

The California ESA followed NPPA and covers both plants and animals that are determined to be endangered or threatened with extinction. Plants listed as rare under NPPA were designated threatened under the California ESA.

The California Fish and Game Code (Section 1600 et seq.) requires an agreement with CDFG for projects affecting riparian and wetland habitats through issuance of a Streambed Alteration Agreement. It is assumed that the project will require a 1602 Agreement from CDFG.

## **4.4 COUNTY OF SAN DIEGO**

### **4.4.1 MSCP Amendment Areas**

The MSCP has been prepared to meet the requirements of the California Natural Community Conservation Planning (NCCP) Act of 1991, federal ESA, and California ESA. The NCCP is a comprehensive, long-term habitat conservation plan that addresses the needs of multiple species by identifying key areas for preservation as open space in order to link core biological areas into a regional wildlife preserve. The County's MSCP Subarea Plan (County 1997) implements the MSCP within the unincorporated areas under the jurisdiction of the County.

The project site lies within the South County Segment of the County's MSCP Subarea Plan. The majority of the site is designated as a Minor Amendment Area, but the southern portion is designated as a Minor Amendment Area Subject to Special Considerations, and a small area along the northeastern property boundary is designated as a Major Amendment Area (Figure 3). These Major and Minor Amendment Areas do not have take authorization under the MSCP until the Amendment process has been completed.

The County is undergoing the Amendment process for QCB for the entire County MSCP Subarea, including the Major and Minor Amendment Areas within the project area. The Amendment would authorize impacts to approximately 38.3 acres of land designated Minor Amendment Area Subject to Special Consideration, and 225.3 acres of land designated Minor Amendment Area. No impacts would occur to the Major Amendment Area. Should the proposed Amendment be approved, this project would not be subject to any additional requirements regarding the County Subarea Plan or other further requirements related to the QCB.

### **Major Amendment Areas**

Lands designated as Major Amendment areas under the County's MSCP Subarea Plan include core habitat areas essential to many MSCP covered species. Take authorization for this Amendment Area would not be authorized until the Amendment process has been completed.

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Major Amendments must conform to the County Subarea Plan and the Biological Mitigation Ordinance (BMO), must be authorized by the USFWS and CDFG, and be in conformance with all applicable laws and regulations, including CEQA, the National Environmental Policy Act (NEPA), and federal and California ESAs. Currently, a Major Amendment is in process for the QCB within the County Subarea, including 0.4 acre of Major Amendment Area occurring on site.

### **Minor Amendment Areas**

Minor Amendment Areas support valuable biological resources that could be impacted without compromising the MSCP Preserve (County 1997). While not considered essential to the MSCP preserve design, these Minor Amendment Areas must go through the Amendment process if sensitive resources covered by the plan would be impacted. In addition to the County, the Minor Amendment process requires approval of the USFWS Field Office Supervisor and the CDFG NCCP Program Manager. Full reviews under NEPA are typically not required.

Processing a Minor Amendment to the MSCP requires preparation of a CEQA document, a biological resources report, identification of any mitigation required by the BMO, and concurrence by the local offices of the USFWS and CDFG. If sensitive resources are not identified on a site, mitigation for projects within Minor Amendment Areas will occur off site unless the preserved habitats are, as proposed in the Environmental Impact Report (EIR; HELIX 2009a), identified on site.

### **Minor Amendment Areas Subject to Special Considerations**

Minor Amendment Areas Subject to Special Consideration are limited to the EOMSP Area, and their designation corresponds to the EOMSP's "G" Designator. These areas are typically transitional areas located between Major and Minor Amendment Areas, but on site, these lands were designated due to their potential to support vernal pools, all of which were eliminated by the recently constructed border fence. Areas with the "G" Designator are subject to the Sensitive Resource Area Regulations of the Zoning Ordinance. Prior to project approval, the County must approve a Resource Conservation Plan addressing impacts to habitat and endangered species on site.

Under the EOMSP, the project site is designated for Mixed Industrial and Rural Residential land use and, as such, was assumed to be completely impacted in the EOMSP Final Environmental Impact Report (FEIR). However, two areas of the site are contained in the EOMSP's "G" Designator, which requires further review for sensitive biological resources as well as preparation of a Resource Conservation Plan. (This biological resources report meets the requirements of a Resource Conservation Plan as defined on pages 109 and 110 of the EOMSP, Mitigation Measure 3A.) The first area, located in the northeastern corner of the site, would be avoided and placed in open space. The second area, which covers much of the southern portion of the site, occurs within the impact footprint as well as within project open space. This area was given the "G" Designator because it was determined to have potential to support vernal pools. Vernal pool surveys in 2000, 2001, and 2005 originally identified three vernal pools on site, all of which were eliminated by the Border Patrol's construction of the border fence. A Resource Management Plan (RMP) would be prepared to describe long-term management of all proposed

biological open space on site and off site. As a result, the proposed impacts are generally consistent with those identified in the EOMSP FEIR.

#### **4.4.2 MSCP Covered Species**

Most federally listed endangered species found locally are covered under the MSCP; however, the QCB is not currently covered because of “unknown conservation and lack of assurances that the Plan will protect preferred habitat (mesa tops/grassland) and connection to known source populations” (County 1997). The County is currently in the process of amending the MSCP to include the QCB as a covered species. If the MSCP is amended to cover the QCB when the proposed project is processed, then no additional USFWS authorization would be required for take of this species. In the absence of a revision to the MSCP, however, each individual landowner in areas where QCB are present would be required to process an individual Section 10(a)(1)(B) Permit or Section 7 consultation under the Federal ESA in order to proceed with development.

The Amendment process requires that the protection of MSCP covered species be addressed. If a project satisfies the preservation requirements of the ESA and NCCP, then the MSCP can be amended to include the project site, and take authorization for covered species can be issued. Plant species that will be addressed by the Amendment include Otay tarplant, variegated dudleya, San Diego marsh elder, and San Diego barrel cactus. Animal species that will be addressed by the Amendment include the coastal California gnatcatcher, burrowing owl, San Diego horned lizard, northern harrier, golden eagle, and southern California rufous-crowned sparrow.

#### **4.4.3 Biological Mitigation Ordinance**

The BMO is the mechanism by which the County implements the MSCP at the project level within the unincorporated area to attain the goals set forth in the County’s MSCP Subarea Plan. The BMO contains design criteria and mitigation standards which, when applied to projects requiring discretionary permits, protect habitats and species and ensures that a project does not preclude the viability of the MSCP Preserve System. In this way, the BMO promotes the preservation of lands that contribute to contiguous habitat core areas or linkages.

Under the BMO, habitat is considered a Biological Resource Core Area (BRCA) if it meets one of the following criteria:

- The land is shown as pre-approved mitigation area on the wildlife agencies’ pre-approved mitigation map;
- The land is located within an area of habitat which contains biological resources that support or contribute to the long-term survival of Sensitive Species . . . and is adjacent to preserved habitat that is within the pre-approved mitigation area on the wildlife agencies’ pre-approved mitigation map;
- The land is part of a regional linkage/corridor;
- The land is shown on the Habitat Evaluation Map as Very High or High and links significant blocks of habitat, except that land which is isolated or links small, isolated patches of habitat

and land that has been affected by existing development to create adverse edge effects shall not qualify as a BRCA;

- The land consists of or is within a block of habitat greater than 500 acres in area of diverse and undisturbed habitat that contributes to the conservation of Sensitive Species; or
- The land contains a high number of Sensitive Species and is adjacent or contiguous to surrounding undisturbed habitats.

Much of the project site is disturbed and has a high non-native weedy component. Because it is located on the western edge of a habitat block larger than 500 acres that contributes to conservation of a large number of sensitive species (and portions of the on-site habitat are mapped by the County as High or Very High quality [County 2002]), the habitat on the southern portion of the site is considered a BRCA. As such, the area is subject to BMO avoidance and mitigation requirements. The northern portion of the site is more heavily disturbed and has fewer sensitive resources than the southern portion of the site. Because the northern portion of the site does contain soils capable of supporting sensitive species (Diablo clay) and supports San Diego fairy shrimp, Riverside fairy shrimp, and two List B plant species, the northern portion of the site is also considered a BRCA.

Additionally, the BMO typically requires a minimum of 80 percent avoidance of populations of County List A and B plant species (discussed above). Where impacts are allowed, in-kind preservation shall be required at a 1:1 to 3:1 ratio depending on the sensitivity of the species and population size, as determined in a biological analysis and approved by the DPLU Director. In order to provide greater overall conservation for the QCB and other MSCP covered species, the MSCP Amendment is proposed to maximize protection of QCB in the most defensible preserve configuration, and impacts to other sensitive species would be allowed to be mitigated as noted below. Additionally, the on-site impacts to these List B species have been analyzed determine whether 20 percent of the on-site population would be impacted by the proposed project.

The County has reviewed the project to determine if an Exception to the BMO for the project is consistent with BMO Section 86.509(b) which states:

In certain cases, during CEQA review and/or design of a project, site specific physical conditions, including but not limited to geology, slope, or location of infrastructure, may be identified which make it infeasible for the project to meet all the goals and criteria or other requirements in the Subarea Plan, but the project could be constructed without compromising the conservation of species and habitats pursuant to the Subarea Plan. The exception shall be the minimum necessary to afford relief and accommodate development. In such instances, the County may grant an exception to this Chapter in conjunction with granting an exception to the Subarea Plan. An exception to the Subarea Plan requires the concurrence from the Wildlife Agencies.

An Exception is appropriate under Section 86.509(b) of the BMO for the project's unique impacts to marsh elder and barrel cactus, two List B plant species for the following reasons.

1. All of the San Diego marsh elder on site is being impacted by construction of a Circulation Element roadway (Lone Star Road). This clearly meets the language in the BMO Exception that states "site specific conditions (geology, slope, location of infrastructure,

etc) may be identified which makes it infeasible for the project to meet all the goals, criteria or other requirements in the Subarea Plan.” Because the marsh elder impacts are entirely caused by County-required infrastructure improvements, the Exception should apply here.

2. The same exception is true for San Diego barrel cactus. There are a total of 72 individual barrel cactus plants (37 percent) impacted by the project. Thirty-seven of these plants, however, are impacted by the construction of either Lone Star Road or Siempre Viva Road, both of which are Circulation Element roads. The remaining 35 individual plants impacted by the balance of the project represent only 18 percent of the total number of plants, which is below the 20 percent threshold stated in the BMO.
3. Significant development constraints for the Otay Crossings project have resulted from the need to accommodate both County Circulation Element roads, a possible corridor for SR-11 through the property, and the POE to be located on the site. Given these site specific constraints, impacts to County List B plant species have been minimized to the maximum extent practicable as stated in BMO Section 86.507(1)(a). The exception to the BMO will “preserve the ability of [the project proponent] to make reasonable use of [its] land ...” as stated in BMO Section 86.501.

The reservation of rights required by Caltrans’ proposed SR-11 improvements has significantly impacted the planning and ultimate development of the Otay Crossings project. Reserving the preferred alternate SR-11 corridor (which includes the POE) through the Otay Crossings property has restricted about 1/3 of the total site from any long-term development potential. This fact caused the planned development to be concentrated within the remaining 2/3 of the property. Accommodation of the SR-11 corridor consequently severely limited the project proponent’s ability to avoid impacts to County List B plant species while still preserving reasonable and economical development of the site.

The substantial disruptions of development planning for the Otay Crossings project that was required to accommodate plans for SR-11 and POE are impacts unique to our project. No other development proposals in the EOMSP have any similar or comparable development constraints and mitigation limitations caused by a proposed State highway or a POE.

Based on these facts, an Exception to the BMO for the project is appropriate.

The project is also proposing to modify the Pre-Approved Mitigation Map boundaries to include 2 off site mitigation parcels within the map boundaries consistent with Section 4.7 of the Subarea Plan. Section 4.7 requires information on the acreages and sensitive resources within the proposed modification, an analysis of how the modification will affect the MSCP and Subarea Plan’s goals and criteria, impacts to covered species, and the feasibility of conserving these additions.

The justification for the two parcels proposed to be added is provided in Section 6.1 of this report.

#### **4.4.4 Resource Protection Ordinance**

The County regulates impacts to biological resources via its RPO; in addition to wetlands, it addresses Sensitive Habitat Lands and wetland buffers. Sensitive Habitat Lands are defined in the RPO as:

lands that support unique vegetation communities or the habitats of rare or endangered species or sub-species of animals or plants as defined by Section 15380 of the State California Environmental Quality Act. "Sensitive Habitat Lands" includes the area necessary to support a viable population of any of the above species in perpetuity or which is critical to the proper functioning of a balanced natural ecosystem or which serves as a functioning wildlife corridor.

Wetland buffers are defined in RPO Section 86.602(r) as:

lands that provide a buffer area of an appropriate size to protect the environmental and functional habitat values of the wetland, or which are integrally important in supporting the full range of the wetland and adjacent upland biological community. Buffer widths shall be 50 to 200 feet from the edge of the wetland as appropriate based on the above factors. Where oak woodland occurs adjacent to the wetland, the wetland buffer shall include the entirety of the oak habitat (not to exceed 200 feet in width).

The on-site disturbed wetland and off-site disturbed mule fat scrub are of low quality and a 50-foot wetland buffer would be considered sufficient to protect their functions and values.

## **5.0 IMPACTS**

The following section describes potential direct and indirect impacts associated with the project. Direct impacts are described based on the grading limits and associated brush management limits. Indirect impacts include project impacts such as noise and lighting that do not directly remove vegetation and sensitive resources, but may indirectly affect the long-term viability of sensitive species on site. The magnitude of an indirect impact can be the same as a direct impact; however, the effect usually takes a longer time to become apparent.

### **5.1 SIGNIFICANCE DETERMINATION CRITERIA**

A project will have a significant adverse environmental effect related to biological resources if any of the following occur as a result of a project-related component:

1. A block of habitat considered essential to the local or regional biological environment will be eliminated or substantially degraded such that it no longer provides the same function or value.
2. Activities within or adjacent to corridors, linkages, or other areas utilized for wildlife movement will:

- a. Prevent wildlife from accessing areas considered necessary to their survival;
  - b. Restrict wildlife from utilizing their natural movement paths; or
  - c. Further constrain a narrow corridor by reducing width, removing available vegetative cover, creating edge effects, or placing barriers in the movement path.
3. On- or off-site habitat will be subjected to substantial edge effects, including:
- a. Construction and post-construction noise levels in excess of 60 dB during daytime hours and 50 dB during nighttime hours;
  - b. Artificial light in excess of 0.005-foot candles (half as bright as a full moon);
  - c. A drawdown of the groundwater table of 3 feet or more (for groundwater-dependent species or habitat);
  - d. Potential for encroachment of any kind, including but not limited to clearing within preserved areas and unauthorized pedestrian, equestrian, or off-road vehicle traffic;
  - e. Degradation of the habitat through unrestrained domestic pets or invasive plants; or
  - f. Water runoff causing a change in natural moisture levels and/or increasing the spread of pollution and pesticides.
4. The natural biological diversity and habitat associations are not being preserved in a contiguous, functional block, thereby compromising the health and viability of the ecosystem.
5. Any of the following will occur to or within County-defined wetlands: removal of associated vegetation; grading; obstruction or diversion of water flow; change in velocity or siltation rate; placement of fill; placement of structures; construction of a road crossing; placement of culverts or other underground piping; any disturbance of the substratum; and/or any activity that may cause a change in species composition, diversity, and abundance.
6. Any component of native or naturalized habitat will be removed through grading, clearing, and/or other construction activities.
7. The value of habitat will be “moderately to significantly” degraded either immediately or in the long-term as indicated by one of the following:
- a. A change in species composition, diversity, or abundance;
  - b. A decline in the value or function of the habitat.
8. Direct, indirect, and/or cumulative impacts may occur that may be detrimental to the regional long-term survival of a County Group C or D plant species or County Sensitive animal.
9. Direct, indirect, and/or cumulative impacts may reduce the local population of a plant species listed as federally or state endangered or threatened, or County Group A or B by more than 20 percent, or cause impacts that may be considered detrimental to the regional long-term survival of this species.

10. Direct, indirect, and/or cumulative impacts may reduce the estimated local population of an animal species listed as federally or state endangered or threatened by more than 20 percent, or cause impacts that may be considered detrimental to the regional long-term survival of this species.
11. Grading, clearing, construction, or other activities (except for passive recreation) will occur within 500 feet of occupied breeding or non-breeding wetland habitat for the arroyo southwestern toad.
12. Grading, clearing, construction, or other activities (including passive and active recreation) will occur within 4,000 feet of an active golden eagle nest during breeding season (January 1 to July 31).
13. Long-term or permanent development or active recreational uses will occur within 4,000 feet of an active golden eagle nest.
14. Grading, clearing, and/or construction will occur within the following distances and within the following time periods for one or more of these species:

<b>Species</b>	<b>Distance</b>	<b>Breeding Season</b>
Coastal cactus wren	300 feet from occupied habitat	February 15 to August 15
Coastal California gnatcatcher	300 feet from occupied habitat	February 15 to August 31
Least Bell's vireo	300 feet from occupied habitat	March 15 to September 15
Southwestern willow flycatcher	300 feet from occupied habitat	May 1 to September 1
Tree-nesting raptors	300 feet from occupied habitat	February 15 to July 15
Golden eagle	4,000 from active nest	January 1 to July 31
Burrowing owl	300 feet from active nest	February 15 to July 15
Ground-dwelling raptors	900 feet from occupied habitat	February 15 to July 15

15. Substantial raptor foraging habitat will be removed.
16. The project does not conform to the requirements regarding wetlands, wetland buffers, or sensitive habitat lands as outlined in the RPO.
17. The project does not conform to the goals and requirements of the NCCP or Section 7 of the Federal ESA.
18. The project does not conform to the goals and requirements as outlined in an applicable Habitat Conservation Plan (HCP), Habitat Management Plan, Special Area Management Plan (SAMP), or similar regional planning effort.
19. The project does not conform to the goals and requirements of applicable federal or state regulations, including but not limited to the federal ESA, MBTA, Bald Eagle Protection Act, Clean Water Act, Porter-Cologne Water Quality Act, and the California Fish and Game Code.

## 5.2 DIRECT IMPACTS

The proposed project would cause direct impacts to vegetation communities both on and off site (Figure 5 and map pocket). The off-site impact footprint reflects grading for required public roads and sewer.

### 5.2.1 Vegetation Communities

On-and off-site project development would cause direct impacts to approximately 294.1 acres of vegetation communities, comprising approximately 0.97 acre of tamarisk scrub (of which 0.73 is jurisdictional, as discussed in Section 5.2.2), 0.1 acre of native grassland, 1.9 acres of Diegan coastal sage scrub (including 0.3 acre of disturbed), 263.1 acres of non-native grassland, 1.0 acre of eucalyptus woodland, 0.7 acre of agriculture, 20.6 acres of disturbed habitat, and 5.7 acres of developed land (Table 6). Impacts to jurisdictional tamarisk scrub, native grassland, Diegan coastal sage scrub, and non-native grassland would be considered significant because they would meet Significance Criteria 4, 6 and 7. Criteria 1 would not be met, because, although the site supports significant resources, it is not considered essential to the local or regional biological environment. Impacts to eucalyptus woodland, agricultural land, disturbed habitat, and developed areas would be considered adverse but less than significant because Criteria 4, 6 and 7 would not be met.

Twenty-four of the 31 road pools mapped on site (and 5 mapped off site) would be impacted by the proposed development (Figure 5 and map pocket). None of the impacted road pools supports vernal pool indicator species, and only one supports San Diego fairy shrimp and Riverside fairy shrimp. Impacts to the one pool supporting San Diego and Riverside fairy shrimp would be considered significant, and mitigation would be required because Criteria 8 and 10 would be met. Impacts to all other pools would not be considered significant and mitigation would not be required because Significance Criteria 8 and 10 would not be met.

VEGETATION COMMUNITY	EXISTING ON SITE	ON SITE IMPACTS	OFF SITE IMPACTS†	TOTAL IMPACTS
<b>Wetlands</b>				
Tamarisk scrub	0.97	0.97	0.00	<b>0.97</b>
Disturbed wetland	0.03	0.00	0.00	<b>0.00</b>
<b>Tier I</b>				
Native grassland	0.0	0.0	0.1	<b>0.1</b>
<b>Tier II</b>				
Diegan coastal sage scrub (including disturbed)	8.7	1.8	0.1	<b>1.9</b>
<b>Tier III</b>				
Non-native grassland	278.5	244.1	19.0	<b>263.1</b>

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**Table 6 (cont.)  
Impacts to Vegetation Communities\***

<b>VEGETATION COMMUNITY</b>	<b>EXISTING ON SITE</b>	<b>ON SITE IMPACTS</b>	<b>OFF SITE IMPACTS†</b>	<b>TOTAL IMPACTS</b>
<b>Tier IV</b>				
Eucalyptus woodland	1.0	1.0	0.0	<b>1.0</b>
Agriculture	<0.1	<0.1	0.7	<b>0.7</b>
Disturbed habitat	22.2	15.6	5.0	<b>20.6</b>
Developed	<0.1	<0.1	5.7	<b>5.7</b>
<b>TOTAL*</b>	<b>311.5</b>	<b>263.5</b>	<b>30.6</b>	<b>294.1</b>

\* All wetland areas are presented in acre(s) rounded to the nearest 0.01; upland areas are rounded to the nearest 0.1; thus totals reflect rounding.

† Off-site acreages under Sewer Option A; Sewer Options B-1 and B-2 would each include an additional 4.4 acres of impacts.

If Sewer Option B-1 is implemented, off site impacts would total 35.0 acres, including impacts to 0.056 acre of vernal pools, 0.1 acre of native grassland, 0.1 acre of Diegan coastal sage scrub, 23.5 acres of non-native grassland, 0.7 acre of agriculture, 5.8 acres of disturbed habitat (including 0.04 acre of road pool), and 4.7 acre of developed. Impacts to vernal pools, Diegan coastal sage scrub, native grassland, and non-native grassland would be considered significant because they would meet Significance Criteria 6 and 7.

If Sewer Option B-2 is implemented, off site impacts would total 35.0 acres, including impacts to 0.056 acre of vernal pools, 0.1 acre of native grassland, 0.1 acre of Diegan coastal sage scrub, 22.9 acres of non-native grassland, 0.7 acre of agriculture, 5.4 acres of disturbed habitat (including 0.04 acre of road pool), and 5.7 acre of developed. Impacts to vernal pools, Diegan coastal sage scrub, native grassland, and non-native grassland would be considered significant because they would meet Significance Criteria 6 and 7.

### **5.2.2 Jurisdictional Areas**

Direct impacts to jurisdictional areas would result from project development both on and off site. Approximately 0.20 acre of Corps non-wetland Waters of the U.S. would be impacted (Figure 6a; Table 7). Impacts to CDFG jurisdictional areas would total 0.97 acre, including 0.73 acre of tamarisk scrub and 0.24 acre of streambed (Figure 6b; Table 7). As previously discussed in Section 3.2, an additional 0.24 acre of tamarisk scrub occurring on site was not considered jurisdictional as it does not occur along CDFG streambed. As such, no mitigation is proposed for impacts to these areas. No impacts to County RPO wetlands are proposed; however, off-site improvements to Alta Road would occur within the wetland buffer of off-site mule fat scrub, but no other project improvements would affect wetland buffers (Figure 6c). Impacts associated with improvements to Alta Road are considered permitted uses within an RPO wetland under Section 86.604(a)(5) because Alta Road is a Circulation Element roadway. Nonetheless, proposed impacts to jurisdictional areas would be considered significant because Significance Criterion 5 would be met. Significance Criterion 16 would not be met because the project impacts from Alta Road are an allowed use under the RPO.

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**Table 7  
IMPACTS TO JURISDICTIONAL AREAS\***

JURISDICTIONAL AREA	CORPS		CDFG		COUNTY	
	Existing on Site	Impacts (On and off site)	Existing on Site	Impacts (On and off site)	Existing on Site	Impacts (On and off site)
Tamarisk scrub	0.00	0.00	0.73	0.73	0.00	0.00
Disturbed wetland	0.03	0.00	0.03	0.00	0.03	0.00
Non-wetland Waters of the U.S./Streambed	0.31	0.20	0.36	0.24	0.00	0.00
<b>TOTAL</b>	<b>0.34</b>	<b>0.20</b>	<b>1.12</b>	<b>0.97</b>	<b>0.03</b>	<b>0.00</b>

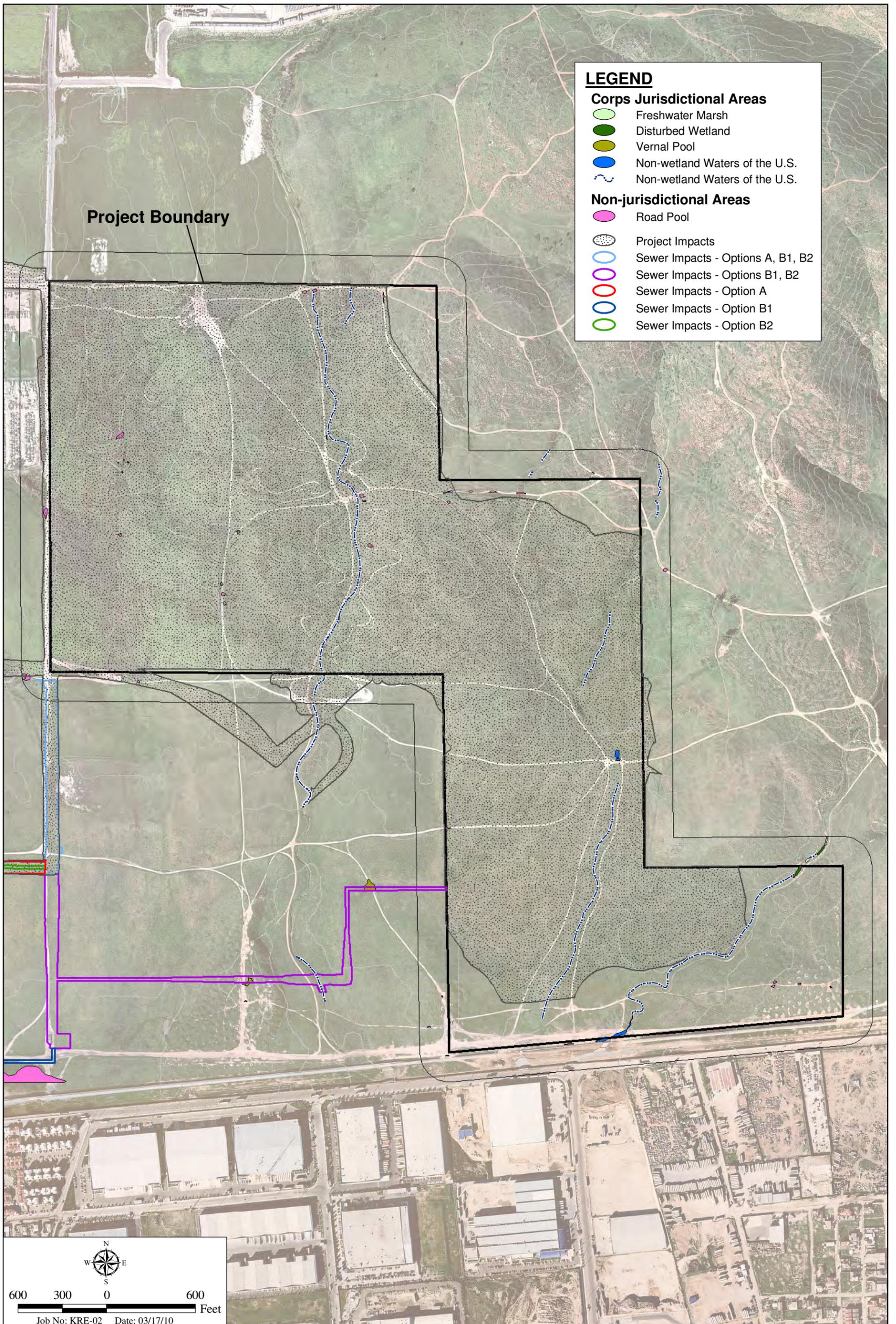
\*Areas are presented in acre(s) rounded to the nearest 0.01.

If either Sewer Option B-1 or B-2 is implemented, off site impacts to jurisdictional vernal pools totals 0.056 acre, and impacts to Waters of the U.S./CDFG streambed would total 0.012 acre.

### **5.2.3 Sensitive Plant Species**

All of the Otay tarplant, variegated dudleya, and California adolphia in the parcel are outside of the limits of development and would not be directly impacted, and a minimum 100-foot setback from development is provided for Otay tarplant and a 300-foot setback is provided for variegated dudleya. Impacts to 2 County Group B species (San Diego barrel cactus and San Diego marsh-elder) and 2 County Group D species (small-flowered morning glory and San Diego County viguiera) would occur and are further discussed below.

Approximately 72 of the 193 (37 percent) San Diego barrel cacti and all of the approximately 138 marsh-elder plants on site lie within the impact boundaries. The BMO typically requires that impacts to Group B plant species be avoided to the maximum extent practicable. However, impacts resulting from circulation element roads are considered unavoidable. All of the impacts to San Diego marsh-elder are associated with the construction of Lone Star Road, which is a circulation element road. Camino Del Mayer (formerly Lone Star Road) cannot be modified to avoid these impacts, as the northern terminus is already fixed, and the remainder of the alignment is constrained by the future alignment of State Route 11. Impacts to more than 20 percent of the on-site population of a County Group A or B species is generally considered significant and unmitigable by the County. Because greater than 20 percent of the on-site population of barrel cactus and marsh-elder would be impacted, these impacts would be considered significant under the CEQA (Criteria 9 would be met). As noted in Section 4.4.3 above, consistent with Section 86.509(b) of the BMO, an exception for County Group B plant species is appropriate for the project. This exception is based on the following consistent with Section 1.9.3.2 of the Subarea Plan.



**LEGEND**

**Corps Jurisdictional Areas**

- Freshwater Marsh
- Disturbed Wetland
- Vernal Pool
- Non-wetland Waters of the U.S.
- - - Non-wetland Waters of the U.S.

**Non-jurisdictional Areas**

- Road Pool
- Project Impacts
- Sewer Impacts - Options A, B1, B2
- Sewer Impacts - Options B1, B2
- Sewer Impacts - Option A
- Sewer Impacts - Option B1
- Sewer Impacts - Option B2

**Project Boundary**

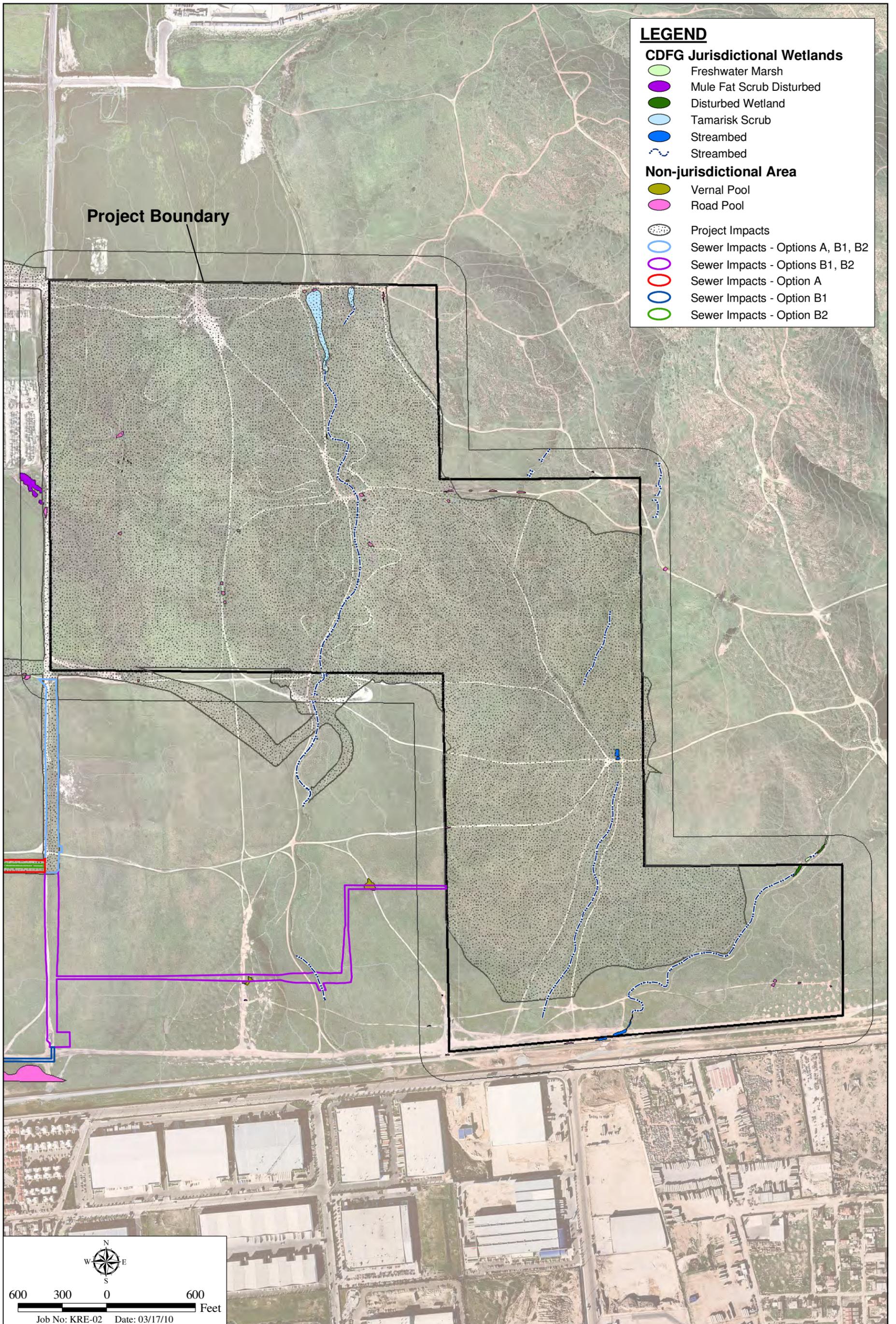
600 300 0 600 Feet

Job No: KRE-02 Date: 03/17/10

**Corps Jurisdictional Delineation - Impacts**

OTAY CROSSINGS COMMERCE PARK

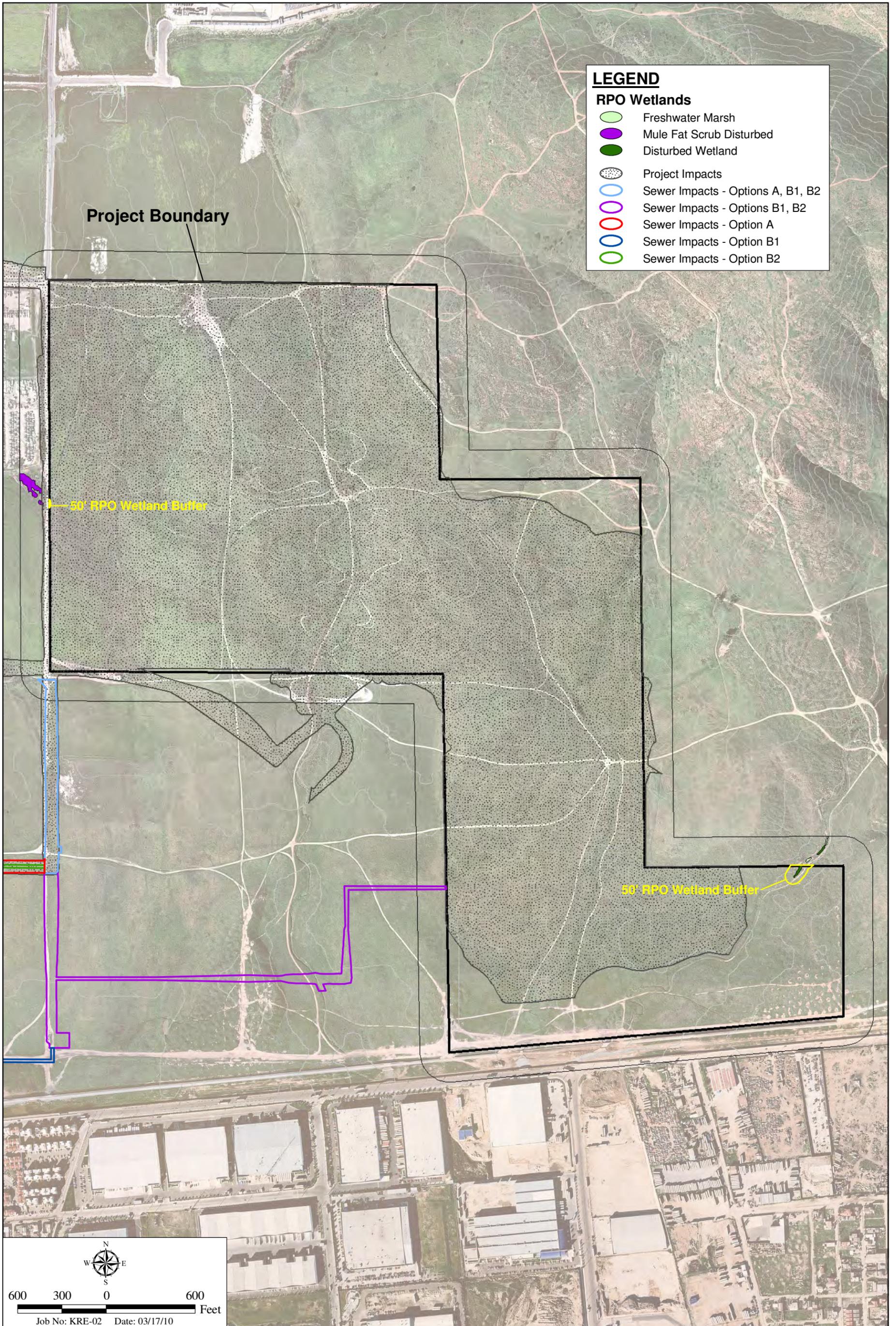
Figure 6a



**CDFG Jurisdictional Delineation - Impacts**

OTAY CROSSINGS COMMERCE PARK

Figure 6b



## RPO Wetlands - Impacts

OTAY CROSSINGS COMMERCE PARK

Figure 6c

- The need to accommodate both County Circulation Element roads (Lone Star Road and Siempre Viva Road), a possible corridor for SR-11 through the property, and the POE, precludes avoidance of 80 percent of either species on site.
- Impacts to San Diego barrel cactus have been minimized by avoidance of 63 percent of the population in the northwestern corner of the site. All of the impacts to marsh elder are the result of circulation element roads, and minimization is therefore not feasible.
- Table 5-3 of the Final MSCP Plan states that the San Diego barrel cactus “is an abundant species that will be protected at varying levels in several subareas...” Eighty-one percent of the major populations will be conserved. The 193 individuals on site would not be considered one of these major populations, and the loss of 72 individuals would not compromise the conservation of this species within the Subarea Plan.
- San Diego marsh elder occurs in drainages throughout southern San Diego County, with the largest populations occurring along the Otay River, Salt Creek, Marron Valley, and drainages on Otay Mountain (Reiser 2001). The loss of 138 individuals on site would not result in a significant threat to the conservation of this species within the Subarea Plan.
- Mitigation for both species is provided in Section 6.1.3 of this report.

The project would impact all 15 of the small-flowered morning glory individuals observed on site. Avoidance of small-flowered morning glory is not considered feasible due to its location and distribution in the central portion of the site. Because the site does not support a critical population of this species and the small number of individuals impacted would not threaten the long-term survival of the species in the region, combined with the low sensitivity rating of the species, these impacts are not considered significant.

The project would impact approximately 44 of the 252 San Diego County viguiera individuals (17 percent) observed on site. The project would place approximately 83 percent of the on-site population of this species into open space. The preserved individuals are located in the most biologically sensitive areas of the site. This species has a low sensitivity rating and would be adequately preserved on site as well as within the proposed O’Neal Canyon off-site mitigation parcel, and as such these impacts are not considered significant.

If Sewer Option B-1 or B-2 are implemented, impacts would result to 5 San Diego button-celery (*Eryngium aristulatum* var. *parishii*) associated with the off site vernal pool impacts. These impacts would be considered significant because Criteria 9 would be met.

#### **5.2.4 Sensitive Animal Species**

One of the two basins supporting Riverside and San Diego fairy shrimp totaling 116 square feet will be impacted by the project. These impacts are considered significant because Criterion 10 would be met.

All or portions of the territories of 4 burrowing owl pairs will be impacted by the project. The locations of 4 nesting pairs and 1 individual of burrowing owls recorded in the southeastern corner of the site would be preserved in open space. The County MSCP (1997) requires establishment of a 300-foot impact avoidance area around all occupied burrows, which has been

incorporated into the design of the open space. These impacts are considered significant because Criterion 10 would be met.

The federally listed endangered QCB was identified on site in 2000; however, it was not detected on site during protocol surveys in 2005 or 2006. Two of the 3 locations will be impacted by the project. The ability to detect this species varies from year to year, so it is assumed that portions of the impacted habitat on site are occupied by QCB. This impact would be considered significant because Criterion 10 would be met.

Although none was observed on site, a golden eagle pair is known to nest in O'Neal Canyon several miles off site to the northeast, and the project site lies within the pair's foraging area. Because this species generally nests in rugged areas far from human activity, it is not expected to nest within several miles of the project site; thus, the project would only impact golden eagle foraging habitat; no direct take of a golden eagle would occur. Golden eagle territories were estimated at 23,000 acres (range 12,160 to 30,720 acres) for 27 pair mapped in 1937 (Dixon 1937). Based on this estimate, the project site (311 acres) represents slightly over 1.0 to 2.5 percent of a golden eagle territory. Significant foraging habitat (namely, Diegan coastal sage scrub and non-native grassland) would remain on Otay Mesa and in the adjacent foothills, providing ample foraging habitat for the golden eagle. Because the project would not reduce the local population by more than 20 percent, no project activities would occur within 4,000 feet of an active nest, and it would not impact a substantial portion of eagle foraging habitat, Criteria 12, 13, 14, and 15 would not be met; therefore, this impact would be considered less than significant.

The project would also impact habitat occupied by the following MSCP covered northern harrier, as well as the following non-covered species: coastal western whiptail, California horned lark, loggerhead shrike, white-tailed kite, western spadefoot, and grasshopper sparrow. Additionally, impacts will occur to white-tailed kite foraging habitat. The white-tailed kite is a State Fully Protected Species. These impacts would be significant and mitigated to less than significant through habitat-based mitigation and would not result in direct, indirect, and/or cumulative impacts that would be detrimental to the regional long-term survival of these species. No arroyo southwestern toads occur on site. No impacts would result to arroyo southwestern toads and Criteria 11 would therefore not be met. No significant impacts would occur.

A majority of the site could be used for raptor foraging, including all of the grassland, Diegan coastal sage scrub and disturbed areas impacted by the project. These impacts are considered significant because Criterion 15 would be met.

If Sewer Option B-1 or B-2 is implemented, impacts would result to San Diego fairy shrimp associated with the off site vernal pool impacts. One additional burrowing owl pair and one QCB location would be impacted by both Sewer Options B-1 and B-2. These impacts would be considered significant because Criteria 10 would be met.

### **5.2.5 Wildlife Corridors**

As noted in Section 3.5.4, the site forms the southwestern corner of a large contiguous block of habitat that extends east onto Otay Mountain and beyond. While the site does function as a BRCA, the project site does not support any local or regional corridors or linkages. Mexico abuts the property's southern border, and existing development abuts the northern and northwestern property boundary. Because of the lack of significant topography, wildlife movement would be randomly dispersed across the site, rather than along any local or regional movement corridor. The project site does not support any riparian corridors that might be used for wildlife movement, nor does it connect to any such corridors off site. No impacts would result to wildlife corridors and Criterion 2 would therefore not be met. No significant impacts would occur.

### **5.2.6 Local, State and Federal Regulations**

The project would impact sensitive vegetation communities, sensitive species and areas considered jurisdictional by the Corps, CDFG and RWQCB through direct loss and could cause significant indirect impacts to them as well. Mitigation is proposed within the context of the BMO, MSCP, Sections 7 and 10 of the federal ESA, MBTA, Bald Eagle Protection Act, Sections 404 and 401 of the federal Clean Water Act, Porter-Cologne Water Quality Act, and California Fish and Game Code. This, combined with on-site avoidance of sensitive resources and off-site habitat preservation, results in project impacts that are considered significant but mitigable. As a result Criteria 18 and 19 would not be met.

## **5.3 INDIRECT IMPACTS**

Potential indirect impacts from project construction include fugitive dust, noise, animal behavioral changes, and errant construction impacts, as well as effects due to edge effects, including decreased water quality (through sedimentation, urban contaminants, or fuel release, for example), colonization of non-native plant species, nuisance animal species, and night lighting.

Edge effects occur when blocks of habitat are fragmented, bringing otherwise undisturbed habitat into contact with developed areas. The created habitat edges facilitate non-native plant invasion and give predators (native and non-native) access to prey that may otherwise have been protected within large, contiguous blocks of habitat. Disruption of predator-prey, parasite-host, and plant-pollinator relationships due to edge effects has been reported (Soulé, ed. 1986). For example, edge effects have provided nest parasites such as the brown-headed cowbird (*Molothrus ater*) easier access to otherwise unreachable native bird nests.

### **5.3.1 Fugitive Dust**

Fugitive dust produced by construction could disperse onto native vegetation. Effects on vegetation due to airborne dust could occur adjacent to construction. A continual cover of dust may reduce the overall vigor of individual plants by reducing their photosynthetic capabilities and increasing their susceptibility to pests or disease. This in turn could affect animals

dependent on these plants (e.g., seed-eating rodents). Fugitive dust also may make plants unsuitable as habitat for insects and birds.

Air quality effects associated with oxides of Nitrogen (NO<sub>x</sub>) and particulate matter under 10 microns (PM<sub>10</sub>) were determined to be significant in the EIR (HELIX 2007). Impacts associated with NO<sub>x</sub> and PM<sub>10</sub> are assessed in the Air Quality technical report as human respiratory irritants rather than as threats to plant or animal species. Active construction areas and unpaved surfaces would be watered pursuant to County grading permit requirements to ensure that generation of fugitive dust is held to a level below significance. Therefore, Criterion 7 would not be met, and impacts due to fugitive dust would be considered less than significant.

### **5.3.2 Construction Noise**

Noise from such sources as grading, grubbing, and vehicular traffic would be an impact to local wildlife. Noise-related impacts would be considered significant if sensitive species (such as coastal California gnatcatchers or raptors) were displaced from their nests and failed to breed. Birds and other species may be temporarily displaced from the vicinity of the project areas. The least Bell's vireo (*Vireo bellii pusillus*) and southwestern willow flycatcher (*Empidonax traillii extimus*) have no potential to occur on site. If grading or construction would occur within 300 feet of burrowing owl burrow or nesting coastal California gnatcatchers, within 500 feet of tree-nesting raptors, or within 900 feet of ground-nesting raptors, Criterion 14 would be met and effects due to construction noise would be significant.

Blasting may be required as part of the overall grading operation for the project. Blasting is an episodic event that creates a brief noise burst, but does not create prolonged noise impacts that would be considered significant.

### **5.3.3 Operational Noise**

Noise generated by future industrial development on Lots 16, 17, 18 and 24 has the potential to exceed 60 dB during daytime hours and 50 dB during nighttime hours in the sensitive habitat located on those lots. According to calculations conducted by Kimley-Horn and Associates (2009), sound levels from typical industrial operations could range from 57.5 dB to 60 dB Leq at the property line. Because Diegan coastal sage scrub would be preserved in on-site open space easements between the industrial pads and the property line, operational noise could interfere with breeding bird activity within the on-site open space and Criterion 3a would be met. Operational noise effects would be significant.

### **5.3.4 Animal Behavioral Changes**

Breeding birds and mammals may temporarily or permanently leave their nests and territories to avoid construction activity, which could reduce reproductive success and increase mortality. The project site supports burrowing owls and has potential to support coastal California gnatcatchers (although none were detected during protocol surveys in 2000 or in any subsequent survey) and tree- and ground-nesting raptors. Therefore, it has potential to cause indirect impacts to these species if any of the following occur:

- Construction activity within 500 feet of an active tree-dwelling raptor nest or owl burrow;
- Construction within 300 feet of an active burrowing owl burrow;
- Construction within 300 feet of a gnatcatcher nest; or
- Construction within 900 feet of a ground-dwelling raptor nest.

Because the project has potential to meet one of the above conditions, Criterion 14 would be met and the impact would be considered significant.

### **5.3.5 Errant Construction Impacts**

Errant grading or clearing beyond the proposed construction limits could impact sensitive vegetation communities or species intended for preservation. Prior to construction, orange construction fencing would be installed within the proposed limits of impact to clearly define the grading boundaries and biological monitoring of on-site open space would be conducted during grading and construction prevent unintended impacts. As a result, Criterion 6 would be not be met, and the potentially significant errant construction impacts would be expected.

### **5.3.6 Water Quality**

Water quality in riparian areas can be adversely affected by potential surface runoff and sedimentation during construction. The use of petroleum products (fuels, oils, and/or lubricants) and erosion of cleared land during construction could potentially contaminate surface water. Decreased water quality may adversely affect vegetation, aquatic animals, and terrestrial wildlife that depend upon these resources. The proposed project would address potential water quality impacts through compliance with the County Grading Ordinance and implementation of the proposed best management practices outlined in the Stormwater Management Plan. Thus, surface water quality would not be degraded by the project, and Criterion 3 would not be met. Degraded water quality would be considered a less than significant impact.

### **5.3.7 Non-native Plant Species**

Non-native plants could colonize sites disturbed by construction and could potentially spread into adjacent native habitats, especially following a disturbance such as fire. Many of these non-native plants are highly invasive and can displace native vegetation and reduce native species diversity, potentially increase flammability and fire frequency, change ground and surface water levels, and potentially adversely affect native wildlife that is dependent on the native plant species, as a few examples. Colonization of non-native plant species in non-impact areas and the resulting degradation of native habitats would be significant, should it occur as a result of the proposed project. Because project landscaping would not include any Cal-IPC List A species, Criterion 1, 3e, and 7 would not be met and impacts due to non-native plants would be considered less than significant.

### **5.3.8 Human Activity**

Increases in human activity in the area could result in degradation of sensitive vegetation through habitat fragmentation, formation of additional edges through unauthorized road or trail creation, removal of existing vegetation, or illegal dumping. Should such impacts occur, Criterion 3 would be met; therefore, these impacts would be considered significant. However, the project is an industrial development and is not expected to result in increased human activity in proposed open space areas.

### **5.3.9 Nuisance Animal Species**

Nuisance animal species, particularly domestic cats, are known to impact native wildlife. However, because the project is an industrial development, no nuisance animal species are anticipated. Therefore, Criterion 3e would not be met, and no significant impacts would occur due to nuisance animal species.

### **5.3.10 Night Lighting**

Night lighting may expose wildlife species to an unnatural light regime and alter their behavior patterns, and may result in a loss of species diversity. All construction and security lighting associated with the project would be shielded or directed away from the open space. As a result, Criterion 3b would not be met and impacts due to night lighting would be less than significant.

### **5.3.11 Groundwater Drawdown**

No groundwater pumping is proposed by the project. As a result, Criterion 3c would not be met and no significant impacts would occur due to groundwater drawdown.

## **5.4 IMPACT CONSISTENCY WITH EOMSP FINAL EIR**

Biological resources were addressed in Section 4.3 of the EOMSP Final EIR (FEIR) for the entire EOMSP, which concluded that impacts to non-native grassland, coastal sage scrub, western spadefoot, burrowing owl, raptors, and vernal pool species are significant and unmitigable. As noted in Section 4.4.1 of this report, the impact analysis for the project is consistent with the impact analysis prepared for the EOMSP FEIR. However, since the approval of the EOMSP, the MSCP has been approved, which addresses impacts to biological resources on a regional basis and provides for long-term conservation of species addressed in the EOMPS FEIR. This, combined with on-site avoidance of sensitive resources and off-site habitat preservation, results in project impacts that are considered significant but mitigable.

## **6.0 PROPOSED MITIGATION MEASURES**

The project would impact sensitive vegetation communities and species significantly through direct loss and could cause significant indirect impacts to them as well. Mitigation is proposed within the context of the BMO, assuming the project site is considered a BRCA; although as noted

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above, an Exception to the BMO is being granted for impacts to County Group B plant species. Mitigation Measures (MM) identified in the EOMSP FEIR are also discussed where appropriate. MMs 3B through 3L are identified as “general guidelines for vegetation/habitat mitigation.” Some of the measures are not applicable to the proposed project since they pertain to resources not present on the Otay Crossings Commerce Park site.

All avoided habitat (i.e. not including grading or brush management areas) on site and off-site mitigation locations would be preserved in one or more open space easements. An RMP will be provided for both on- and off-site open space that will include all stewardship measures, such as upkeep of fencing and signs, restricting trespassing, and removing debris. Impacts associated with off-site road and sewer improvements are assumed based on the current status of these areas. If any feature is required to be built by other projects and is constructed prior to the proposed project needing to construct those facilities, proposed mitigation shall not be required of the proposed project. Appendix D breaks out mitigation requirements for the project and related off site improvements under the scenarios of other overlapping projects moving forward concurrently with or ahead of the Otay Crossings project.

## **6.1 MITIGATION FOR DIRECT IMPACTS**

### **6.1.1 Upland Vegetation Communities**

The project would cause direct impacts to 0.1 acre of native grassland, 1.9 acres of Diegan coastal sage scrub (including disturbed) and 263.1 acres of non-native grassland. EOMSP FEIR MM 3B prioritizes on site avoidance as first priority, with off-site preservation second priority. EOMSP FEIR MM 3C recommends that conserved lands should be part of large contiguous blocks of habitat. EOMSP FEIR MM 3E requires that a majority of the Diegan coastal sage scrub within the specific plan area be conserved, with impacts being mitigated at between a 1:1 and 3:1 ratio. In accordance with the BMO and consistent with the EOMSP FEIR, impacts to native grassland will be mitigated at a 2:1 mitigation ratio, impacts to Diegan coastal sage scrub will be mitigated at a 1.5:1 ratio, while those to non-native grassland will be mitigated at a 1:1 ratio through a combination of on- and off-site preservation (Table 8). Impacts to Tier II or III habitats will be mitigated with same or higher tier habitats. Because the site is within an MSCP Minor Amendment Area, complete consistency with the BMO is not required, although the mitigation largely complies with the BMO.

In total, impacts to 0.1 acre of native grassland will require mitigation with 0.2 acre of native grassland preservation. This will be met through acquisition of land on the Lonestar property, of which 0.2 acre will be for impacts to native grassland, and the remaining 81.8 acres will be used as partial mitigation for impacts to non-native grassland (discussed in more detail in Section 6.1.4). Impacts to 1.9 acres of Diegan coastal sage scrub (including disturbed) will be offset with preservation of 2.9 acres of Diegan coastal sage scrub on site. Because a total of 6.8 acres of Diegan coastal sage scrub would be available for mitigation, the remaining 3.9 acres will be applied to the mitigation requirement for non-native grassland. Impacts to 263.1 acres of non-native grassland will be partially offset with on-site preservation of 34.4 acres of non-native grassland, 6.4 acres of disturbed habitat to be restored to grassland (HELIX 2009b), and the remaining 3.9 acres of Diegan coastal sage scrub, for a total of 44.7 acres. The remaining non-

native grassland mitigation will occur with off-site preservation of 5 parcels: 1) the 69-acre O’Neal Canyon parcel; 2) the 15-acre O’Neal Canyon parcel; 3) a 62-acre parcel at the Lonestar Ridge site; 4) 20 acres of a 40-acre parcel at Lonestar Ridge (Figure 8); and 5) 40 acres of the 63-acre Martz parcel in Ramona (Figure 9). An additional 12.4 acres will need to be acquired if the Otay Crossings project moves forward ahead of other projects in the area with overlapping impacts and mitigation requirements. This will include 9.2 acres of the Paragon portion of the Lonestar Ridge parcel and 3.2 acres of the Martz parcel. A more detailed discussion of each off-site mitigation parcel is provided in the burrowing owl mitigation section below.

**Table 8  
MITIGATION FOR IMPACTS TO SENSITIVE VEGETATION COMMUNITIES\***

VEGETATION COMMUNITY	IMPACTS†	MITIGATION						
		Required		Proposed				Total
		Ratio	Area	Preservation		Creation	Restoration	
On Site	Off Site							
<b>Wetlands</b>								
Tamarisk scrub	0.73‡	1:1	0.73	0.00	0.00	0.73	0.00	<b>0.73</b>
Disturbed wetland	0.00	--	0.00	0.03§	0.00	0.00	0.00	<b>0.03</b>
<b>Tier I</b>								
Native grassland	0.1	2:1	0.2	0.0	0.2	0.0	0.0	<b>0.2</b>
<b>Tier II</b>								
Diegan coastal sage scrub (including disturbed)	1.9	1.5:1	2.9	2.9**	0.0	0.0	0.0	<b>2.9§</b>
<b>Tier III</b>								
Non-native grassland	263.1	1:1 <sup>+</sup>	263.1	44.7††	218.4	0.0	0.0	<b>263.1</b>
<b>TOTAL</b>	<b>265.7</b>	<b>--</b>	<b>266.9</b>	<b>47.6</b>	<b>218.6</b>	<b>0.73</b>	<b>0.00</b>	<b>266.9</b>

\*All wetland areas are presented in acre(s) rounded to the nearest 0.01; upland areas are rounded to the nearest 0.1.

†Off-site impact acreage reflects proposed off-site road, water and storm-drain improvement footprints, as well as Sewer Option A footprint. Off-site grading impacts would increase to 35.0 acres if Sewer Option B-1 or B-2 is selected.

‡A total of 0.97 acre of tamarisk scrub would be impacted, of which only 0.73 is considered jurisdictional and would require mitigation.

§Not included in the mitigation total.

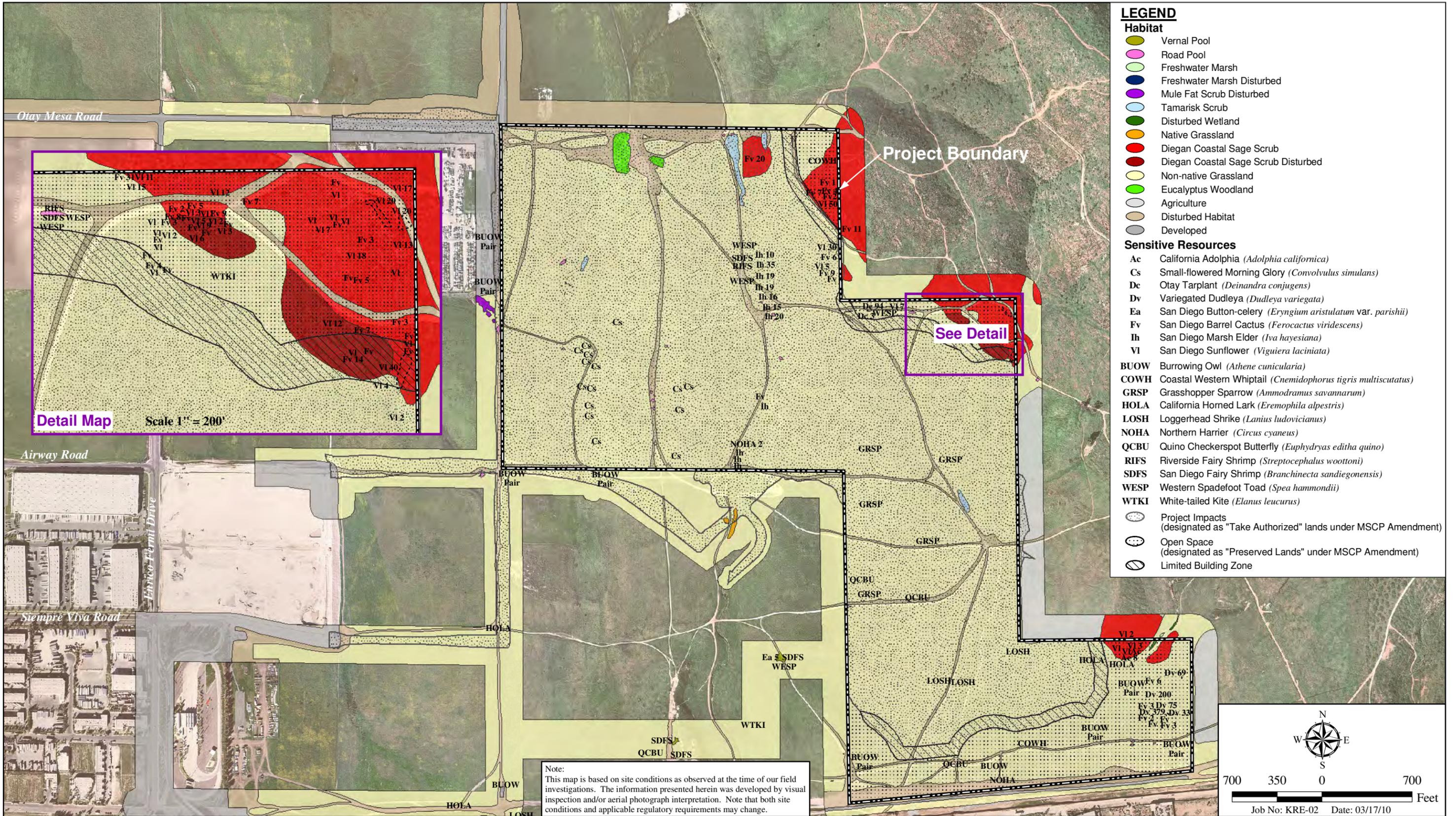
\*\*Excess of 3.9 acres of Diegan coastal sage scrub will be used to reduce non-native grassland mitigation by 3.9 acres. May also be mitigated with higher tier habitats or fee-based program.

††Includes 34.4 acres of non-native grassland, 6.4 acres of disturbed habitat to be restored to grassland, and 3.9 acres of excess Diegan coastal sage scrub.

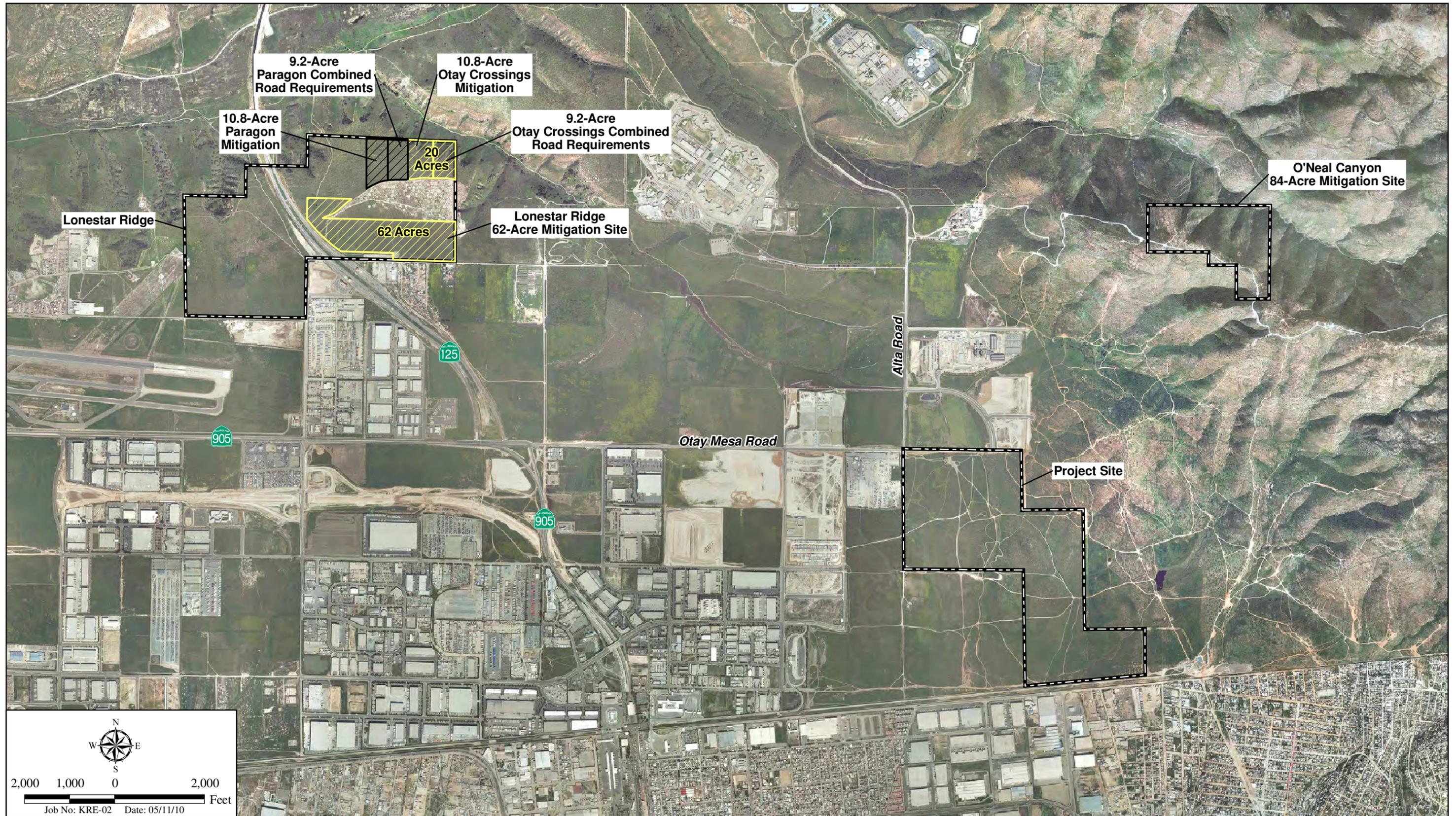
<sup>+</sup> A 1:1 ratio is required for burrowing owl occupied habitat.

Three areas on site are planned for preservation as partial mitigation for project impacts and are identified as open space on Figure 7. The open space areas are considered BRCA's because they are connected to large blocks of existing undeveloped land to the east that support diverse, high quality habitat, which in turn supports a number of sensitive species. The remainder of required mitigation will occur off site within the County by direct purchase of land. An RMP shall be

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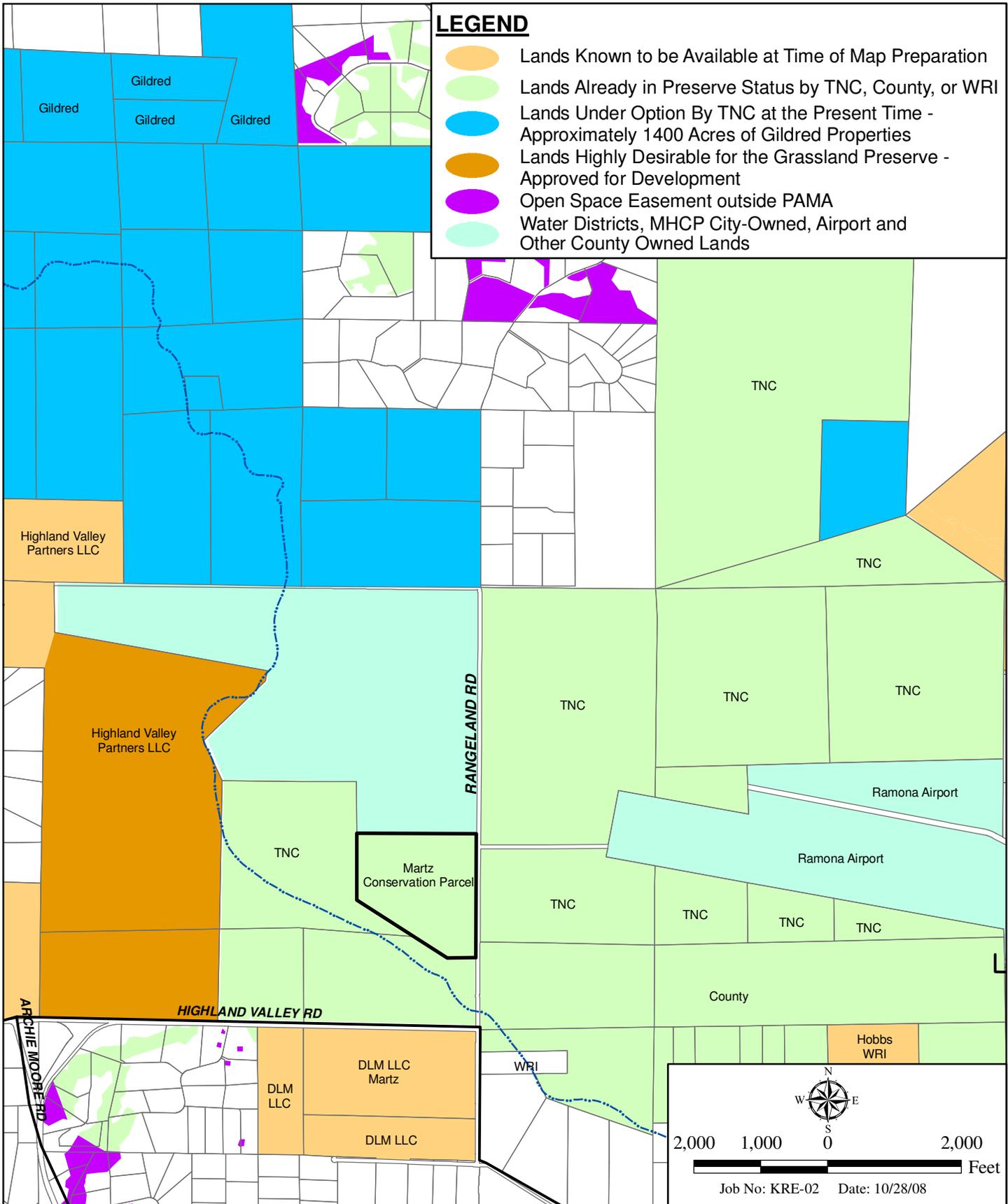
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## Project Mitigation Sites

OTAY CROSSINGS COMMERCE PARK

Figure 8



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# Ramona/Martz Conservation Parcel

OTAY CROSSINGS COMMERCE PARK

Figure 9



prepared and implemented for all biological open space. A Property Analysis Record (PAR) and cost estimate will be prepared for long-term management of on-site and off-site open space and incorporated into the RMP.

If either Sewer Option B-1 or B-2 is implemented instead of Sewer Option A, impacts to 0.056 acre of vernal pools will be mitigated by restoration of vernal pool habitat at Lonestar Ridge at a 3:1 ratio, resulting in restoration of 0.168 acre of vernal pool surface area. The restoration plan should include San Diego button-celery in the seed mix and success criteria. A restoration plan will be prepared and submitted for approval to the County and wildlife agencies prior to initiating impacts. Impacts to the additional 4.5 or 3.9 acres of non-native grassland (under Sewer Options B-1 and B-2, respectively) will be mitigated through preservation of 4.5 or 3.9 acres (respectively) of the Paragon open space parcel on Lonestar Ridge.

### **6.1.2 Wetland Vegetation Communities and Jurisdictional Areas**

The project applicant would be required to obtain wetland permits and approvals for impacts to Corps and CDFG jurisdictional areas. Project impacts to Corps jurisdictional areas would consist of 0.20 acre of non-wetland Waters of the U.S. Impacts to CDFG jurisdictional areas would consist of 0.73 acre of tamarisk scrub, and 0.24 acre of streambed. Refer to Table 9 for a summary of mitigation requirements for jurisdictional areas. No impacts to RPO wetlands are proposed. Federal and state agencies typically require no net loss of wetlands, a criterion under which mitigation includes a 1:1 creation element, and often a restoration/enhancement element. Impacts to jurisdictional tamarisk scrub will require a 1:1 mitigation ratio through creation of 0.73 acre of riparian or mule fat scrub. Impacts to jurisdictional non-wetland Waters of the U.S./CDFG streambeds are generally mitigated only through creation at a 1:1 ratio. This will require creation of 0.24 acre of drainages, of which 0.20 acre must be Corps jurisdictional. Wetland mitigation will occur within the open space along existing on-site drainages (HELIX 2009c) and at an off-site location to be determined through the permitting process. An RMP shall be prepared and implemented for all biological open space. On-site mitigation will consist of realigning and widening portions of existing non-wetland Waters of the U.S./CDFG streambeds within the impact footprint and seeding/planting with a mix of native grasses and forbs as well as riparian shrubs such as mule fat. The widening of the drainages may satisfy a portion of the creation component of the mitigation, and seeding/planting will partially satisfy the enhancement/restoration component. Additional enhancement/restoration will occur along the drainage in the open space in the southeastern corner of the site.

**Table 9  
MITIGATION FOR IMPACTS TO JURISDICTIONAL AREAS\***

JURISDICTIONAL AREA	RATIO	CORPS		CDFG		COUNTY	
		Impacts	Mitigation	Impacts	Mitigation	Impacts	Mitigation
Tamarisk scrub	1:1	0.00	0.00	0.73	0.73	0.00	0.00
Disturbed wetland	--	0.00	0.00	0.00	0.00	0.00	0.00
Non-wetland Waters of the U.S./Streambed	1:1	0.20	0.20	0.24	0.24	0.00	0.00
<b>TOTAL</b>	<b>--</b>	<b>0.20</b>	<b>0.20</b>	<b>0.97</b>	<b>0.97</b>	<b>0.00</b>	<b>0.00</b>

\*Areas are presented in acre(s) rounded to the nearest 0.01.

If either Sewer Option B-1 or B-2 is implemented, impacts to 0.056 acre of vernal pools will be mitigated by creation of vernal pool habitat at Lonestar Ridge at a 3:1 ratio, resulting in creation of 0.168 of vernal pool surface area. Impacts to 0.012 acre of unvegetated Waters of the U.S./streambed will be mitigated by creation of vernal pool habitat at Lonestar Ridge at a 1:1 ratio.

### **6.1.3 Sensitive Plants**

Impacts to 37 percent of the on-site population of San Diego barrel cactus and 100 percent of the on-site population of San Diego marsh-elder (both County Group B species) would require mitigation. No impacts to Otay tarplant, variegated dudleya, or California adolphia would occur, and impacts to County Group D species (small-flowered morning glory and San Diego County viguiera) are not significant and would not require species-specific mitigation. EOMSP FEIR MM 3I prioritizes on site avoidance as the first priority, with off-site preservation the second priority. For impacts to County Group A and B species, Section 86.507 of the BMO requires that “in-kind preservation shall be required at a 1:1 to 3:1 ratio depending on the sensitivity of the species and population size.” The following measures shall meet this requirement.

Impacts to 72 San Diego barrel cactus shall be mitigated at a 2:1 ratio through acquisition of habitat supporting a minimum of 144 barrel cacti. This mitigation will be met within on site open space as well as with lands acquired for mitigation of impacts to grassland and burrowing owls (Table 10). Although the project would impact approximately 37 percent of the on-site barrel cactus population, which is not consistent with the 20 percent impact threshold contained in the BMO, these impacts would be offset through mitigation. Mitigation will consist of acquisition of lands (O’Neal Canyon and Lonestar Ridge parcels – further discussed in Section 6.1.4 below) which support barrel cactus populations, with approximately 279 individuals occurring on Lonestar Ridge alone. Mitigation will also consist of salvage of the 72 barrel cacti within the project footprint and relocation of these individuals to areas of appropriate habitat within the open space parcels. An On-site Grassland and San Diego Barrel Cactus Mitigation Plan shall be prepared by the applicant, and approved by the County prior to initiating impacts. Translocation of the barrel cacti shall occur prior to initiating impacts consistent with the On-site Grassland and San Diego Barrel Cactus Mitigation Plan (HELIX 2009b). The applicant also will fund implementation of an RMP that includes measures to protect and enhance the preserved and relocated populations of San Diego barrel cactus (HELIX 2009b and d). Therefore, although the project is not required to comply with the BMO because of the Exception allowed under Section 86.509(b), and would not

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conform to the BMO in terms of allowable impacts, adequate mitigation for those impacts will be provided.

**Table 10  
SENSITIVE SPECIES MITIGATION**

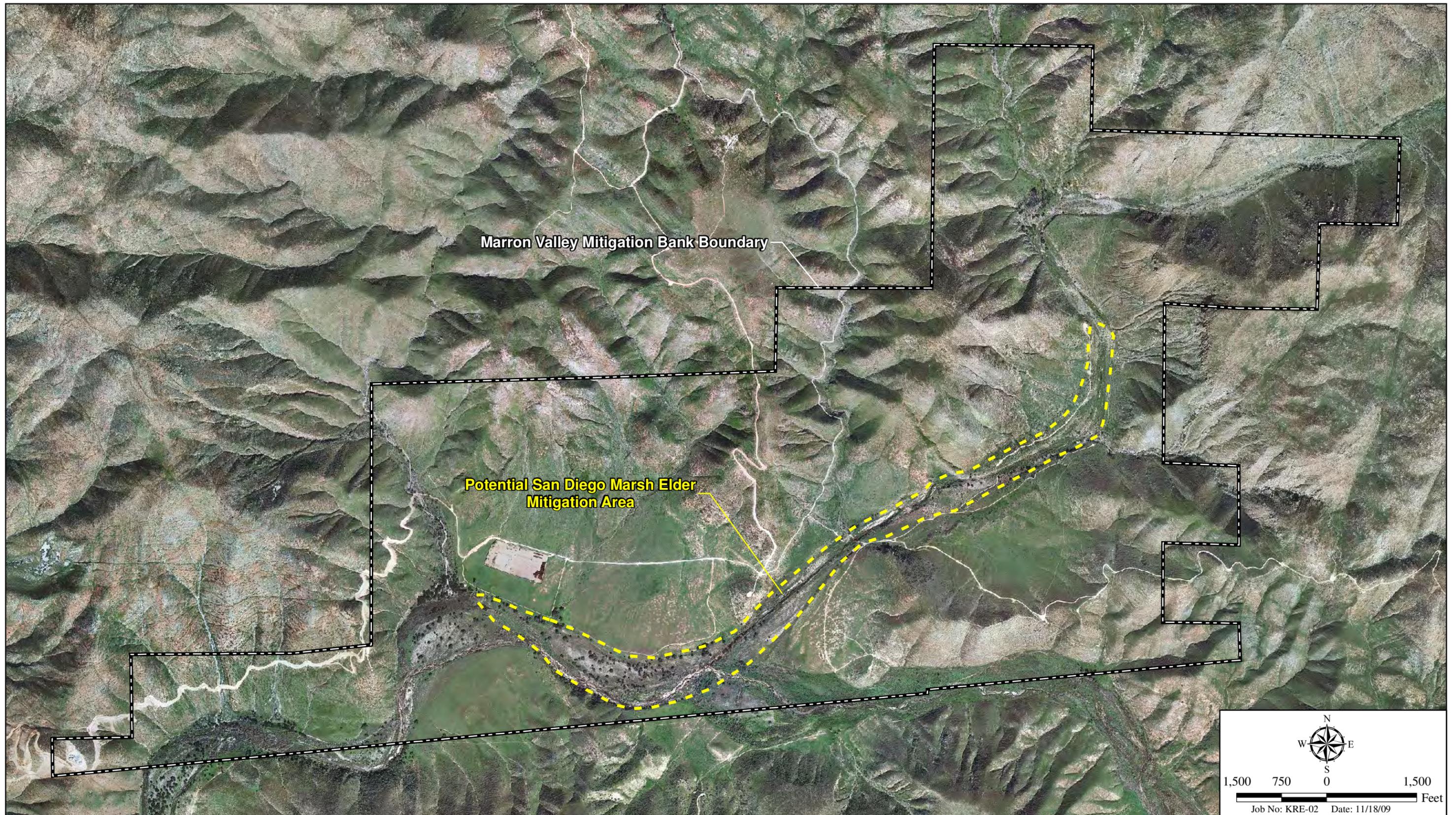
<b>Species</b>	<b>Impacts</b>	<b>Mitigation Ratio</b>	<b>Mitigation Location</b>	<b>Mitigation Type</b>	<b>Resource Management Plan/Mitigation Plan</b>
San Diego barrel cactus	72 individuals	2:1	On site, Lonestar Ridge, O'Neal Canyon	Preservation of 121 individuals on site, 279 individuals on Lonestar Ridge, 3 individuals on O'Neal Canyon, Transplantation of 72 individuals	On site and Lonestar Ridge RMP
San Diego marsh elder	138 individuals	2:1	On site	Preservation or planting of 276 individuals	Off-site acquisition at Marron Valley or inclusion in Corps/CDFG mitigation
San Diego fairy shrimp	116 sq. ft.	2:1	Lonestar Ridge	Vernal pool restoration – 232 sq. ft.	Lonestar Ridge Vernal Pool Restoration Plan
Riverside fairy shrimp		2:1	Lonestar Ridge	Vernal pool restoration – 232 sq. ft.	Lonestar Ridge Vernal Pool Restoration Plan
Burrowing owl		1:1	On site (47.4 acres), O'Neal Canyon (84 acres), Lonestar Ridge (82 acres), Ramona (40 acres)	Preservation	On site, Lonestar Ridge and Ramona RMP, Burrowing owl/QCB mitigation plan

**Table 10 (cont.)  
SENSITIVE SPECIES MITIGATION**

<b>Species</b>	<b>Impacts</b>	<b>Mitigation Ratio</b>	<b>Mitigation Location</b>	<b>Mitigation Type</b>	<b>Resource Management Plan/Mitigation Plan</b>
Quino checkerspot butterfly	2 individuals	3.5:1	On site (47.4 acres), O'Neal Canyon (84 acres), Lonestar Ridge (82 acres)	Preservation of 7 locations, habitat restoration	On site and Lonestar Ridge RMP, Burrowing owl/QCB mitigation plan
Coastal western whiptail, California horned lark, grasshopper sparrow, loggerhead shrike, white-tailed kite, northern harrier	N/A	Mitigation met through habitat preservation	On site (47.4 acres), O'Neal Canyon (84 acres), Lonestar Ridge (82 acres), Ramona (40 acres)	Preservation	On site, Lonestar Ridge and Ramona RMP
Spadefoot toad	116 sq. ft.	2:1	Lonestar Ridge	Vernal pool restoration – 232 sq. ft.	Lonestar Ridge Vernal Pool Restoration Plan

Impacts to 138 San Diego marsh-elder individuals will be mitigated at a 2:1 ratio through acquisition of habitat supporting at least 276 individuals in Marron Valley Mitigation Bank (Figure 10) or through restoration of a minimum of 276 individuals within the off site mitigation location for Corps and CDFG WUS/streambed as determined through the permitting process (Table 10). An RMP shall be prepared and implemented for all on site biological open space (HELIX 2009e).

If either Sewer Option B-1 or B-2 is implemented, impacts to San Diego button-celery will be mitigated by creation of vernal pool habitat at Lonestar Ridge at a 3:1 ratio, resulting in creation of 0.168 of vernal pool surface area. A San Diego button-celery restoration plan will be prepared and submitted for approval to the County prior to initiating impacts.



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## Marron Valley San Diego Marsh Elder Mitigation Area

OTAY CROSSINGS COMMERCE PARK

Figure 10

#### **6.1.4 Sensitive Animals**

##### **Riverside and San Diego Fairy Shrimp**

EOMSP FEIR MM 3I prioritizes on site avoidance as the first priority, with off site preservation the second priority. Impacts to 116 square feet of road pool occupied by Riverside and San Diego fairy shrimp will be mitigated by creating 232 square feet (2:1 ratio) of pool habitat that supports these species (Table 10). Although it will not be a requirement to create vernal pools, vernal pool plant species will be incorporated into the restoration effort. The creation will occur in the off-site open space at Lonestar Ridge (HELIX 2009f). The restoration plan should modify the microtopography of the site to provide for appropriate hydrology for pools and associated species. It should include restoration of appropriate habitat and hydrology and provide for propagation of San Diego and Riverside fairy shrimp. Management and monitoring should ensure that appropriate success criteria are met.

If either Sewer Option B-1 or B-2 is implemented, impacts to San Diego button-celery will be mitigated by creation of vernal pool habitat at Lonestar Ridge at a 3:1 ratio that supports San Diego fairy shrimp, resulting in creation of 0.168 of vernal pool surface area. A restoration plan will be prepared and submitted for approval to the County prior to initiating impacts.

##### **Burrowing Owl**

If grading would occur during the burrowing owl breeding season (February 15 through August 15), a pre-construction survey of the known active burrows will be conducted to avoid filling burrows or injuring the owls by burrow collapse. The survey will take place 3 to 5 days prior to initiation of construction. Weed removal (by whacking, bush hogging, or mowing) will be conducted if necessary to make all potential burrows in the relevant impact area more easily observed. This weed removal will be monitored by a qualified biologist to ensure that burrows are not disturbed during the process. Cameras should be used to ensure that burrows are unoccupied by burrowing owls. If owls are present in the burrows during the breeding season, passive relocation or eviction shall not be allowed. No grading will occur during the breeding season for the burrowing owl without concurrence by the Wildlife Agencies that owls will not be affected by construction activities. If owls are present outside of the breeding season, passive relocation with the use of one-way doors would be implemented by a qualified biologist in accordance with the CDFG Staff Report on Burrowing Owl Mitigation. Once it is believed that the owls have vacated the burrows (this should take approximately 48 hours after installation of one-way doors), all burrows will be carefully excavated (to confirm they are empty) and then filled to prevent occupation or reoccupation. The excavation and filling will also be carried out by a qualified biologist.

- If grading would occur during the owl breeding season, active burrows shall be avoided and a 300-foot buffer shall be observed around the active burrows until August 15.
- The BMO requires passive relocation (in accordance with CDFG requirements [CDFG 1995]) of any burrowing owls that would be impacted by the project.

As discussed above, impacts to habitat occupied by burrowing owls must be mitigated with occupied habitat. The BMO specifically states:

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[m]itigation for impacts to the occupied habitat must be through the conservation of occupied burrowing owl habitat or lands appropriate for restoration, management and enhancement of burrowing owl nesting and foraging requirements at a ratio of no less than 1:1 for the territory of the burrowing owl.

The territory of a burrowing owl varies greatly depending on the location of the study and the density of the population being studied. Territory size is directly proportional to the available habitat and burrow availability (Rosenberg and Haley 2004; Haug et al. 1993; Desmond et al. 1995; Trulio 1997; Millsap and Bear 2000). Some studies have shown territory sizes from less than 1 to up to 4 acres, with an average distance between burrows of 436 feet (Thomsen 1971; Martin 1973). Other studies have shown territories ranging from approximately 12.3 acres for areas in black-tailed prairie dog colonies (Desmond et al. 1995), 20.2 acres at Naval Air Station North Island (Range 2.2-56.3 acres with considerable overlap of territories resulting in a density estimate much lower than 20.2 acres; Winchell and Pavelka 2004), approximately 30 acres in the Imperial Valley (Rosenberg and Haley 2004) to as much as 595 acres for owls in Saskatchewan (Haug and Oliphant 1990). One recent record of burrowing owls in Otay Mesa showed six owl pairs within a fully constrained 80-acre parcel (Mayer, pers. comm. 2006). For mitigation purposes, it is assumed that 4 pair of owls in the southern portion of the site would be adequately conserved within the proposed on-site open space easement on Lot 57. As previously noted, the applicant has asserted that not all of the site should be considered occupied habitat, which will result in a reduction of the mitigation ratio from 1:1 to 0.5:1 for unoccupied grassland habitat. Nonetheless, the applicant has agreed to provide for an overall 1:1 mitigation ratio for non-native grassland impacts as spelled out above (Table 8). The areas proposed for burrowing owl mitigation will also be used to satisfy the mitigation requirements for impacts to sensitive upland habitats, sensitive plant species, and other sensitive animal species, with the exception of San Diego fairy shrimp.

### On-site Preservation

Through the consultation process with the Wildlife Agencies, the project has been reconfigured along the southern boundary, eliminating development in Lot 57, and maintaining an open space connection with potential open space being planned on the adjacent Paragon parcel to the west. A total of 34.4 acres of non-native grassland and 6.8 acres of Diegan coastal sage scrub would be conserved within viable open space along the eastern and southern border of the site. An additional 6.4 acres of disturbed habitat will be restored to grassland (HELIX 2009b), for a total of 47.6 acres of on-site preservation. The block of open space in the southeast corner supports the highest quality grassland habitat on the project site as well as 4 pair of burrowing owls. The on-site preservation will provide a 300-foot buffer around known burrowing owl locations and conserve 4 of the 8 pairs observed on site plus a single individual. The on-site preservation will also conserve 1 QCB location, and habitat for several other sensitive animal species, including horned lark, northern harrier, coastal western whiptail, in addition to numerous rare plants, including San Diego barrel cactus, variegated dudleya, and San Diego County viguiera. An RMP has been prepared for the on site open space (HELIX 2009e).

### Off-site Acquisition

Five parcels are being acquired as part of the mitigation proposal: 1) the 69-acre O'Neal Canyon parcel; 2) the 15-acre O'Neal Canyon parcel; 3) a 62-acre parcel at the Lonestar Ridge site; 4) 20 acres of a 40-acre parcel at Lonestar Ridge (Figure 8); and 5) 40 acres of the 63-acre Martz parcel in Ramona (Figure 9) or another 40 acres in the Ramona area acceptable to the USFWS, CDFG and County. The remaining 12.4 acres of mitigation will be met through preservation of 9.2 acres of the Paragon open space parcel on Lone Star Ridge and 3.2 acres at the Martz parcel. If the Otay Crossings project goes forward concurrently with the Paragon project, the mitigation requirements will be revised based on Appendix D.

#### *O'Neal Canyon (69-acre and 15-acre parcels)*

These sites lie east of Alta Road, north and south of Otay Mountain Truck Trail, and in the northeastern quarter of Section 29 of the U.S. Geological Survey Otay Mesa quadrangle. Habitats on site include southern mixed chaparral, chamise chaparral, Diegan coastal sage scrub, disturbed habitat, and developed (Otay Mountain Truck Trail). Host and nectaring plants in sufficient quantities to support the QCB occur on both sites and include dwarf plantain (*Plantago erecta*), owl's clover (*Castilleja exserta*), popcorn flower (*Cryptantha* sp.) and goldfields (*Lasthenia californica*). Sensitive plant species on the sites include Dunn's mariposa lily (*Calochortus dunnii*), Tecate cypress (*Cupressus forbesii*), Gander's pitcher sage (*Lepechinia ganderi*), San Diego barrel cactus, Munz's sage (*Salvia munzii*), San Diego County needle grass (*Achnatherum diegoense*), and San Diego County viguiera. Non-protocol level surveys for QCB (HELIX 2003, 2004, 2005; Ecological Ventures California 2001) identified three individuals at one location and a fourth individual at a separate location. Surveys in 2008 have identified at least 5 QCB on the site. The site also provides foraging habitat for the golden eagle and other raptors. The site is bounded by BLM lands to the north and east, and by lands targeted for conservation to the west and south. The BLM will be assuming long-term management responsibilities for this parcel.

#### *Lonestar Ridge (62-acre parcel and 20 acres of 40-acre parcel)*

On the 62-acre parcel, approximately 53.5 acres occur within an area outside of the City of San Diego's MSCP Multiple Habitat Planning Area (MHPA) that is zoned for industrial development, and would otherwise be developable. There are 0.06 acre of vernal pool and 61.9 acres of non-native grassland on site. Sensitive resources on site include 67,000 variegated dudleya and 330,000 Otay tarplant, both of which represent one of the largest known populations for these species. Additionally, one QCB location, as well as one vernal pool with San Diego fairy shrimp, and one vernal pool with San Diego button-celery (*Eryngium aristulatum* var. *parishii*) will also be conserved. The site is bounded by existing conserved lands to the north and east. Additionally, the applicant has purchased the adjacent 48 acres to the north to be used by others for mitigation of impacts on Otay Mesa. Combined, these lands will secure conservation of the entire mesa in this location east of State Route (SR) 125 and help achieve the goal of insuring at least one of the five owl sub-populations on Otay Mesa.

Conservation of the 40-acre parcel includes 0.2 acre of vernal pool, 31.7 acres of non-native grassland and 8.1 acres Diegan coastal sage scrub vegetation on site. As noted, the applicant will be responsible for purchasing one-half of the 40 acres, for a 20-acre mitigation obligation. An additional 9.2 acres will need to be acquired if the Otay Crossings project moves forward ahead of other projects in the area with overlapping impacts and mitigation requirements (refer to Appendix D). An RMP has been prepared for the Lonestar Ridge Parcel (HELIX 2009d).

The Lonestar Ridge parcel shall be annexed into the County MSCP Subarea Plan as part of project approvals to insure consistency with the BMO. The following provides information necessary for the County and resource agencies to approve the modification to the Pre-Approved Mitigation Map.

This modification will add 82 acres of conserved habitat to the South County Preserve. As noted above, a majority of this area is grassland habitat that supports a high number of sensitive species (Figure 8). The 82 acres includes lands that are within the City of San Diego's MHPA as well as lands zoned for industrial development outside of the MHPA. Conservation of the 82 acres will result in a net increase of 53.5 acres of conservation in this area. The Lonestar Ridge parcel abuts the South County Subarea Plan and will link directly with open space conserved as part of the Subarea Plan. As noted above, this parcel supports regionally significant populations of Otay tarplant and variegated dudleya.

The goals of the Subarea Plan (Section 1.2) will be achieved by preservation of the Lonestar Ridge parcel because this will:

- Maximize conservation of unique habitat features (stockpen soils);
- Provide conservation of coastally influenced grassland habitats;
- Completes conservation of remaining habitat east of SR-125, creating a single large block of contiguous habitat that minimizes edge effects;
- Focuses development in an area that will have high intensity uses as a result of the future SR-11 and POE;
- Provides for conservation of key regional populations of Otay tarplant and variegated dudleya, and provides for habitat in a biologically functioning unit; and
- Conserves a large block of interconnected habitat for wide ranging species such as mule deer and golden eagle. The parcel connects with the Otay River Valley to the north and Otay Mountain to the east.

#### 40-acre Ramona Martz Parcel

Otay Crossings, the applicant, shall purchase the 63-acre Martz parcel in the Ramona grasslands. The site is bounded by existing conserved lands to south, east and west, and by the Ramona Water District lands to the north (Figure 4). Otay Crossings will conserve the entire 63-acre parcel but needs only 40 acres for the Otay Crossings project. The parcel contains non-native grassland suitable as potential burrowing owl habitat, as well as 4 vernal pools. Sensitive species known to occur on site include graceful tarplant, San Diego fairy shrimp, sharp-shinned hawk (*Accipiter striatus*), ferruginous hawk (*Buteo regalis*), and Stephens' kangaroo rat (*Dipodomys stephensi*). The specific 40 acres proposed for conservation for the Otay Crossings project

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occurs in the grassland areas that do not support vernal pools and support only a small area with Stephens' kangaroo rat (Figure 11). The remaining 23 acres will be available for mitigation for other projects. An additional 3.2 acres will need to be acquired if the Otay Crossings project moves forward ahead of other projects in the area with overlapping impacts and mitigation requirements (refer to Appendix D). Conservation of the Martz parcel will complete conservation of the mosaic of grasslands to the east, south and west of that site. An RMP has been prepared for the Martz Parcel (HELIX 2009g).

Otay Crossings may choose to provide an alternative mitigation parcel in Ramona to meet their 40-acre mitigation need. This parcel shall contribute to grassland conservation in Ramona, and will be reviewed and approved by the USFWS, CDFG, and County prior to acceptance as mitigation. The Ramona parcel shall be annexed into the County MSCP Subarea Plan as part of project approvals to insure consistency with the BMO. The following provides information necessary for the County and resource agencies to approve the modification to the Pre-Approved Mitigation Map.

This modification will add 40 acres of conserved habitat to the Ramona grasslands that had previously been part of a proposed development. Conservation of the parcel will conserve a significant part of the remaining non-protected habitat along Santa Maria Creek. This parcel supports the Stephens' kangaroo rat and provides foraging habitat for a variety of raptor species.

The goals of the Subarea Plan (Section 1.2) will be achieved by preservation of the Martz parcel because this will:

- Maximize conservation of unique habitat features (rock outcrops, vernal pools);
- Completes conservation of habitat matrix, creating a single large block of contiguous habitat that minimizes edge effects;
- Focuses development in an area that will have high intensity uses as a result of the future SR-11 and POE;
- Provides for conservation of key regional populations of Stephens' kangaroo rat, and provides for habitat in a biologically functioning unit; and
- Conserves a large block of interconnected habitat for wide ranging species such as mule deer and golden eagle.

#### *On- and Off-site Enhancement*

Approximately 2.0 acres of slope areas in the northeast corner of the project site will be revegetated with native grassland species to enhance this area for burrowing owls (HELIX 2009h). Additionally, the applicant will work with the County, USFWS, and CDFG in identifying additional measures to enhance the values of open space both on site as well as immediately off site of the project boundary. Measures could include weeding of non-native grasses and mustard, and reseeded with native grasses and forbs.

The 62-acre Lonestar Ridge parcel presents an excellent opportunity to function as a long-term owl receptor site and QCB habitat enhancement within a large contiguous block of open space east of SR 125. The eastern 60 percent of the site has relatively low weed cover and needs minimal enhancement for owls and QCB. The western 40 percent has a much higher weed

component and will be the focus of the enhancement efforts. The following enhancement efforts will be conducted and spelled out in more detail in the Burrowing Owl and Quino Checkerspot Butterfly Mitigation Plan for Lonestar Ridge (HELIX 2009h):

- The western portion of the site will be weeded and de-thatched during the first year to reduce non-native grass and mustard cover. A controlled burn of the site will be considered as part of the weed eradication strategy.
- The entire 62-acre site will be seeded with native grasses and annuals in an attempt to overwhelm the non-native grasses with native species.
- The applicant will prepare a grading plan to develop a series of berms and mound topography for construction of artificial owl burrows.
- Natural rubble piles will be placed within the enhancement area to provide habitat for ground squirrels.
- The applicant will develop a plan for the reintroduction of ground squirrels to provide for a naturally functioning system of owl occupation of abandoned ground squirrel burrows.

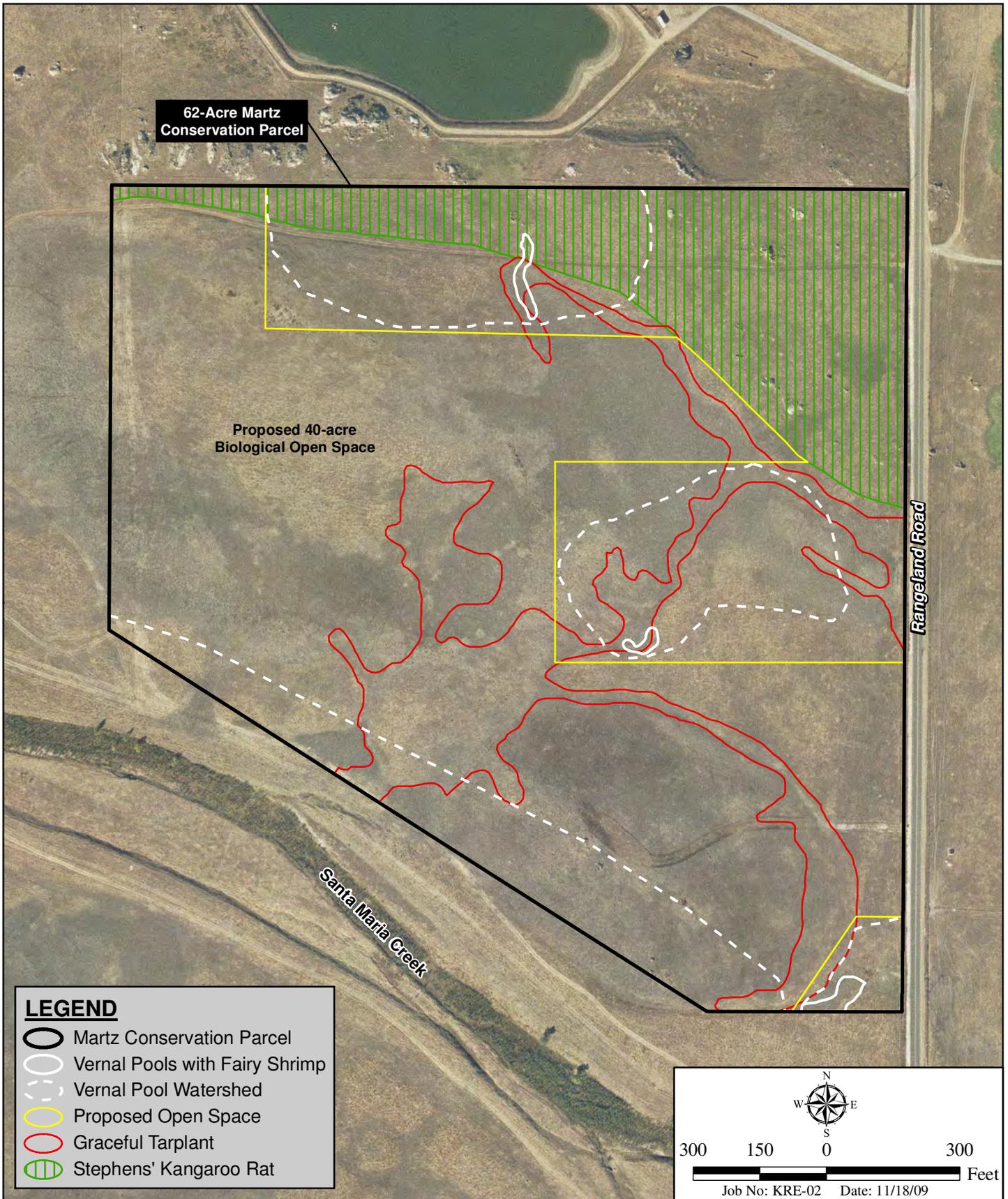
The results of these enhancement efforts will be a site with berm and mound topography ideally suited for long-term owl occupation, with a significant native grassland component, and a ground squirrel population that will provide natural burrows for the owls.

The applicant will work with the County, USFWS and CDFG in identifying the appropriate long-term manager for the on site and off site mitigation parcels. Currently it is anticipated that long-term management funding will be provided through annual assessments of the Property Owners Association or similar vehicle.

If either Sewer Option B-1 or B-2 is selected, impacts to the additional 4.5 or 3.9 acres (respectively) of non-native grassland supporting burrowing owls will be mitigated through preservation of 1.5 acres of the Paragon open space parcel on Lone Star Ridge and 3.0 or 2.4 acres (respectively) at the Martz parcel.

#### Quino Checkerspot Butterfly

Impacts to the QCB will be mitigated through on- and off-site preservation of occupied habitat as part of the mitigation for impacts to vegetation communities (Table 10). A total of 7 QCB-occupied locations shall be included in the preserved habitat. Existing biological resources and enhancement efforts for mitigation parcels obtained through off-site acquisition are discussed above, in conjunction with mitigation for impacts to burrowing owl habitat. On site preservation will conserve 1 previously recorded QCB location. An RMP shall be prepared and implemented for all biological open space (HELIX 2009d and e). The County is currently undergoing an MSCP amendment process with the USFWS to gain QCB take authorization for the entire County MSCP Subarea. The proposed MSCP amendment is distinct from the proposed project's MSCP Amendments. If the County's QCB amendment to the MSCP is processed before implementation of the proposed project, the project will be covered by the County's QCB take authority. As this approval cannot be assumed, it is expected that the project will have to process an individual take authority for QCB impacts via a Section 7 consultation.



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## Sensitive Resources - Martz Conservation Parcel

OTAY CROSSINGS COMMERCE PARK

If either Sewer Option B-1 or B-2 is selected, impacts to the additional 4.5 or 3.9 acres (respectively) of non-native grassland supporting QCB will be mitigated through preservation of 1.5 acres of the Paragon open space parcel on Lone Star Ridge and 3.0 or 2.4 acres (respectively) at the Martz parcel.

### Other Sensitive Species

Impacts to the coastal western whiptail, California horned lark, grasshopper sparrow, loggerhead shrike, white-tailed kite, northern harrier, and raptor foraging habitat will be mitigated through sage scrub and grassland mitigation requirements. Impacts to western spadefoot will be mitigated through vernal pool restoration (Table 10). All of the proposed mitigation will provide raptor foraging habitat. On site areas currently support numerous raptor species and consist primarily of non-native grassland. Off site areas support non-native grassland, sage scrub and chaparral habitats that are utilized by golden eagle, white-tailed kite, and numerous other raptor species.

Potential direct impacts to bird species covered under the MBTA will be mitigated by restricting brushing and grading to outside of the breeding season of most bird species (general breeding season is February 15 to September 15). Grubbing, grading, or clearing during the breeding season of MBTA covered species, including State Fully Protected Species (golden eagle and white-tailed kite), could occur if it is determined via a pre-construction survey that no nesting birds (or birds displaying breeding or nesting behavior) are present immediately prior to grubbing, grading, or clearing and will require approval of the USFWS, CDFG, and County that no breeding or nesting avian species are present in the vicinity of the grubbing, grading, or clearing.

## **6.2 MITIGATION FOR INDIRECT IMPACTS**

Active construction areas and unpaved surfaces would be watered pursuant to County grading permit requirements to ensure that generation of fugitive dust is held to a level below significance. As part of the project design, orange construction fencing would be installed prior to construction within the proposed limits of impact to clearly define the grading boundaries, and biological monitoring of on-site open space would be conducted during grading and construction prevent unintended impacts. The proposed project would address potential water quality impacts through compliance with the County Grading Ordinance and implementation of the proposed best management practices outlined in the Stormwater Management Plan. All construction and security lighting associated with the project would be shielded or directed away from the open space. After construction is complete, project landscaping would not include any Cal-IPC List A species.

In addition to the above project design features, the following mitigation measures would be required to ensure indirect impacts would be less than significant.

### **Construction Noise/Animal Behavior Changes**

Given the high potential for nesting birds on site, all brushing, grading, and clearing of vegetation should take place outside of the bird breeding season (February 15 through August 31). If

construction activities are proposed to occur during the breeding season within 300 feet of burrowing owl burrows or gnatcatcher nests, 500 feet of tree dwelling raptor nests, or within 900 feet of ground dwelling raptor nests, a pre-construction survey shall be conducted to determine if nesting birds (or birds displaying breeding or nesting behavior) are present. No construction activities shall occur within those distances until a qualified biologist determines that they are no longer active or it is determined that noise levels will not exceed 60 dB(A)  $L_{eq}$  at the nest site. Alternatively, noise minimization measures such as noise barriers could be constructed to bring noise levels to below 60 dB(A)  $L_{eq}$ , which will reduce impacts to below a level of significance. Although the EOMSP EIR identified a 1,500 foot limit for assessing noise impacts to gnatcatchers, the above mitigation has been updated to conform with noise mitigation requirements of the Subarea Plan and BMO.

### **Operational Noise**

Operational noise levels will be addressed through the dedication and enforcement of a Noise Protection Easement on Lots 16 through 18 and 24. The Noise Protection Easement will require future noise analysis within subsequent discretionary permits for the lots to ensure that noise levels will not exceed 60 dBA  $L_{eq}$  during the daytime and 50 dBA  $L_{eq}$  during the nighttime. Noise protection measures could be integrated into future industrial site plans could include proper building orientation, selection of quieter equipment, or placement of noise-producing equipment behind buffer zones, noise enclosures or parapet walls.

## 7.0 CERTIFICATION/QUALIFICATION

The following individuals contributed to the fieldwork and/or preparation of this report.

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APPENDIX A

PLANT SPECIES OBSERVED

**Appendix A**  
**PLANT SPECIES OBSERVED – OTAY CROSSINGS COMMERCE PARK**

<b><u>FAMILY</u></b>	<b><u>SCIENTIFIC NAME</u></b>	<b><u>COMMON NAME</u></b>	<b><u>HABITAT†</u></b>
<b>DICOTS</b>			
Aizoaceae	<i>Mesembryanthemum nodiflorum</i> *	slender-leaved iceplant	DCSS-D
Amaranthaceae	<i>Amaranthus</i> sp.*	tumbleweed	NNG
Anacardiaceae	<i>Malosma laurina</i>	laurel sumac	DCSS, DCSS-D
Apiaceae	<i>Foeniculum vulgare</i> *	fennel	DH, DW
Asteraceae	<i>Ambrosia psilostachya</i>	western ragweed	DW
	<i>Artemisia californica</i>	California sagebrush	DCSS, DCSS-D
	<i>Baccharis pilularis</i>	coyote brush	DCSS, DCSS-D, DH
	<i>Baccharis sarothroides</i>	broom baccharis	DCSS, DCSS-D
	<i>Centaurea melitensis</i> *	star thistle	DH, NNG
	<i>Conyza canadensis</i> *	horseweed	DH
	<i>Cynara cardunculus</i> *	cardoon	NNG
	<i>Deinandra conjugens</i> †	Otay tarplant	NNG
	<i>Deinandra fasciculata</i>	fascicled tarplant	DCSS, DCSS-D, NNG
	<i>Filago californica</i>	California filago	NNG
	<i>Gazania linearis</i> *	gazania	DCSS-D, NNG
	<i>Gnaphalium californicum</i>	California everlasting	DCSS, DCSS-D, NNG
	<i>Grindelia camporum</i> var. <i>bracteosum</i>	gum plant	NNG
	<i>Hedypnois cretica</i> *	Crete hedypnois	NNG
	<i>Helianthus annuus</i>	western sunflower	DCSS, DCSS-D, NNG
	<i>Hypochaeris glabra</i> *	smooth cat's-ear	NNG
	<i>Isocoma menziesii</i> var. <i>menziesii</i>	San Diego goldenbush	DCSS, DCSS-D, NNG
	<i>Iva hayesiana</i> †	San Diego marsh-elder	NNG
	<i>Lactuca serriola</i> *	wild lettuce	DW
	<i>Lessingia filaginifolia</i> var. <i>filaginifolia</i>	California-aster	DCSS-D, NNG
<i>Osmadenia tenella</i>	osmadenia	NNG	
<i>Sonchus oleraceus</i> *	common sow thistle	DH, NNG	
<i>Stylocline gnaphaloides</i>	everlasting nest straw	NNG	
<i>Viguiera laciniata</i> †	San Diego County viguiera	DCSS, DCSS-D, NNG	
<i>Xanthium strumarium</i> *	cocklebur	DW	
Boraginaceae	<i>Cryptantha</i> sp.	cryptantha	DCSS, DCSS-D
	<i>Plagiobothrys</i> sp.	popcorn flower	DCSS-D, NNG

**Appendix A (cont.)**  
**PLANT SPECIES OBSERVED – OTAY CROSSINGS COMMERCE PARK**

<u>FAMILY</u>	<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>HABITAT</u> †
<b>DICOTS (cont.)</b>			
Brassicaceae	<i>Brassica nigra</i> *	black mustard	DH, NNG
	<i>Lepidium</i> sp.*	peppergrass	NNG
	<i>Lepidium latifolium</i>	peppergrass	NNG
Cactaceae	<i>Ferocactus viridescens</i> †	San Diego barrel cactus	DCSS, DCSS-D, NNG
	<i>Opuntia littoralis</i>	coastal prickly pear	DCSS, DCSS-D
Capparaceae	<i>Isomeris arborea</i>	bladderpod	DCSS, DCSS-D
Caryophyllaceae	<i>Silene gallica</i> *	common catchfly	DCSS-D, NNG
	<i>Spergularia bocconii</i> *	sand-spurry	NNG
	<i>Spergularia</i> sp.*	sand-spurry	NNG
Chenopodiaceae	<i>Atriplex semibaccata</i> *	Australian saltbush	NNG
	<i>Chenopodium</i> sp.*	pigweed	DH, DW, NNG
	<i>Salicornia bigelovii</i>	dwarf glasswort	DW
	<i>Salsola tragus</i> *	Russian thistle	DH, NNG
Convolvulaceae	<i>Calystegia macrostegia</i> ssp. <i>arida</i>	finger-leaf morning-glory	DCSS, DCSS-D
	<i>Convolvulus arvensis</i> *	bindweed	NNG
	<i>Convolvulus simulans</i> †	small-flowered morning glory	NNG
Crassulaceae	<i>Crassula connata</i>	pygmy-weed	NNG
	<i>Dudleya variegata</i> †	variegated dudleya	NNG
Euphorbiaceae	<i>Eremocarpus setigerus</i>	dove weed	DH, NNG
Fabaceae	<i>Lotus scoparius</i> var. <i>scoparius</i>	coastal deerweed	DCSS, DCSS-D
	<i>Medicago polymorpha</i>	bur-clover	NNG
	<i>Medicago sativa</i> *	alfalfa	NNG
Gentianaceae	<i>Centaurium venustum</i>	canchalagua	DCSS, DCSS-D
Geraniaceae	<i>Erodium cicutarium</i> *	red-stem filaree	DH, NNG
	<i>Erodium moschatum</i> *	green-stem filaree	DH, NNG
Lamiaceae	<i>Trichostema lanceolatum</i>	vinegar weed	DCSS, DCSS-D
Malvaceae	<i>Malva parviflora</i> *	cheeseweed	DH, NNG
Nyctaginaceae	<i>Mirabilis californica</i>	wishbone bush	DCSS-D, NNG
Oxalidaceae	<i>Oxalis pes-caprae</i> *	Bermuda-buttercup	NNG
Plantaginaceae	<i>Plantago erecta</i>	dwarf plantain	DCSS-D, NNG

**Appendix A (cont.)**  
**PLANT SPECIES OBSERVED – OTAY CROSSINGS COMMERCE PARK**

<b><u>FAMILY</u></b>	<b><u>SCIENTIFIC NAME</u></b>	<b><u>COMMON NAME</u></b>	<b><u>HABITAT</u>†</b>
<b>DICOTS (cont.)</b>			
Polygonaceae	<i>Eriogonum fasciculatum</i> ssp. <i>fasciculatum</i>	California buckwheat	DCSS, DCSS-D, NNG
	<i>Linanthus dianthiflorus</i>	ground pink	DCSS, DCSS-D
	<i>Polygonum</i> sp.	knotweed	DH, NNG
	<i>Rumex crispus</i> *	curly dock	DW, TS
Portulacaceae	<i>Calandrinia ciliata</i>	red maids	DCSS, DCSS-D, NNG
Primulaceae	<i>Anagallis arvensis</i> *	scarlet pimpernel	NNG
	<i>Dodecatheon clevelandii</i> ssp. <i>clevelandii</i>	shooting star	DCSS-D, NNG
Rhamnaceae	<i>Adolphia californica</i> †	California adolphia	DCSS
Rubiaceae	<i>Galium</i> sp.	bedstraw	DCSS-D
Tamaricaceae	<i>Tamarix</i> sp.*	tamarisk	TS
Verbenaceae	<i>Verbena</i> sp.	verbena	NNG
<b>MONOCOTS</b>			
Iridaceae	<i>Sisyrinchium bellum</i>	blue-eyed grass	NNG
Juncaceae	<i>Juncus bufonius</i>	toad rush	NNG
Liliaceae	<i>Bloomeria crocea</i> var. <i>crocea</i>	golden star	DCSS-D, NNG
	<i>Brodiaea jolonensis</i>	mesa brodiaea	DCSS-D, NNG
	<i>Chlorogalum pomeridianum</i>	soap plant	DCSS
	<i>Dichelostemma capitatum</i>	blue dicks	DCSS, DCSS-D, NNG
	<i>Zigadenus fremontii</i>	star-lily	NNG
Poaceae	<i>Avena barbata</i> *	slender wild oat	DCSS, DCSS-D, DH, NNG
	<i>Avena fatua</i> *	wild oat	DCSS-D, DH, NNG
	<i>Bromus diandrus</i> *	common ripgut grass	DCSS, DCSS-D, NNG, DH
	<i>Bromus hordeaceus</i> *	soft chess	NNG
	<i>Bromus madritensis</i> ssp. <i>rubens</i> *	foxtail chess	DCSS, DCSS-D, NNG, DH
	<i>Gastridium ventricosum</i> *	nit grass	NNG
	<i>Hordeum marinum</i> ssp. <i>gussoneanum</i> *	Mediterranean barley	DH, NNG
	<i>Hordeum</i> sp.	barley	NNG
	<i>Lamarckia aurea</i> *	goldentop	DH

**Appendix A (cont.)**  
**PLANT SPECIES OBSERVED – OTAY CROSSINGS COMMERCE PARK**

<u>FAMILY</u>	<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>HABITAT</u> ‡
<b>MONOCOTS (cont.)</b>			
Poaceae (cont.)	<i>Lolium multiflorum</i> *	Italian ryegrass	NNG
	<i>Lolium</i> sp.*	ryegrass	NNG, DH
	<i>Nassella pulchra</i>	purple needlegrass	NNG
	<i>Nassella</i> sp.	needlegrass	NNG
	<i>Phalaris</i> sp.*	canary grass	DW
	<i>Polypogon monspeliensis</i> *	annual beard grass	DW, DH, NNG
	<i>Schismus barbatus</i> *	Mediterranean grass	DH, NNG
	<i>Vulpia myuros</i> *	fescue	DCSS, DCSS-D, DH, NNG
Typhaceae	<i>Typha</i> sp.	cattail	DW, TS
<b>PTERIDOPHYTES</b>			
Selaginellaceae	<i>Selaginella cinerascens</i>	ashy spike-moss	DCSS

\*Non-native species

†Sensitive species

‡Habitat acronyms: DCSS=Diegan coastal sage scrub, DCSS-D=disturbed Diegan coastal sage scrub, DH=disturbed habitat, DW=disturbed wetland, NNG=non-native grassland, TS=tamarisk shrub

APPENDIX B

ANIMAL SPECIES OBSERVED

**Appendix B**  
**ANIMAL SPECIES OBSERVED – OTAY CROSSINGS COMMERCE**  
**PARK**

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>
<b>INVERTEBRATES</b>	
<i>Anthocharis sara</i>	Sara orangetip
<i>Apodemia mormo virgulti</i>	Behr's metalmark
<i>Branchinecta sandiegonensis</i> †	San Diego fairy shrimp
<i>Brephidium exilis</i>	western pygmy blue
<i>Coenonympha californica</i>	common California ringlet
<i>Erynnis funeralis</i>	funereal duskywing
<i>Euphydryas editha quino</i> †	Quino checkerspot butterfly
<i>Glaucopsyche lygdamus australis</i>	southern blue
<i>Junonia coenia</i>	buckeye
<i>Papilio eurymedon</i>	pale swallowtail
<i>Papilio zelicaon</i>	Anise swallowtail
<i>Pieris rapae</i>	cabbage butterfly
<i>Plebejus acmon</i>	Acmon blue
<i>Pontia protodice</i>	common white
<i>Pyrgus albescens</i>	common checkered skipper
<i>Streptocephalus woottoni</i> †	Riverside fairy shrimp
<i>Vanessa annabella</i>	west coast lady
<i>Vanessa cardui</i>	painted lady

**VERTEBRATES**

**Amphibian**

<i>Spea hammondi</i> †	western spadefoot
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**Reptiles**

<i>Cnemidophorus hyperythrus beldingi</i>	orange throated whiptail
<i>Cnemidophorus tigris multiscutatus</i> †	coastal western whiptail
<i>Sceloporus occidentalis</i>	western fence lizard
<i>Thamnophis hammondi</i>	two-striped garter snake

**Birds**

<i>Agelaius phoeniceus</i>	red-wing blackbird
<i>Ammodramus savannarum</i> †	grasshopper sparrow
<i>Athene cunicularia</i> †	burrowing owl

**Appendix B (cont.)**  
**ANIMAL SPECIES OBSERVED – OTAY CROSSINGS COMMERCE**  
**PARK**

**SCIENTIFIC NAME**

**COMMON NAME**

**VERTEBRATES (cont.)**

**Birds** (cont.)

<i>Buteo jamaicensis</i>	red-tailed hawk
<i>Carduelis psaltria</i>	lesser goldfinch
<i>Carduelis tristis</i>	American goldfinch
<i>Carpodacus mexicanus</i>	house finch
<i>Charadrius vociferus</i>	killdeer
<i>Chordeiles acutipennis</i>	lesser nighthawk
<i>Circus cyaneus</i> †	northern harrier
<i>Corvus brachyrhynchos</i>	American crow
<i>Corvus corax</i>	common raven
<i>Elanus leucurus</i> †	white-tailed kite
<i>Eremophila alpestris actia</i> †	California horned lark
<i>Falco sparverius</i>	American kestrel
<i>Hirundo pyrrhonota</i>	cliff swallow
<i>Icterus bullockii</i>	Bullock's oriole
<i>Lanius ludovicianus</i> †	loggerhead shrike
<i>Mimus polyglottos</i>	northern mockingbird
<i>Passer domesticus</i>	house sparrow
<i>Passerina caerulea</i>	blue grosbeak
<i>Pipilo crissalis</i>	California towhee
<i>Sayornis nigricans</i>	black phoebe
<i>Sturnella neglecta</i>	western meadowlark
<i>Sturnus vulgaris</i>	European starling
<i>Tyrannus verticalis</i>	western kingbird
<i>Tyrannus vociferans</i>	Cassin's kingbird
<i>Zenaida macroura</i>	mourning dove
<i>Zonotrichia leucophrys</i>	white-crowned sparrow

**Mammals**

<i>Spermophilus beecheyi</i>	California ground squirrel
<i>Sylvilagus audubonii</i>	desert cottontail
<i>Thomomys bottae</i>	Botta's pocket gopher

†Sensitive species

## APPENDIX C

### EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES

**Appendix C**  
**EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES**

**FEDERAL, STATE, AND LOCAL CODES**

**U.S. Fish and Wildlife Service (USFWS)**

FE        Federally listed endangered  
FT        Federally listed threatened

**California Department of Fish and Game (CDFG)**

SE        State listed endangered  
ST        State listed threatened  
SR        State listed rare  
SSC      State species of special concern  
Fully Protected    Fully Protected species may not be taken or possessed without a permit from the Fish and Game Commission and/or CDFG.

**County of San Diego**

**Plant sensitivity:**

Group A    Plants rare, threatened or endangered in California or elsewhere  
Group B    Plants rare, threatened or endangered in California but more common elsewhere  
Group C    Plants that may be quite rare, but more information is needed to determine rarity status  
Group D    Plants of limited distribution and are uncommon, but not presently rare or endangered

**OTHER CODES AND ACRONYMS**

**Multiple Species Conservation Program (MSCP) Covered**

Multiple Species Conservation Program covered species for which the County has take authorization within MSCP area.

**MSCP Narrow Endemic (NE) Species**

Some native species, primarily plants with restricted geographic distributions, soil affinities, and/or habitats, are referred to as narrow endemic species. For vernal pools and identified narrow endemic species, jurisdictions will specify measures in their respective subarea plans to ensure that impacts to these resources are avoided to the maximum extent practicable.

**Appendix C (cont.)**  
**EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES**

**California Native Plant Society (CNPS) Codes**

**Lists**

- 1A = Presumed extinct.
- 1B = Rare, threatened, or endangered in California and elsewhere. Eligible for state listing.
- 2 = Rare, threatened, or endangered in California but more common elsewhere. Eligible for state listing.
- 3 = Distribution, endangerment, ecology, and/or taxonomic information needed. Some eligible for state listing.
- 4 = A watch list for species of limited distribution. Needs monitoring for changes in population status. Few (if any) eligible for state listing.

**List/Threat Code Extensions**

- .1 = Seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)
- .2 = Fairly endangered in California (20 to 80 percent occurrences threatened)
- .3 = Not very endangered in California (less than 20 percent of occurrences threatened, or no current threats known)
- A CA Endemic entry corresponds to those taxa that only occur in California.
- All List 1A (presumed extinct in California) and some List 3 (need more information; a review list) plants lacking threat information receive no threat code extension. Threat Code guidelines represent only a starting point in threat level assessment. Other factors, such as habitat vulnerability and specificity, distribution, and condition of occurrences, are considered in setting the Threat Code.

APPENDIX D

HABITAT MITIGATION SCENARIOS  
FOR CONCURRENT PROJECT IMPLEMENTATION

**Appendix D**  
**HABITAT MITIGATION SCENARIOS**  
**FOR CONCURRENT PROJECT IMPLEMENTATION**

In addition to the proposed project moving forward independently of adjacent development, there are two other buildout scenarios that would affect mitigation requirements for the Otay Crossings project: 1) Development concurrently with adjacent development; or 2) development following buildout of adjacent development. Within these two development scenarios, Sewer Option A is included in the analysis. Sewer Options B-1 and B-2 are also discussed. Each scenario is discussed below.

**Development Concurrently with Adjacent Development**

Under this scenario, off site impacts would occur concurrently with adjacent development projects such as Otay Business Park (Paragon property), and as a result, there would be overlapping impacts and mitigation requirements which would be split between the projects. The on-site impacts include all proposed development on site, with the exception of Alta Road and a small portion of Siempre Viva Road that are considered shared improvements that would extend off site onto the Otay Business Park project to the south. The total shared impacts between Otay Crossings and Otay Business Park include Alta Road along the length of the western boundary of Otay Crossings and Siempre Viva Road within the boundaries of Otay Business Park and extending off site to the west approximately 1,100 feet. Combined, these shared impacts total 18.0 acres of non-native grassland and 0.1 acre of native grassland (Figure 5b). Table 1 provides a summary of the on-site and off-site (including shared) impacts and Table 2 summarizes mitigation obligations.

<b>Table 1</b> <b>IMPACTS FOR DEVELOPMENT</b> <b>CONCURRENTLY WITH ADJACENT DEVELOPMENT*</b>					
<b>VEGETATION COMMUNITY</b>	<b>EXISTING ON SITE</b>	<b>ON-SITE IMPACTS</b>	<b>SHARED ON- SITE AND OFF-SITE IMPACTS†</b>	<b>OTHER OFF- SITE IMPACTS</b>	<b>TOTAL IMPACTS</b>
<b>Wetlands</b>					
Tamarisk scrub	0.97	0.97	0.00	0.00	<b>0.97</b>
Disturbed wetland	0.03	0.00	0.00	0.00	<b>0.00</b>
<b>Tier I</b>					
Native grassland	0.0	0.0	0.09	0.01	<b>0.10</b>
<b>Tier II</b>					
Diegan coastal sage scrub (including disturbed)	8.7	1.9	0.0	0.1	<b>2.0</b>
<b>Tier III</b>					
Non-native grassland	278.5	244.3	18.0	1.0	<b>263.3</b>

**Table 1 (cont.)  
Impacts FOR DEVELOPMENT  
CONCURRENTLY WITH ADJACENT DEVELOPMENT\***

VEGETATION COMMUNITY	EXISTING ON SITE	ON-SITE IMPACTS	SHARED ON-SITE AND OFF-SITE IMPACTS†	OTHER OFF-SITE IMPACTS	TOTAL IMPACTS
<b>Tier IV</b>					
Eucalyptus woodland	1.0	1.0	0.0	0.00	<b>1.0</b>
Agriculture	<0.1	<0.1	0.0	0.7	<b>0.7</b>
Disturbed habitat	22.2	15.8	2.6	2.4	<b>20.8</b>
Developed	<0.1	<0.1	0.4	5.3	<b>5.7</b>
<b>TOTAL*</b>	<b>311.5</b>	<b>264.0</b>	<b>21.1</b>	<b>9.5</b>	<b>294.6</b>

\* All wetland areas are presented in acre(s) rounded to the nearest 0.01; upland areas are rounded to the nearest 0.1; thus totals reflect rounding.

† This column represents Otay Crossings' share of impacts (i.e., half of the impacts) with Otay Business Park. This column includes off-site acreages under Sewer Option A; Sewer Options B-1 and B-2 would each include an additional 4.4 acres of impacts.

**Table 2  
MITIGATION REQUIREMENTS FOR DEVELOPMENT  
CONCURRENTLY WITH ADJACENT DEVELOPMENT\***

VEGETATION COMMUNITY	IMPACTS†	MITIGATION						Total
		Required		Proposed				
		Ratio	Area	Preservation		Creation	Restoration	
				On Site	Off Site			
<b>Wetlands</b>								
Tamarisk scrub	0.73‡	1:1	0.73	0.00	0.00	0.73	0.00	<b>0.73</b>
Disturbed wetland	0.00	--	0.00	0.03§	0.00	0.00	0.00	<b>0.03</b>
<b>Tier I</b>								
Native grassland	0.05	2:1	0.1	0.0	0.1	0.0	0.0	<b>0.1</b>
<b>Tier II</b>								
Diegan coastal sage scrub (including disturbed)	2.0	1.5:1	3.0	3.0**	0.0	0.0	0.0	<b>3.0§</b>
<b>Tier III</b>								
Non-native grassland	254.3	1:1	254.3	44.4††	209.9	0.0	0.0	<b>254.3</b>
<b>TOTAL</b>	<b>257.1</b>	<b>--</b>	<b>258.1</b>	<b>47.4</b>	<b>210.1</b>	<b>0.73</b>	<b>0.00</b>	<b>258.2</b>

\*All wetland areas are presented in acre(s) rounded to the nearest 0.01; upland areas are rounded to the nearest 0.1.

†Off-site impact acreage reflects proposed off-site road, water and storm-drain improvement footprints, as well as Sewer Option A footprint. Off-site grading impacts would increase if Sewer Option B-1 or B-2 is selected.

‡A total of 0.97 acre of tamarisk scrub would be impacted, of which only 0.73 is considered jurisdictional and would require mitigation.

§Not included in the mitigation total.

\*\*Excess of 3.8 acres of Diegan coastal sage scrub will be used to reduce non-native grassland mitigation by 3.8 acres. May also be mitigated with higher tier habitats or fee-based program.

††Includes 34.2 acres of non-native grassland, 6.4 acres of disturbed habitat to be restored to grassland, and 3.8 acres of excess Diegan coastal sage scrub.

If Sewer Option B-1 is selected, there would be new impacts to vernal pools totaling 0.056 acre, impacts to non-native grassland would be increased by 4.5 acres, impacts to disturbed habitat would be increased by 0.8 acre, and impacts to developed land would be decreased by 1.0 acre. If Sewer Option B-2 is selected, there would be new impacts to vernal pools totaling 0.056 acre, impacts to non-native grassland would be increased by 3.9 acres, impacts to disturbed habitat would be increased by 0.5 acre, and impacts to developed land would be decreased by 0.1 acre. These acreages represent total additional impacts by sewer option; therefore, for the purpose of

mitigation required by Otay Crossings, these acreages would be halved, as Otay Business Park would mitigate for half of the total impacts.

**Development Following Buildout of Adjacent Development**

Under this scenario the Otay Crossings project would move forward following development of adjacent parcels. As a result, Alta Road on the Otay Crossings project will have already been constructed and Siempre Viva Road off site will have also been constructed. Table 3 summarizes impacts and Table 4 summarizes mitigation under this scenario.

Because the sewer facilities would have already been constructed under this scenario, discussion of Sewer Options B-1 and B-2 are not relevant.

<b>Table 3 IMPACTS FOR DEVELOPMENT FOLLOWING DEVELOPMENT OF ADJACENT PROPERTY*</b>					
<b>VEGETATION COMMUNITY</b>	<b>EXISTING ON SITE</b>	<b>ON-SITE IMPACTS</b>	<b>SHARED ON-SITE AND OFF-SITE IMPACTS</b>	<b>OTHER OFF-SITE IMPACTS</b>	<b>TOTAL IMPACTS</b>
<b>Wetlands</b>					
Tamarisk scrub	0.97	0.97	N/a	0.00	<b>0.97</b>
Disturbed wetland	0.03	0.00	N/a	0.00	<b>0.00</b>
<b>Tier I</b>					
Native grassland	0.0	0.0	N/a	0.01	<b>0.01</b>
<b>Tier II</b>					
Diegan coastal sage scrub (including disturbed)	8.7	1.9	N/a	0.1	<b>2.0</b>
<b>Tier III</b>					
Non-native grassland	278.5	244.3	N/a	1.0	<b>245.3</b>
<b>Tier IV</b>					
Eucalyptus woodland	1.0	1.0	N/a	0.00	<b>1.0</b>
Agriculture	<0.1	<0.1	N/a	0.7	<b>0.7</b>
Disturbed habitat	22.2	15.8	N/a	2.4	<b>18.2</b>
Developed	<0.1	<0.1	N/a	5.3	<b>5.3</b>
<b>TOTAL*</b>	<b>311.5</b>	<b>264.0</b>	<b>0.0</b>	<b>9.5</b>	<b>273.5</b>

\*All wetland areas are presented in acre(s) rounded to the nearest 0.01; upland areas are rounded to the nearest 0.1; thus totals reflect rounding.

**Table 4  
MITIGATION REQUIREMENTS FOR DEVELOPMENT  
FOLLOWING DEVELOPMENT OF ADJACENT PROPERTY\***

VEGETATION COMMUNITY	IMPACTS†	MITIGATION						
		Required		Proposed				Total
		Ratio	Area	Preservation		Creation	Restoration	
				On Site	Off Site			
<b>Wetlands</b>								
Tamarisk scrub	0.73‡	1:1	0.73	0.00	0.00	0.73	0.00	<b>0.73</b>
Disturbed wetland	0.00	--	0.00	0.03§	0.00	0.00	0.00	<b>0.03</b>
<b>Tier I</b>								
Native grassland	0.01	2:1	0.02	0.0	0.02	0.0	0.0	<b>0.02</b>
<b>Tier II</b>								
Diegan coastal sage scrub (including disturbed)	2.0	1.5:1	3.0	3.0**	0.0	0.0	0.0	<b>3.0§</b>
<b>Tier III</b>								
Non-native grassland	245.3	1:1	254.3	44.4††	200.9	0.0	0.0	<b>245.3</b>
<b>TOTAL</b>	<b>248.0</b>	<b>--</b>	<b>249.1</b>	<b>47.4</b>	<b>200.9</b>	<b>0.73</b>	<b>0.00</b>	<b>249.1</b>

\*All wetland areas are presented in acre(s) rounded to the nearest 0.01; upland areas are rounded to the nearest 0.1.

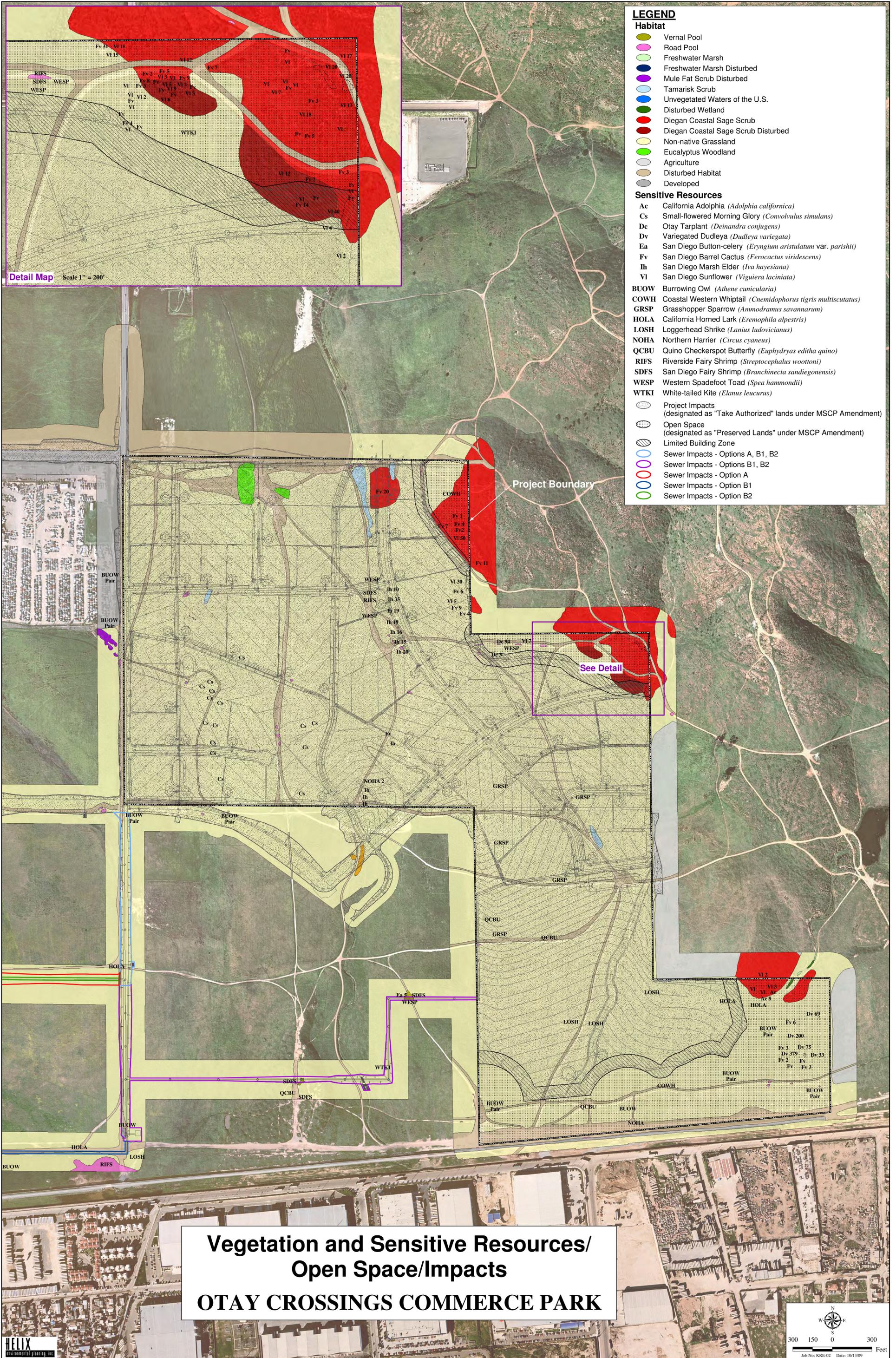
†Off-site impact acreage reflects proposed off-site improvements to Otay Mesa Road and Alta Road. All other off-site improvements will have been mitigated for by Otay Business Park.

‡A total of 0.97 acre of tamarisk scrub would be impacted, of which only 0.73 is considered jurisdictional and would require mitigation.

§Not included in the mitigation total.

\*\*Excess of 3.8 acres of Diegan coastal sage scrub will be used to reduce non-native grassland mitigation by 3.8 acres. May also be mitigated with higher tier habitats or fee-based program.

††Includes 34.2 acres of non-native grassland, 6.4 acres of disturbed habitat to be restored to grassland, and 3.8 acres of excess Diegan coastal sage scrub.



**LEGEND**

**Habitat**

- Vernal Pool
- Road Pool
- Freshwater Marsh
- Freshwater Marsh Disturbed
- Mule Fat Scrub Disturbed
- Tamarisk Scrub
- Unvegetated Waters of the U.S.
- Disturbed Wetland
- Diegan Coastal Sage Scrub
- Diegan Coastal Sage Scrub Disturbed
- Non-native Grassland
- Eucalyptus Woodland
- Agriculture
- Disturbed Habitat
- Developed

**Sensitive Resources**

- Ac** California Adolphia (*Adolphia californica*)
- Cs** Small-flowered Morning Glory (*Convolvulus simulans*)
- Dc** Otay Tarplant (*Deinandra conjugens*)
- Dv** Variegated Dudleya (*Dudleya variegata*)
- Ea** San Diego Button-celery (*Eryngium aristulatum var. parishii*)
- Fv** San Diego Barrel Cactus (*Ferocactus viridescens*)
- Ih** San Diego Marsh Elder (*Iva hayesiana*)
- VI** San Diego Sunflower (*Viguiera laciniata*)
- BUOW** Burrowing Owl (*Athene cucularia*)
- COWH** Coastal Western Whiptail (*Cnemidophorus tigris multiscutatus*)
- GRSP** Grasshopper Sparrow (*Ammodramus savannarum*)
- HOLA** California Horned Lark (*Eremophila alpestris*)
- LOSH** Loggerhead Shrike (*Lanius ludovicianus*)
- NOHA** Northern Harrier (*Circus cyaneus*)
- QCBU** Quino Checkerspot Butterfly (*Euphydryas editha quino*)
- RIFS** Riverside Fairy Shrimp (*Streptocephalus woottoni*)
- SDFS** San Diego Fairy Shrimp (*Branchinecta sandiegonensis*)
- WESP** Western Spadefoot Toad (*Spea hammondi*)
- WTKI** White-tailed Kite (*Elanus leucurus*)

- Project Impacts (designated as "Take Authorized" lands under MSCP Amendment)
- Open Space (designated as "Preserved Lands" under MSCP Amendment)
- Limited Building Zone
- Sewer Impacts - Options A, B1, B2
- Sewer Impacts - Options B1, B2
- Sewer Impacts - Option A
- Sewer Impacts - Option B1
- Sewer Impacts - Option B2

Detail Map Scale 1" = 200'

Project Boundary

See Detail

**Vegetation and Sensitive Resources/  
Open Space/Impacts  
OTAY CROSSINGS COMMERCE PARK**