APPENDIX H

APPENDIX H-1:

OTAY RANCH VILLAGE 7 BIOLOGICAL TECHNICAL REPORT

OTAY RANCH VILLAGE 7

BIOLOGICAL TECHNICAL REPORT

May 13, 2004

Prepared for:

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Otay Ranch Village 7
Biological Technical Report

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EXECUTIVE SUMMARY

The proposed project is an application for a Sectional Planning Area Plan (SPA) and Tentative Map (TM) for the eastern portion of Village 7, one of the proposed villages contained within the larger master-planned community of Otay Ranch. There are five separate property owners in the village. The applicant's ownership, which totals approximately 162.5 acres, covers the eastern half of Village 7. This report covers only the applicant's ownership.

The project site is located west of Otay Lakes and south of Birch Road in Chula Vista, California. An under construction housing development occurs immediately to the north. The future extension of State Route 125 (SR 125) is planned along the eastern property boundary.

One sensitive vegetation community, non-native grassland, is present on site. No federally or state listed plant or animal species occur on site. U.S. Army Corps of Engineers (Corps; non-wetland Waters of the U.S.) and California Department of Fish and Game (CDFG) jurisdictional areas (streambeds) are present. No wildlife corridors are present within the project area. The project would significantly and permanently affect non-native grassland. The project would significantly but temporarily impact Corps and CDFG jurisdictions.

Mitigation for project impacts to native habitats would be consistent with mitigation requirements set forth in the Otay Ranch Program Environmental Impact Report (EIR) and Resource Management Plan (RMP). The Otay Ranch Land Use Plan, which is contained in the Otay Ranch General Development Plan (GDP) in combination with the Otay Ranch RMP and mitigation measures imposed by the Otay Ranch Program EIR, meet or exceed the preservation standards contained in Multiple Species Conservation Plan. The GDP permits 11,524 acres of development within Otay Ranch and requires 11,375 acres of preservation for resource protection. The RMP's Preserve Conveyance Plan sets out the policies that govern the orderly conveyance of land to open space for resource protection and management by the Preserve Owner/Manager. The amount of open space conveyed by each village takes into consideration that a portion of the development area may contain common use areas, such as parks, schools and arterial roadways, all of which occur within Village 7. According to Exhibit 9 in the Otay Ranch RMP, Village 7 is forecast to convey 377 acres of land to the Otay Ranch open space preserve. However, the RMP acknowledges that the acreage amount can be refined as more precise planning and engineering is conducted to prepare the Sectional Planning Area plan for the village. The location of conveyed land is driven by the quality of the resources, the vulnerability of the resources and the ability to restore resources.

The Conveyance Plan defines a current ratio of 1.118 acres of mitigation for each acre of native habitat impacted, regardless of the habitat type. Mitigation is not required for "common uses," which the plan defines as "local parks, schools, arterials, SR 125, and lands designated as a public use area." Based on that ratio and definition, 139.75 acres of habitat must be conveyed for impacts to 125 acres from the proposed project on the applicant's ownership. Pursuant to mitigation measures adopted with the General Development Plan Program EIR certified on October 19, 1992, direct impacts to all habitats and covered sensitive species would be mitigated to below a level of significance.

Proposed mitigation for impacts to Corps and CDFG jurisdiction includes restoring Waters of the U.S./Streambeds either on site or at an off-site location acceptable to the City of Chula Vista at a 1:1 mitigation ratio.

1.0 INTRODUCTION

This biological technical report provides the project applicant (McMillin Land Development), the City of Chula Vista (City), the U.S. Army Corps of Engineers (Corps), U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), and the public with current biological data to satisfy review of the applicant's portion of the Otay Ranch Village 7 project under the California Environmental Quality Act (CEQA) and federal and state regulations. This report covers only the applicant's ownership for Village 7. Other ownerships within Village 7 and any offsite improvements are not included.

1.1 PROJECT LOCATION AND SITE DESCRIPTION

The project site is west of Otay Lakes and south of Birch Road in Chula Vista, California (Figures 1 and 2). A housing development that is under construction occurs immediately to the north. The future extension of State Route 125 (SR 125) is planned along the eastern boundary of the property.

Topography on site consists of rolling hills with intervening drainages. Wolf Canyon is the northernmost existing drainage on site. Elevation on site ranges from approximately 420 to 600 feet above mean sea level. Soils on site consist primarily of Diablo clay with Linne clay loams in the drainages and swales (Bowman 1973).

Land uses on site consist primarily of extensive agriculture (wheat crop) with a few dirt roads, and disturbed areas previously used for staging for construction of Birch Road.

1.2 PROJECT DESCRIPTION

The proposed project is an application for a Sectional Planning Area Plan (SPA) and Tentative Map (TM) for the eastern portion of Village 7, one of the proposed villages contained within the larger master-planned community of Otay Ranch. There are five separate property owners in the village. The applicant's ownership, which totals approximately 162.5 acres, includes residential parcels R-1, R-5, R-6, and R-7 for a total of 753 proposed residential units of which 305 are single-family residential (R-1), 246 are multi-/single-family cluster (R-5 and R-6), and the remaining 202 are multi-family residential (R-7). In addition, the applicant's ownership includes a neighborhood park site designated P-1, an elementary school site designated S-3 and portions of S-1 (high school site), parcel TS (Town Square), and a small private park designated P2/CPF and open space. The applicant's ownership is bisected by Wolf Canyon, which is being proposed as open space (and serve a water quality function) and will include a regional trail system. The project will implement development previously approved as part of the Otay Ranch General Development Plan (GDP) and Village 7 SPA.

2.0 SURVEY METHODS

The following surveys have been conducted on the project site: vegetation mapping, jurisdictional delineation, general botany and zoology, and focused rare plant surveys.

The site was first surveyed by RECON in 1989 and 1990 as part of the Otay Ranch Environmental Impact Report (EIR; RECON 1989 and 1990). RECON subsequently resurveyed the property in 1998/1999 as part of the Lomas Verdes project which included Otay Ranch Villages 6, 7, 12, and the eastern urban center. RECON performed vegetation mapping, a jurisdictional delineation, and general botanical and zoological surveys (RECON 1999).

W. Larry Sward of HELIX Environmental Planning, Inc. surveyed the applicant's portion of Village 7 on September 26, 2003. Surveys included vegetation mapping, jurisdictional delineation, and a general botanical survey. Sensitive animal species were mapped when observed.

The vegetation mapping was conducted using a 2003 aerial photograph at a 1"=400' scale. All potential Waters of the U.S. were inspected according to Corps wetland delineation guidelines (Environmental Laboratory 1987). Standard data forms were completed for each sample point, and photographs were taken at sample points.

A focused rare plant survey was conducted on April 19, 2004 by Sally Trnka and Amy Mattson.

3.0 RESULTS

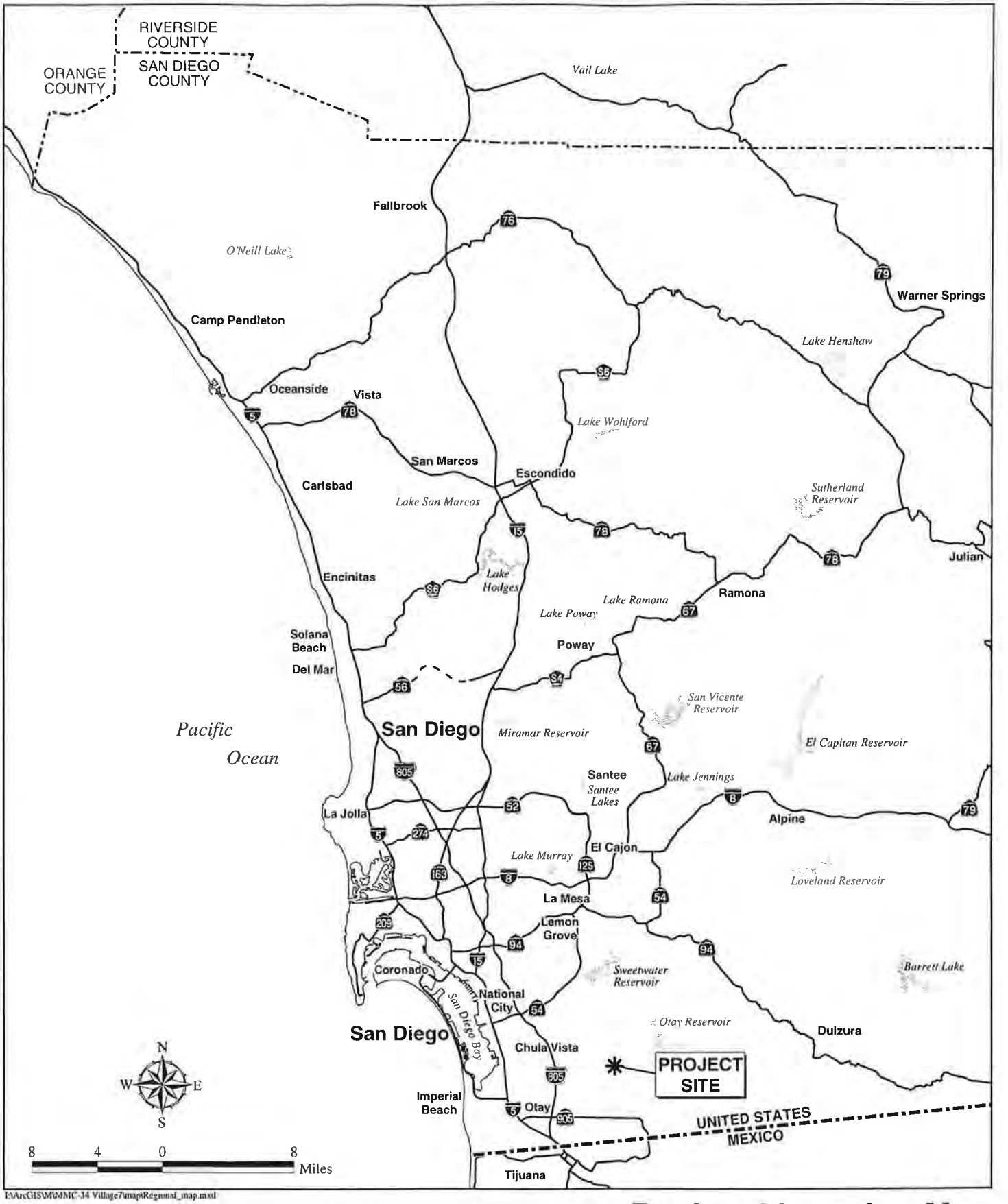
This section explains the vegetation communities, plant and animal species, jurisdictional areas that were found on site.

3.1 VEGETATION COMMUNITIES

Three vegetation communities and developed land occur on site (Figure 3). The vegetation communities and developed land are described following Table 1, which lists the acreage of each community on site.

Table 1
EXISTING VEGETATION COMMUNITIES

VEGETATION COMMUNITY	ACREAGE
Non-native grassland	0.2
Extensive agriculture	137.0
Disturbed habitat	10.1
Developed	15.2
TOTAL	162.5



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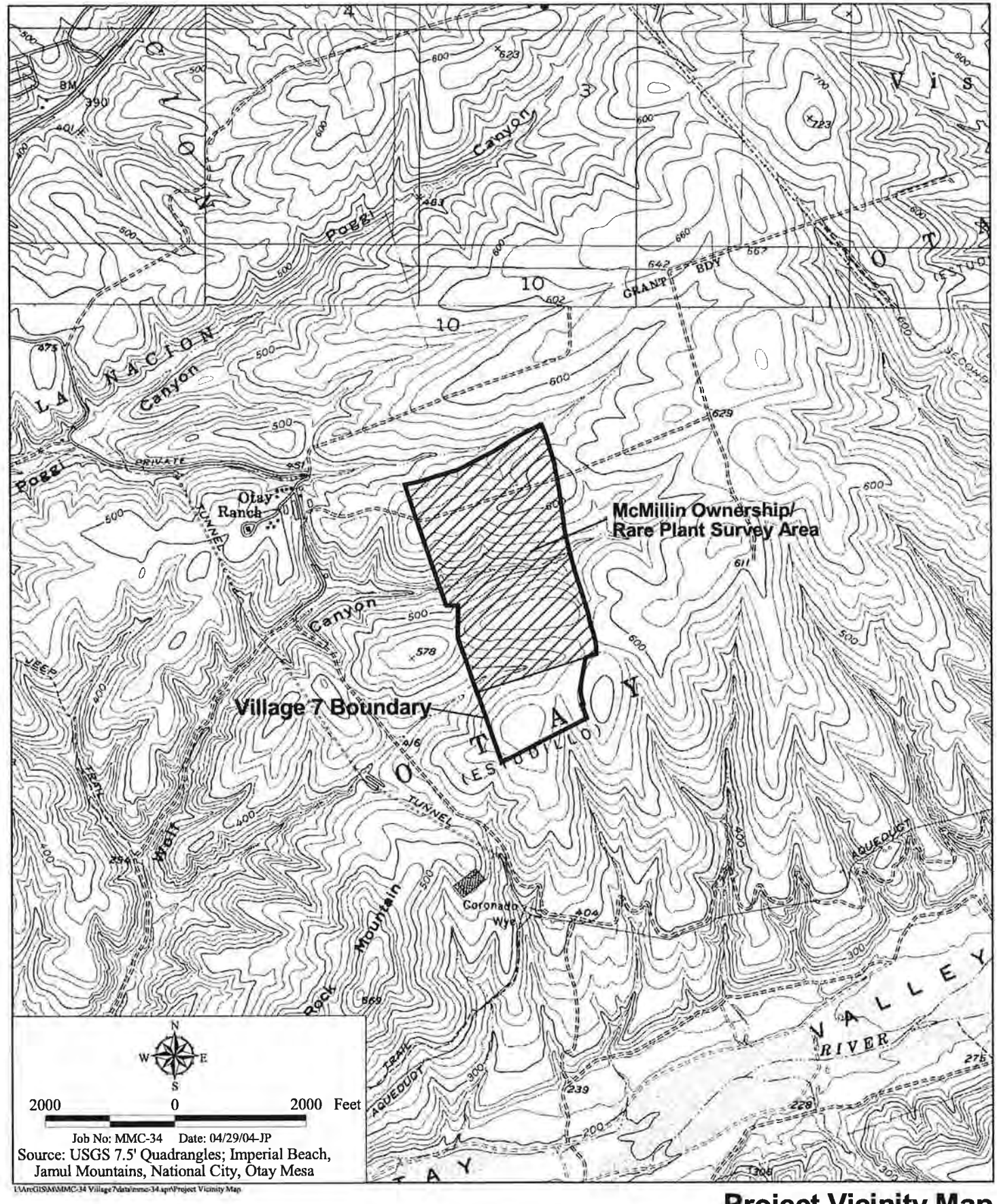
Regional Location Map

OTAY RANCH VILLAGE 7

HELIX

Figure 1



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Source: USGS 7.5' Quadrangles; Imperial Beach, Jamul Mountains, National City, Otay Mesa

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Project Vicinity Map

OTAY RANCH VILLAGE 7

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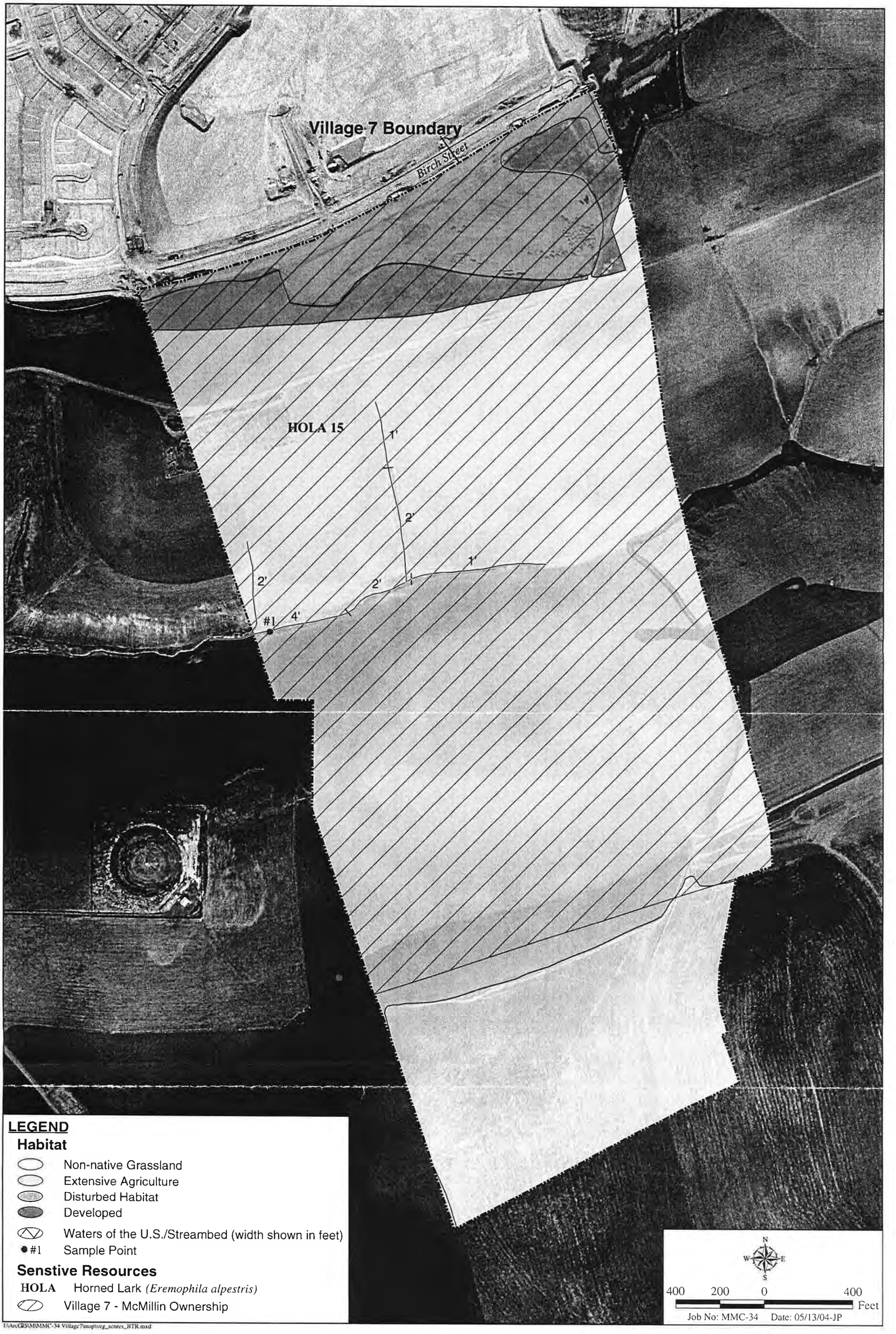
Figure 2



Vegetation and Sensitive Resources

OTAY RANCH VILLAGE 7

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Figure 3

3.1.1 Non-native Grassland

Non-native grassland is a dense to sparse cover of non-native grasses sometimes associated with species of native annual forbs. This association often occurs on gradual slopes with deep, fine-textured, usually clay soils. Characteristic species in the non-native grassland on site include oats (*Avena* sp.), ryegrass (*Lolium multiflorum*), ripgut grass (*Bromus diandrus*), yellow star-thistle (*Centaurea melitensis*), mustard (*Brassica* sp.), and fennel (*Foeniculum vulgare*). Most of the species originated from the Mediterranean region, an area with a long history of agriculture and a climate similar to California.

3.1.2 Extensive Agriculture

Extensive agriculture on site consists of wheat (*Triticum* sp.) fields.

3.1.3 Disturbed Habitat

Disturbed habitat on site occurs between a developed area and extensive agriculture. It consists primarily of non-native goosefoot (*Chenopodium murale*), tree tobacco (*Nicotiana glauca*), and some of the same species as non-native grassland (e.g., ryegrass) but not enough cover of grasses to be considered grassland.

3.1.4 Developed

Developed area on site occurs immediately south of Birch Road. This area was used as a staging area for the construction of Birch Road.

3.2 PLANT SPECIES

Thirteen plant species were observed on site on September 26, 2003 (Appendix A). Additional species are expected to occur on site but were not observable during the time of the 2003 project surveys.

3.3 ANIMAL SPECIES

During the September 26, 2003 survey, one animal species (the horned lark [*Eremophila alpestris actia*]) was observed on site. Additional common animal species are expected to occur on site.

3.4 JURISDICTIONAL AREAS

Corps jurisdiction on site includes non-wetland Waters of the U.S. that occur in three channels, one of which is in Wolf Canyon. The widths of the Waters of the U.S. range from 1 foot to 4 feet (Figure 3). These areas also are considered streambeds and are under CDFG jurisdiction.

3.5 SENSITIVE BIOLOGICAL RESOURCES

Sensitive resources are those defined as: (1) habitat areas or vegetation communities that are unique, of relatively limited distribution, or of particular value to wildlife; or (2) species 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

One vegetation community on site, non-native grassland, is sensitive. Directly and indirectly, non-native grasslands are key to the conservation of a large number of species. They provide foraging habitat for raptors and may be succeeded naturally by coastal sage scrub or other native habitats over time. Approximately 0.2 acre of non-native grassland occur in the southern portion of the site.

3.5.2 Sensitive Plant Species

No sensitive plant species have been observed on site and none have a high potential to occur on site.

3.5.3 Sensitive Plant Species with Potential to Occur

Based on the site's long history of agricultural use, there is very little potential for any sensitive plant species to be present. Table 2 summarizes sensitive species known from the project vicinity and their potential to occur on site. None of these species was observed during rare plant surveys conducted for Otay Ranch (RECON 1990) or 2003 surveys conducted by HELIX.

Table 2
LISTED OR SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR

SPECIES	STATUS*	POTENTIAL TO OCCUR
Willowy monardella (*Monardella linoides* ssp. *viminea*)	FE/SE CNPS List 1B R-E-D 3-3-? MSCP Narrow Endemic	None. Occurs in dry washes with sandy or cobbly substrates. Habitat not appropriate on site.
California Orcutt grass (*Orcuttia californica*)	FE/SE CNPS List 1B R-E-D 3-3-2	None. Occurs in vernal pools. No vernal pools occur on site.
Otay mesa mint (*Pogogyne nudiuscula*)	FE/SE CNPS List 1B R-E-D 3-3-2	None. Occurs in vernal pools in southern San Diego County. No vernal pools occur on site.
San Diego button-celery (*Eryngium aristulatum* var. *parishii*)	FE/SE CNPS List 1B R-E-D 2-3-2	None. Occurs in vernal pools, vernal swales, and areas immediately adjacent to vernal pools. No suitable habitat occurs on site.
San Diego thornmint (*Acanthomintha ilicifolia*)	FT/SE CNPS List 1B R-E-D 2-3-2 MSCP Narrow Endemic	Low. Occurs on clay lenses in open areas. Not observed during previous surveys.
Otay tarplant (*Deinandra conjugens*)	FT/SE CNPS List 1B R-E-D 3-3-2 MSCP Narrow Endemic	Moderate. Occurs on clay soils in grasslands and coastal sage scrub. Has been observed in the immediate project vicinity to the west in Wolf Canyon. Not observed during previous surveys.

Table 2 (cont.)
LISTED OR SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR

SPECIES	STATUS*	POTENTIAL TO OCCUR
Thread-leaved brodiaea (*Brodiaea filifolia*)	FT/SE CNPS List 1B R-E-D 3-3-3 MSCP Narrow Endemic	Low. Occurs in coastal sage scrub, cismontane woodlands, grassland, and vernal pools with clay soils. Not observed during previous surveys.
San Diego ambrosia (*Ambrosia pumila*)	FE/-- CNPS List 1B R-E-D 3-3-2 MSCP Narrow Endemic	None. Occurs in silty-bottomed drainages and valley bottoms. No suitable habitat occurs on site.
Mexican flannelbush (*Fremontodendron mexicanum*)	FE/-- CNPS List 1B R-E-D 3-3-2	None. Occurs in moist, shaded canyons. Would have been observed if present.
Spreading navarretia (*Navarretia fossalis*)	FT/-- CNPS List 1B R-E-D 2-3-2	None. Occurs in vernal pools. No vernal pools occur on site.
Orcutt's brodiaea (*Brodiaea orcuttii*)	FSC/-- CNPS List 1B R-E-D 1-3-2 MSCP Narrow Endemic	Low. Occurs in vernal pools and in ephemeral streams and seeps, and heavy clay soils. Clay soils on site have been heavily disturbed by agriculture. Not observed during previous surveys.
Variegated dudleya (*Dudleya variegata*)	FSC/-- CNPS List 1B R-E-D 2-2-2 MSCP Narrow Endemic	Low. Occurs in dry uplands of vernal pools and in arid, rocky outcrops in grassland, coastal sage scrub, and chaparral below 1,000 feet. Known from southwest of the site. Not observed during previous surveys.
San Diego goldenstar (*Muilla clevelandii*)	FSC/-- CNPS List 1B R-E-D 2-3-2 MSCP Narrow Endemic	Low. Occurs in clay soils on dry mesas and on hillsides in coastal sage scrub or chaparral. Known from west of the site. Not observed during previous surveys.
Snake cholla (*Opuntia parryi* var. *serpentina*)	FSC/-- CNPS List 1B R-E-D 3-3-2 MSCP Narrow Endemic	None. Occurs in coastal sage scrub. Known from west of the site. Would have been observed if present.
Parry's tetracoccus (*Tetracoccus dioicus*)	FSC/-- CNPS List 1B R-E-D 3-2-2	None. Occurs on gabbro soils not found on site.
San Diego marsh-elder (*Iva hayesiana*)	FSC/-- CNPS List 2 R-E-D 2-2-1	None. Low-lying, occurring in moist or alkaline places along the coast. Has been reported along intermittent streams. Would have been observed if present.
San Diego barrel cactus (*Ferocactus viridescens*)	FSC/-- CNPS List 2 R-E-D 1-3-1	None. Occurs on dry slopes in coastal sage scrub. Would have been observed if present.

Table 2 (cont.)
LISTED OR SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR

SPECIES	STATUS*	POTENTIAL TO OCCUR
Little mousetail (*Myosurus minimus* ssp. *apus*)	FSC/-- CNPS List 3 R-E-D 2-3-2	None. Occurs in vernal pools and alkaline marshes. Would have been observed if present.
Palmer's grapplinghook (*Harpagonella palmeri*)	FSC/-- CNPS List 4 R-E-D 1-2-1	Low. Occurs in clay soils in grasslands and coastal sage scrub. Not observed during previous surveys.
Decumbent goldenbush (*Isocoma menziesii* var. *decumbens*)	--/-- CNPS List 1B R-E-D 2-2-2	Low. Occurs in coastal sage scrub. An infrequent plant of sandy areas.
California adolphia (*Adolphia californica*)	--/-- CNPS List 2 R-E-D 1-3-1	None. Occurs on clay soils in chaparral and coastal sage scrub. Would have been observed if present.
Golden-spined cereus (*Bergerocactus emoryi*)	--/-- CNPS List 2 R-E-D 2-2-1	None. Habitat is sandy soils and bluffs associated with coastal sage scrub and maritime succulent scrub. Would have been found if present.
Munz's sage (*Salvia munzii*)	--/-- CNPS List 2 R-E-D 2-2-1	None. Occurs in coastal sage scrub. Would have been observed if present.
Palmer's sage (*Artemisia palmeri*)	--/-- CNPS List 2 R-E-D 2-2-1	None. Occurs in coastal sage scrub and in drainages. Would have been observed if present.
Palmer's goldenbrush (*Ericameria palmeri* ssp. *palmeri*)	--/-- CNPS List 2 R-E-D 3-2-1 MSCP Narrow Endemic	Low. Found in coastal sage scrub. Would likely have been found if present.
San Diego bur-sage (*Ambrosia chenopodiifolia*)	--/-- CNPS List 2 R-E-D 3-3-1	None. Found on dry sunny hillsides within maritime succulent scrub and coastal sage scrub. Would have been observed if present.
San Diego County needle grass (*Achnatherum diegoense*)	--/-- CNPS List 4 R-E-D 1-2-1	None. Often found in mesic areas in chaparral and coastal sage scrub.
San Diego County viguiera (*Viguiera laciniata*)	--/-- CNPS List 4 R-E-D 1-2-1	None. Occurs in coastal sage scrub. Known from west of the site. Would have been observed if present.
Southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*)	--/-- CNPS List 4 R-E-D 1-2-1	None. Occurs in moist, saline, or alkaline soils. Would have been observed if present.

Table 2 (cont.) LISTED OR SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR		
SPECIES	STATUS*	POTENTIAL TO OCCUR
Western dichondra (*Dichondra occidentalis*)	--/-- CNPS List 4 R-E-D 1-2-1	Low. Occurs in dry sandy banks in coastal sage scrub, chaparral, or southern oak woodland; often proliferates on recently burned slopes.
California adder's tongue (*Ophioglossum californicum*)	--/-- CNPS List 4 R-E-D 1-2-2	Low. Occurs in vernally moist areas.

3.5.4 Sensitive Animal Species

Two sensitive animal species have been observed on site (Figure 3), each of which is briefly described below. The California horned lark was observed on September 26, 2003, and the sharp-shinned hawk was observed in 1998/1999 in Wolf Canyon.

California horned lark (*Eremophila alpestris actia*)
Status: --/CSC
Distribution: Coastal slopes and lowlands from Sonoma County to northern Baja.
Habitat(s): Sandy beaches, agricultural fields, grasslands, open areas.
Status on site: A flock of approximately 15 horned larks was observed in the northern portion of the site in extensive agriculture.

Sharp-shinned hawk (*Accipiter striatus*)
Status: --/CSC
Distribution: Northern North America and breeds in the northern portion of California but is only an uncommon winter visitor to San Diego County. Sometimes a casual visitor to San Diego in the summer.
Habitat(s): Edges of deciduous or coniferous woodlands and thickets. May migrate during the winter to other areas that provide adequate cover.
Status on site: The sharp-shinned hawk was observed chasing small birds in Wolf Canyon.

3.5.5 Sensitive Animal Species with Potential to Occur

Based on the site's long history of agricultural use, there is limited potential for other sensitive animal species to be present. Table 3 summarizes sensitive species known from the project vicinity and their potential to occur on site. None of these species was observed during biological surveys conducted for Otay Ranch (RECON 1989) or Lomas Verdes (RECON 1999).

Table 3
LISTED OR SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR

SPECIES	STATUS*	POTENTIAL TO OCCUR
INVERTEBRATES		
Riverside fairy shrimp (*Streptocephalus woottoni*)	FE/--	None. Occurs in vernal pools. No vernal pools occur on site.
San Diego fairy shrimp (*Branchinecta sandiegonensis*)	FE/--	None. Occurs in vernal pools. No vernal pools occur on site.
Quino checkerspot butterfly (*Euphydryas editha quino*)	FE/--	Low. Habitat includes vegetation communities with relatively open-area patches of principal larval host plant dwarf plantain (*Plantago erecta*), purple owl's clover (*Castilleja exserta*), and nectaring plants. Highly disturbed nature of habitat limits the potential for this species to occur on site.
VERTEBRATES		
Reptiles and Amphibians		
Arroyo southwestern toad (*Bufo microscaphus californicus*)	FE/CSC	None. No appropriate habitat on site.
Coronado skink (*Eumeces skiltonianus interparietalis*)	FSC/CSC	Low. Found in grasslands, coastal sage scrub, and open chaparral where there is abundant leaf litter or low, herbaceous growth.
Orange-throated whiptail (*Cnemidophorus hyperythrus beldingi*)	FSC/CSC	Low. Found in coastal sage scrub and chaparral.
Red diamond rattlesnake (*Crotalus exsul* aka *C. ruber ruber*)	FSC/CSC	Low. Favors rocky outcrops in coastal sage scrub, chaparral, creosote bush scrub, and areas dominated by cactus. Habitat not appropriate on site.
San Diego horned lizard (*Phrynosoma coronatum blainvillei*)	FSC/CSC	Low. Found in coastal sage scrub, chaparral, open oak woodlands, and open coniferous forests. Harvester ants (*Pogonomyrmex* sp.), are its primary prey item. No harvester ants were observed during 2003 surveys.
Two-striped garter snake (*Thamnophis hammondii*)	FSC/CSC	Low. Found in aquatic habitats, preferably rocky streams with protected pools, cattle ponds, marshes, vernal pools, and other shallow bodies of water. Appropriate habitat lacking.
Coastal rosy boa (*Lichanura trivirgata roseofusca*)	FSC/--	Low. Occurs in rocky areas in coastal sage scrub and chaparral.
Coastal whiptail (*Cnemidophorus tigris multiscutatus*)	FSC/--	Low. Appears in open coastal sage scrub, chaparral, and woodlands; prefers termites (*Reticulitermes* sp.) as food source. Habitat not appropriate.
Western spadefoot (*Scaphiopus hammondii*)	FSC/--	Low. Found in ponding water. No appropriate habitat present on site.

Table 3 (cont.)
LISTED OR SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR

SPECIES	STATUS*	POTENTIAL TO OCCUR
VERTEBRATES (cont.)		
Birds		
Least Bell's vireo (*Vireo bellii pusillus*)	FE/SE	None. Occurs in riparian habitats, none of which is present on site.
Southwestern willow flycatcher (*Empidonax traillii extimus*)	FE/SE	None. Occurs in riparian habitats, none of which is present on site.
Coastal California gnatcatcher (*Polioptila californica californica*)	FT/CSC	Low. Coastal sage scrub, its preferred habitat, does not occur on site.
Tri-colored blackbird (*Agelaius tricolor*)	FSC/CSC; Conditionally Covered Species**	Moderate only to forage on site. Nesting would occur elsewhere. Observed in site vicinity by RECON in 1998/1999.
Bell's sage sparrow (*Amphispiza belli belli*)	FSC/CSC	None. Occurs in coastal sage scrub and chaparral, neither of which is present on site.
Ferruginous hawk (*Buteo regalis*)	FSC/CSC	High only to forage on site in winter. Open grasslands and agricultural fields are preferred hunting grounds. Observed in site vicinity by RECON in 1998/1999.
Golden eagle (*Aquila chrysaetos*)	--/CSC; Fully protected	High only to forage on site. Observed in site vicinity by RECON in 1998/1999.
Northern harrier (*Circus cyaneus*) nesting	--/CSC; Conditionally Covered Species**	High for foraging, low for nesting. Could nest in non-native grassland area. Observed in site vicinity by RECON in 1998/1999.
Burrowing owl (*Speotyto cunicularia*)	--/CSC	Low to moderate. Prefers grassland and desert habitats. No burrows observed during 2003 surveys. Observed on the VORTAC site by RECON in 1998/1999.
Loggerhead shrike (*Lanius ludovicianus*)	--/CSC	High to forage on site. Observed in site vicinity by RECON in 1998/1999.
Yellow warbler (*Dendroica petechia brewsteri*)	--/CSC	None. Found in riparian habitats, none of which is present on site.
Yellow-breasted chat (*Icteria virens*)	--/CSC	None. Found in riparian habitats, none of which is present on site.
White tailed kite (*Elanus leucurus*) nesting	--/Fully protected	High only to forage on site. Nesting would occur elsewhere. Observed in site vicinity by RECON in 1998/1999.

Table 3 (cont.)
LISTED OR SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR

SPECIES	STATUS*	POTENTIAL TO OCCUR
VERTEBRATES (cont.)		
Mammals		
Dulzura pocket mouse (*Chaetodipus californicus femoralis*)	FSC/CSC	Low. Found in chaparral.
Greater western mastiff bat (*Eumops perotis californicus*)	FSC/CSC	Moderate to forage on site. Foraging concentrated around bodies of water but also includes coastal sage scrub, chaparral, and grassland habitats.
San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)	FSC/CSC	Moderate. Species prefers to have some shrub cover. Observed in vicinity of the site in Wolf Canyon by RECON in 1998/1999.
San Diego desert woodrat (*Neotoma lepida intermedia*)	FSC/CSC	None. Den would have been observed if present.
Southern grasshopper mouse (*Onychomys torridus ramona*)	FSC/CSC	Low. Prefers arid shrublands.
Spotted bat (*Euderma maculatum*)	FSC/CSC	None to roost on site (prefers cliffs). Very low potential to forage.
Townsend's western big-eared bat (*Plecotus townsendii*)	FSC/CSC	Low. Could forage in the area, especially in more mesic habitats.
Yuma myotis (*Myotis yumanensis*)	FSC/--	Low to forage. Roosts in buildings, mines, caves, and crevices that are absent on site.
Fringed myotis (*Myotis thysanodes*)	FSC/--	Low. Could forage on site.
Long-eared myotis (*Myotis evotis*)	FSC/--	Low. Could forage on site.
Long-legged myotis (*Myotis volans*)	FSC/--	Low. Could forage on site.
Small-footed myotis (*Myotis ciliolabrum*)	FSC/--	Low. Could forage on site.
Pallid bat (*Antrozous pallidus*)	--/CSC	Low. Could forage on site.
American badger (*Taxidea taxus*)	--/CSC	Low to moderate. Occurs in level, open areas in grasslands, agricultural fields, and open shrub habitats. Digs large burrows in dry, friable soils.

*Refer to Appendix B for a listing and explanation of status codes. Covered Species are those listed as adequately conserved in the City's Draft MSCP Subarea Plan (City 2003).

**Conditionally Covered Species means that coverage is reliant upon implementation of the City and/or the County of San Diego MSCP Subarea Plans.

4.0 REGIONAL AND REGULATORY CONTEXT

4.1 CITY OF CHULA VISTA

Otay Ranch Village 7 is located within a Development Area of the City's Multiple Species Conservation Program (MSCP) Subarea Plan (City 2003). A Development Area is where the take of Covered Species is authorized by the Subarea Plan, with no on-site conservation being required. None of Village 7 occurs within proposed preserve areas for the MSCP.

The GDP for Otay Ranch Village 7 does not identify any permanent natural open space onsite. The GDP permits 11,524 acres of development within Otay Ranch and requires 11,375 acres of preservation for resource protection. As part of the overall mitigation for Otay Ranch as outlined in the Resource Management Plan (RMP; City 1994), a Conveyance Plan was developed that will result in the ultimate conservation of 11,375 acres throughout Otay Ranch. The RMP's Preserve Conveyance Plan sets out the policies that govern the orderly conveyance of land to open space for resource protection and management by the Preserve Owner/Manager (POM). The amount of open space conveyed by each village takes into consideration that a portion of the development area may contain common use areas, such as parks, schools and arterial roadways, all of which occur within Village 7. According to Exhibit 9 in the Otay Ranch RMP, Village 7 is forecast to convey 377 acres of land to the Otay Ranch open space preserve. However, the RMP acknowledges that the acreage amount can be refined as more precise planning and engineering is conducted to prepare the Sectional Planning Area (SPA) plan for the village. The location of conveyed land is driven by the quality of the resources, the vulnerability of the resources and the ability to restore resources. The Conveyance Plan defines a ratio of 1.118 acres of mitigation for each acre of native habitat impacted, regardless of the habitat type.

4.2 STATE OF CALIFORNIA

A Lake or Streambed Alteration Agreement from the CDFG would be required for impacts to streambeds under Section 1603 of the California Fish and Game Code. A Section 401 certification or waiver under the federal Clean Water Act would also be required from the California Regional Water Quality Control Board.

4.3 FEDERAL GOVERNMENT

The discharge of fill into Waters of the U.S. (for example, drainages that meet certain criteria) may be regulated by the ACOE under Section 404 of the federal Clean Water Act. A Section 404 permit would be required from the Corps for impacts to non-wetland Waters of the U.S. Due to the limited area of impact (0.14 acre of non-wetland Waters of the U.S.), it is anticipated that a Nationwide Permit would be required.

5.0 IMPACTS

In general, any impact to a plant or animal species or habitat is considered adverse, although not all impacts are significant. For certain highly sensitive resources (e.g., threatened or endangered species and their habitats), mitigation may be required for any impact. Resources having a low sensitivity (e.g., species with a locally stable population but declining elsewhere) could be affected with minor effects and not require mitigation. For purposes of this analysis, the sensitivity of individual resources has been identified in Section 3.5.

5.1 DIRECT IMPACTS

The entire site will be directly impacted by development of the project.

5.1.1 Vegetation Communities

Table 4 shows the impacts to vegetation communities from development of the project. Impacts to non-native grassland are significant because it is a sensitive vegetation community. Impacts to extensive agriculture, disturbed habitat, and developed area are less than significant.

Table 4
IMPACTS

VEGETATION COMMUNITY	ACREAGE
Non-native grassland	0.2
Extensive agriculture	137.0
Disturbed habitat	10.1
Developed	15.2
TOTAL	162.5

5.1.2 Sensitive Plant Species

No sensitive plant species were observed on site.

5.1.3 Sensitive Animal Species

Impacts to the California horned lark and sharp-shinned hawk through the loss of foraging habitat would be adverse but less than significant due to the lower level of sensitivity of these species.

5.1.4 Jurisdictional Areas

The project will affect 0.14 acre (approximately 2,800 linear feet) of non-wetland Waters of the U.S./streambeds. Impacts to these areas are significant and require special federal and state permits and the provision of compensatory mitigation.

5.2 INDIRECT IMPACTS

Potential indirect effects from project construction and/or the occupation of residential developments often include decreased water quality, fugitive dust, colonization of non-native plant species, edge effects, animal behavioral changes, roadkill, attraction of nuisance animal species, night-time lighting, noise and errant construction impacts. Because the entire site is proposed for development and because the only off-site resource of significance is Wolf Canyon immediately downstream, the indirect impacts discussion will be limited to water quality.

Water Quality

Water quality in Waters of the U.S. can be adversely affected by 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 on site and then downstream in Wolf Canyon. Additionally, runoff from roads within the occupied development could carry pollutants into these waterways as well. Decreased water quality may adversely affect vegetation, aquatic animals, and terrestrial wildlife that depend upon these resources. Any degradation of surface water quality by the project would be considered a significant impact.

6.0 PROPOSED MITIGATION AND MINIMIZATION MEASURES

This section of the report explains the measures to be taken to compensate for significant impacts to biological resources that would or could be caused by the project. These measures are based on the Otay Ranch Program EIR as incorporated into the City's MSCP Subarea Plan (City 2003) and the Otay Ranch RMP (City 1994).

6.1 DIRECT IMPACTS

6.1.1 Sensitive Vegetation Communities

Mitigation for project impacts to native habitats would be consistent with mitigation requirements set forth in the Otay Ranch Program EIR and RMP. The Conveyance Plan defines a ratio of 1.118 acres of mitigation for each acre of habitat impacted, regardless of the habitat type. Mitigation is not required for "common uses," which the plan defines as "local parks, schools, arterials, SR 125, and lands designated as a public use area." Based on that ratio and definition, 139.75 acres of habitat must be conveyed for impacts to 125 acres from the proposed project on the applicant's ownership. Pursuant to mitigation measures adopted with the General Development Plan Program EIR certified on October 19, 1992, this will reduce significant impacts to non-native grassland to less than significant.

6.1.2 Sensitive Plant Species

There would be no significant impacts to sensitive plant species; thus, no mitigation is required. Conveyance of the 139.75 acres of habitat off site will likely benefit sensitive plant species found elsewhere within Otay Ranch.

6.1.3 Sensitive Animal Species

There would be no significant impacts to sensitive animal species; thus, no mitigation is required. Conveyance of the 139.75 acres of habitat off site will likely benefit sensitive animal species found elsewhere within Otay Ranch.

6.1.4 Jurisdictional Areas

Compensatory mitigation for the project's effects on 0.14 acre of non-wetland Waters of the U.S./streambeds shall be to restore at least 0.14 acre of non-wetland Waters of the U.S./streambed within the proposed open space channel on site or at an off-site location. The Corps and CDFG shall determine final mitigation for impacts to Waters of the U.S.

6.2 INDIRECT IMPACTS

Water Quality

During and/or after project construction, measures shall be implemented to control erosion, sedimentation, and/or pollution that could impact water resources on and off site.

Standard measures that shall apply to the proposed project include:

During Construction

- Surface drainage shall be designed to collect and move runoff into the proposed water quality treatment areas in Wolf Canyon.

- Erosion control measures associated with the project shall include techniques for both short- and long-term erosion hazards. These are likely to include such measures as the short-term use of sandbags, matting, mulches, berms, hay bales, or similar devices along all pertinent graded areas to minimize sediment transport. A hydrologic or engineering consultant shall determine the exact design, location, and schedule of use for such devices.

- A maintenance plan for temporary erosion control facilities shall be established. This will typically involve inspection, cleaning, repair operations being conducted after runoff-producing rainfall.

- Specified fueling and maintenance procedures shall be designated to preclude the discharge of hazardous materials used during construction (e.g., fuels, lubricants, solvents). Such designations shall include specific measures to preclude spill including proper handling and disposal techniques.

Post-Construction Measures

- Water quality treatment and water detention basins are proposed for Wolf Canyon within Village 7. These basins are designed to handle, treat, and detain the post-project flows from both Village 7 and the Eastern Urban Center to the east.

- Use of energy dissipating structures (e.g., detention ponds, riprap, or drop structures) as deemed necessary by a hydrologic or engineering consultant shall be used at storm drain outlets, drainage crossings, and/or downstream of all culverts, pipe outlets, and brow ditches to reduce velocity and prevent erosion.

The Preliminary Water Quality Technical Report for Otay Ranch Village 7 (Rick Engineering 2003) provides a more detailed discussion of post-construction water quality treatment measures being implemented by the project.

7.0 SIGNIFICANCE OF IMPACTS FOLLOWING MITIGATION

With implementation of the mitigation measures listed in Section 6.0, the impacts from development of Otay Ranch Village 7 would be rendered less than significant.

8.0 LITERATURE CITED

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APPENDIX A

PLANT SPECIES OBSERVED

Appendix A
PLANT SPECIES OBSERVED

FAMILY	SCIENTIFIC NAME	COMMON NAME
Dicots		
Apiaceae	*Foeniculum vulgare*	fennel
Asteraceae	*Centaurea melitensis*	star thistle
	Lactuca serriola	wild lettuce
	Sonchus oleraceus	common sow thistle
Brassicaceae	*Brassica* sp.	mustard
Chenopodiaceae	*Chenopodium murale*	nettle-leaf goosefoot
	Salsola tragus	Russian thistle
Poaceae	*Triticum aestivum*	wheat
Solanaceae	*Datura wrightii*	jimson weed, thorn-apple
	Nicotiana glauca	tree tobacco
Monocots		
Poaceae	*Avena* sp.	oats
	Bromus diandrus	common ripgut grass
	Lolium multiflorum	Italian ryegrass

APPENDIX B

EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES

Appendix B
EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES

U.S. Fish and Wildlife Service (USFWS)

FE Federally listed endangered
FT Federally listed threatened
FSC Federal special concern species

State of California

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

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.

R-E-D CODE

R (Rarity)
1 = Rare, but found in sufficient numbers and distributed widely enough that the potential for extinction is low at this time.
2 = Distributed in a limited number of occurrences, occasionally more if each occurrence is small.
3 = Distributed in one to several highly restricted occurrences, or present in such small numbers that it is seldom reported.

E (Endangerment)
1 = Not endangered
2 = Endangered in a portion of its range
3 = Endangered throughout its range

D (Distribution)
1 = More or less widespread outside California
2 = Rare outside California
3 = Endemic to California

APPENDIX H-2

BIOLOGICAL RESOURCES REPORT FOR OTAY RANCH VILLAGE SEVEN

DRAFT

BIOLOGICAL RESOURCES REPORT

for

OTAY RANCH VILLAGE SEVEN
CITY OF CHULA VISTA,
SAN DIEGO COUNTY, CALIFORNIA

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MARCH 2004

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SUMMARY OF FINDINGS

This report addresses potential impacts of a portion of the Otay Ranch Village Seven (Project) area within ownership of Otay Ranch Company. This portion of the project area occupies 173.1 acres of vacant land in the eastern portion of the City of Chula Vista, San Diego County, California. Initial biological resource surveys for the site were conducted during the early 1990s. Supplemental biological surveys of the project area were conducted by biologists from Dudek & Associates, Inc. (Dudek) in 2003 to map vegetation, and jurisdictional waters.

Based on species composition and general physiognomy, two native plant community has been identified onsite: revegetated maritime succulent scrub (1.2 acres), coastal sage scrub (0.1 acre), and disturbed coastal sage scrub (0.3 acre). Four non-native plant communities or land cover types were identified: annual (non-native) grassland (26.6 acres), agriculture (140.2 acres), disturbed habitat (3.0 acres) and developed land (1.7 acre). A total of 0.2 acre of unvegetated stream occur onsite within the underlying vegetation communities.

No sensitive species have been observed on the project site, however focused surveys have not yet been conducted. The site supports a moderate potential for two state- or federally-listed species: Otay tarplant (*Deinandra conjugens*) and coastal California gnatcatcher (*Polioptila californica californica)*. Several plant species listed as sensitive by the California Native Plant Society, as well as several animals listed as State Species of Concern, also have a moderate potential to occur onsite. The presence/absence of these species will be established by future surveys.

Implementation of the Otay Ranch Company portion of the Village Seven project would result in the disturbance of 172.8 acres of land both onsite and offsite. Sensitive communities to be impacted include revegetated maritime succulent scrub (1.2 acres), coastal sage scrub (0.1 acre), disturbed coastal sage scrub (0.3 acre), and annual (non-native) grassland (26.3 acres). Additional impacts to jurisdictional waters include 0.2 acre of unvegetated stream channel.

The proposed project is consistent with the Otay Ranch General Development Plan (GDP), Resource Management Plan (RMP), and City of Chula Vista MSCP Subarea Plan (Subarea Plan). Per these plan agreements, the project will be required to convey Preserve land in accordance with ratios established by the RMP (1.188 acres of Preserve to 1 acre of non-common development area).

1.0 INTRODUCTION

This report addresses potential impacts of a portion of the Otay Ranch Village Seven (Project) area within ownership of Otay Ranch Company. This portion of the project area occupies 173.1 acres of vacant land in the eastern portion of the City of Chula Vista, San Diego County, California. Several alternatives are being considered for the project. However, for the purposes of this report, it is assumed that alternative land uses would occupy the same or reduced limits of grading.

Biological resource surveys for the site were initially conducted by various consultants during the early 1990s. Supplemental resource surveys of the project area were conducted by biologists from Dudek & Associates, Inc. (Dudek) in 2003 to map vegetation and jurisdictional waters. This report primarily includes the results of Dudek's field work, however previous reconnaissance is referenced where appropriate.

The purposes of this report are to describe the biological character of the site; analyze the biological significance of the site with respect to subregional biological resource planning; and provide an analysis of direct, indirect and cumulative impacts based on the proposed development scenario.

2.0 METHODS AND SURVEY LIMITATIONS

Data regarding biological resources present on the project site were obtained through a review of pertinent literature including previous surveys by various consultants, and through field reconnaissance; both are described in detail below.

2.1 Literature Review

Sensitive biological resources present or potentially present onsite were identified through a literature search using the following sources: U.S. Fish and Wildlife Service (2001), California Department of Fish and Game (2002), California Native Plant Society's Inventory of Rare and Endangered Vascular Plants (CNPS 2001), and Murphy (1990). As listed below, consultant-generated data sources include RECON (1989, revised 1991), Dudek (1992, 1995 a, b; 1997, 1999), Ogden Environmental and Energy Service (1992), URS (2000), and the vegetation and sensitive species mapping performed for the City of San Diego's MSCP (City of San Diego 1996).

General information regarding wildlife species present in the region was obtained from Unitt (1984) for birds, Bond (1977) for mammals, Stebbins (1985) for reptiles and amphibians, and Emmel and Emmel (1973) for butterflies.

The following consultant-generated data were used to describe existing conditions:

- Biological Resources Report for Otay Ranch Property (RECON 1991)
- Report on the flora of the Otay Ranch Vernal Pools, 1990-1991 (Dudek 1992)
- Baldwin Otay Ranch Wildlife Corridor Study: Phase I Report (OGDEN 1992)
- Draft Maritime Succulent Scrub Habitat Replacement Plan for Otay Ranch-Specific Plan Area 1 Village VII and Olympic Parkway (RECON 1999)

For the purposes of this report and impact analysis, the biological resource maps for the proposed Project will portray only the habitat data collected by Dudek in 2003. These surveys portray the most up to date conditions on the properties. Sensitive resources information from earlier work will be described in a qualitative manner in the results section as historical information, but quantification of impacts is based on current data.

2.2 Field Reconnaissance

Recent biological surveys of the project area were conducted by Dudek biologists Vipul R. Joshi and Paul M. Lemons in July 2003 in conjunction with surveys of the Village 2 and 3 project areas to the west and southwest of Village 7. As such, species list represent cumulative data collection from the overall Village 2/3 project area as well as the portion of the Village 7 considered in this report. Details regarding survey methodology is provided below under each resource area (*i.e.,* flora, fauna, wetlands, and sensitive species).

2.2.1 Resource Mapping

Vegetation mapping was conducted by Dudek biologists Vipul Joshi and Paul Lemons in July 2003.

Plant communities and jurisdictional wetlands were mapped directly onto a 200-scale color aerial photograph of the site and the boundaries were transferred to a digital topographic base by Dudek GIS technician Martie Clemons using ArcCAD.

Plant community classifications used in this report follow Holland (1986), with modifications to accommodate the lack of conformity of the observed communities to those of Holland. Locations of listed, rare, and sensitive plant species also were mapped.

2.2.2 Flora

All plant species encountered during the field surveys were identified and recorded. Those species that could not be identified immediately were brought into the laboratory for further investigation. Latin and common names of plants follow *The Jepson Manual* (Hickman 1993). Where not listed in Hickman (1993), common names are taken from Beauchamp (1986) or Abrams (1923). The cumulative list of plant species observed within the Village 2/3 area and this portion of Village 7 is presented in *Appendix A*.

2.2.3 Fauna

Wildlife species detected during the field survey by sight, calls, tracks, scat, or other signs were recorded. Binoculars (8 x 32 power) were used to identify observed animals. In addition to species actually observed, expected wildlife use of the site was determined by known habitat preferences of local species and knowledge of their relative distributions in the area. A cumulative list of animal species observed within the Village 2/3 area and this portion of Village 7 is presented in *Appendix B*.

Latin and common names of animals follow Stebbins (1985) for reptiles and amphibians, American Ornithologists' Union (1983, 2000) for birds, Jones *et al.* (1997) for mammals, and Emmel and Emmel (1973) for butterflies.

2.2.4 Jurisdictional Waters

A wetland delineation was conducted in July 2003 by Dudek biologists Vipul Joshi and Paul Lemons. The jurisdictional delineation determined the extent of "waters of the United States" and wetlands under the jurisdiction of the U.S. Army Corps of Engineers (ACOE) and California Department of Fish and Game (CDFG), and Regional Water Quality Control Board (RWQCB). The ACOE-jurisdictional wetlands were delineated in accordance with the ACOE *1987 Manual for the Delineation of Wetlands (TR Y-87-1)* and hydrology, hydrophytic vegetation, and soils were examined at potential wetland sites. Jurisdiction of the RWQCB is coincident with ACOE in accordance with the federal Clean Water Act except in cases where a resource is determined to be isolated from navigable waters of the U.S. and the RWQCB may take jurisdiction under the state Porter-Cologne Act. The dimensions of non-wetland jurisdictional areas (*i.e.*, incised channels with no wetland vegetation) were transferred to the topographic base as linear features. The extent of wetland features was determined in the field by pacing and aerial photo interpretation; these shapes were transferred to the topographic base, and digitized into an ArcCAD file.

2.2.5 Sensitive Biological Resources

Sensitive biological resources are those defined as follows: **(1)** species that have been given special recognition by federal, state, or local conservation agencies and organizations due to limited, declining, or threatened population sizes; **(2)** species and habitat types recognized by local and regional resource agencies as sensitive; **(3)** habitat areas or plant communities that are unique, are of relatively limited distribution, or are of particular value to wildlife; and **(4)** wildlife corridors and habitat linkages.

Comprehensive focused surveys have not been conducted for this portion of the Village 7 project area. Portions of the area were included in Village 2/3 focused survey for the state- and federally-listed Otay tarplant (*Deinandra conjugens*) and for burrowing owl *(Athene cunicularia)* and raptor nest sites conducted in Summer 2003. However, these surveys will be updated in 2004 using the current project boundary and thus ensuring accurate coverage of potential impacts.

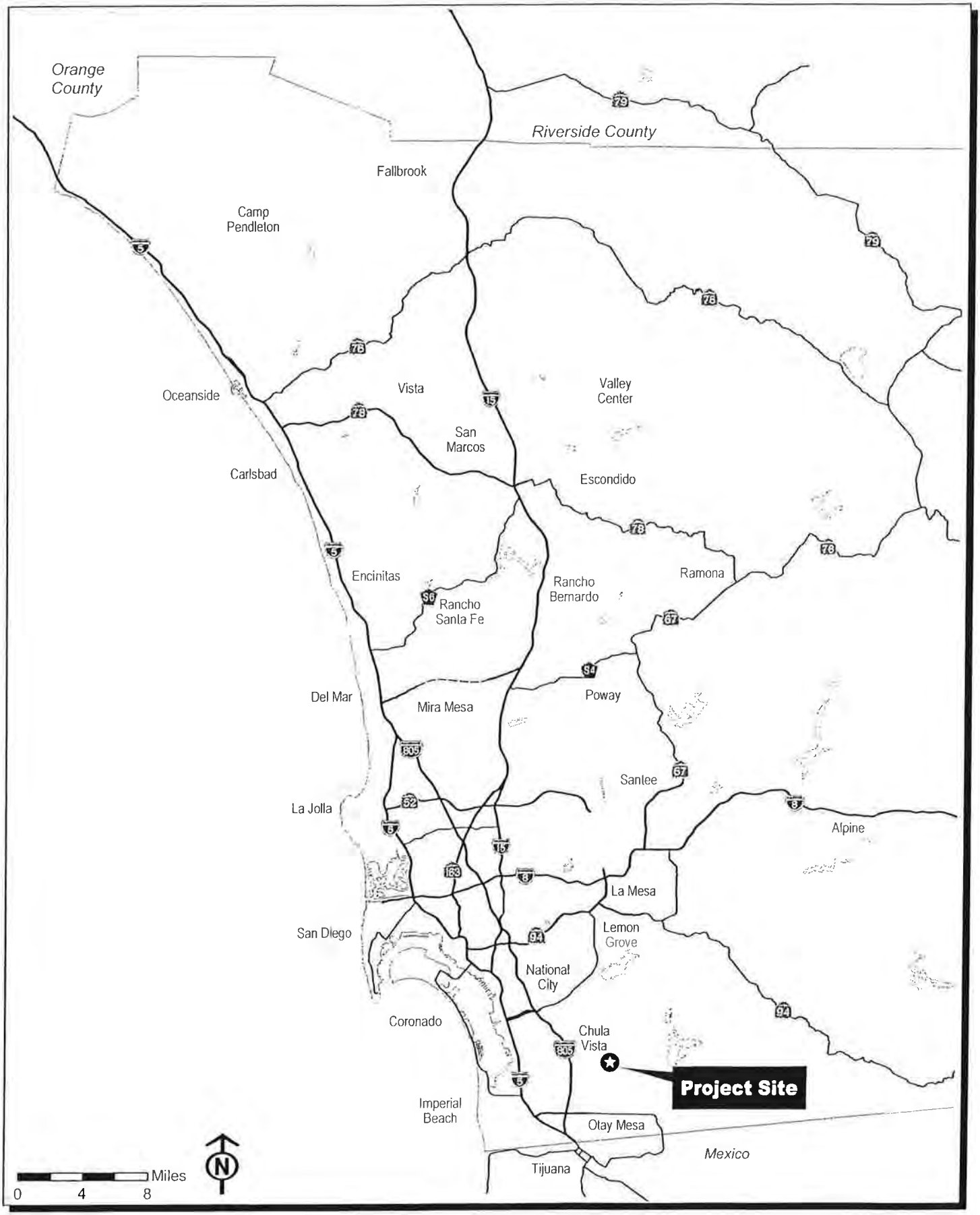
2.3 Survey Limitations

Limitations of the previously conducted surveys include a diurnal bias, and the absence of focused surveys for spring and summer blooming annuals, sensitive bird, reptile/amphibian, and mammal species. Surveys were conducted mostly during the daytime to maximize visibility for the detection of plants and most animals. Birds represent the largest component of the vertebrate fauna, and because they are active in the daytime, diurnal surveys maximize the number observations of this portion of the fauna. In contrast, daytime surveys usually result in few observations of mammals, many of which are nocturnal. In addition, many species of reptiles and amphibians are nocturnal and/or secretive in their habits and are difficult to observe using standard meandering transects.

3.0 PHYSICAL CHARACTERISTICS

3.1 Site Description

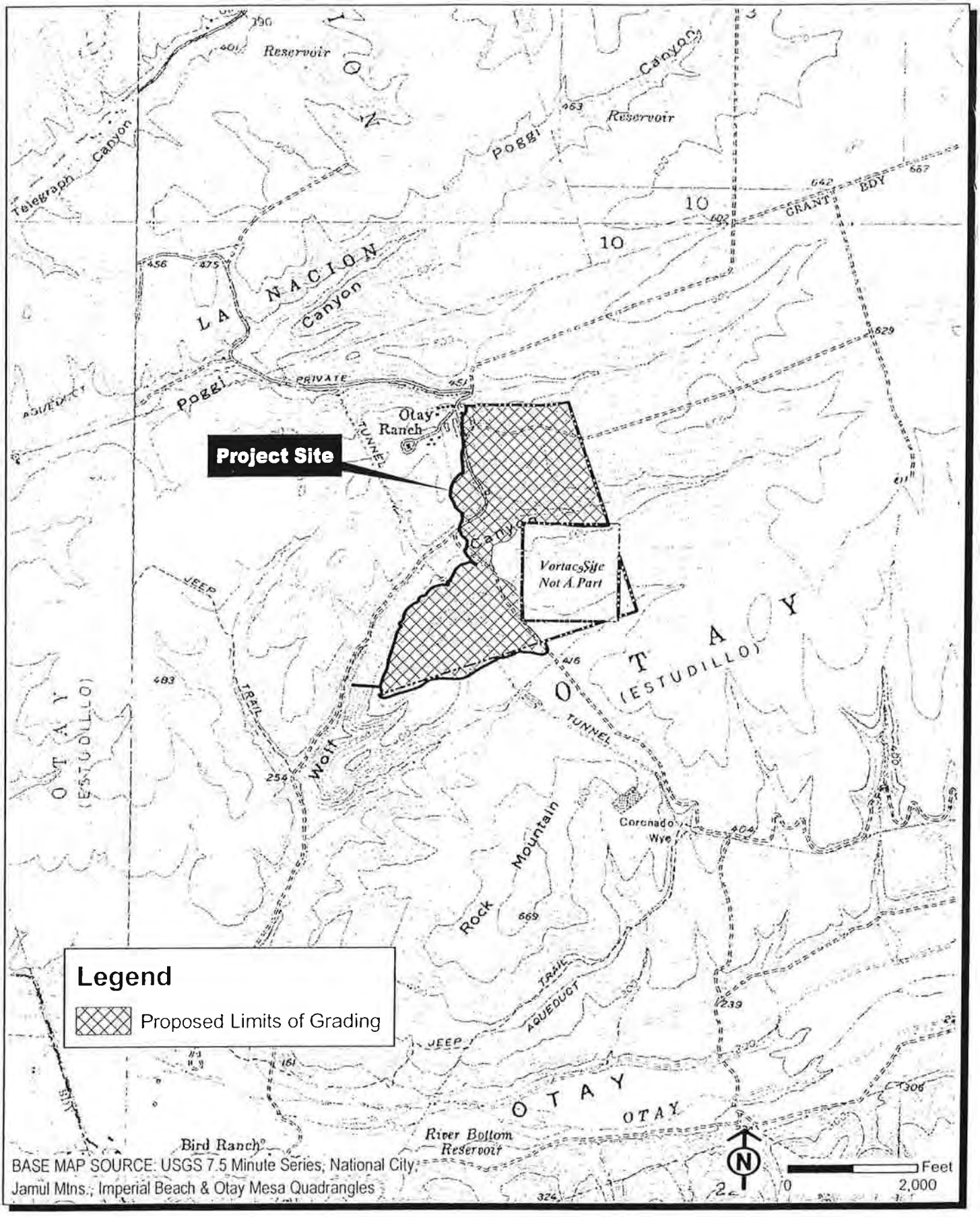
The proposed Project is located in southern San Diego County, California (*Figure 1*). The project area occupies 173 acres within the City of Chula Vista. It is located on the U.S. Geological Survey 7.5 minute series, Otay Mesa quadrangle, Section 12, Township 18 South, Range 1 West (*Figure 2*). The site is defined by a combination of planning and legal boundaries. The western bordered is defined by the alignment of La Media Road, north of Wolf Canyon, but extends west of La Media south of the canyon. The eastern borders of the



Otay Ranch, Village 7 - Biological Resources Report & Impact Analysis

Regional Map

FIGURE 1



Otay Ranch, Village 7 - Biological Resources Report & Impact Analysis

Vicinity Map

FIGURE 2

site are defined by ownership parcels. Main Street and Hanson aggregates mining facility is located approximately 0.5 mile southwest of the project site and Otay Landfill is approximately one mile to the west. Vacant agricultural lands occupy areas east of Village Seven.

The project site is topographically diverse with elevations ranging from 400 feet above mean sea level (AMSL) to 540 feet AMSL. The site consists of rolling hills with Wolf Canyon occurring in the middle of the site. Soils onsite consist of Diablo clays, Diablo-Olivenhain complex, terrace escarpments, Linne clay loams, Olivenhain cobbly loams, and Salinas clay loam (Bowman 1973). The predominant land uses onsite are farming, cattle grazing and vacant land.

4.0 RESULTS OF SURVEYS

4.1 Botany - Plant Communities

Owing to past and current land uses, the native plant community within the project area are in a disturbed state. As such, visual estimations of vegetative cover were used to distinguish vegetation communities, based on Holland (1986). Areas that supported less than 20% native shrubs are mapped as annual grasslands (if dominated by non-native grasses), or agricultural (if regularly disced and planted/seeded). Native shrub communities are mapped based on constituent species (as described per community below). Where shrub cover is between 20% and 50%, the community is designated as disturbed.

The project area supports seven vegetation and land cover types: revegetated maritime succulent scrub, coastal sage scrub, disturbed coastal sage scrub, annual (non-native) grassland, agriculture, disturbed habitat, and developed land. Acreages for the vegetation communities/land covers for this site are presented in *Table 1*. The *Biological Resources Map* (*Figure 3*) depicts vegetation communities within the entire Project area.

4.1.1 Revegetated Maritime Succulent Scrub

Portions of the southeast facing slopes of Wolf Canyon are currently under restoration. Within the revegetated maritime succulent scrub, portions of the degraded slope are being revegetated as Valley needlegrass grassland and Otay tarplant habitat. The remaining areas currently supporting maritime succulent scrub species or are in the process of being restored as maritime succulent scrub and/or Otay tarplant habitat. The mapping of this area defines a total of 1.2 acres of maritime succulent scrub restoration, but this area is not within the boundary of an Irrevocable Offers of Dedication (IOD) recorded for mitigation purposes

related to Otay Ranch Village One as mitigation for 4(d) permits that were issued for take of coastal sage scrub on Village One.

TABLE 1
ACREAGES OF EXISTING VEGETATION COMMUNITY AND LAND COVER TYPES

Vegetation/Land Cover	Onsite Acreage
Revegetated Maritime Succulent Scrub	1.2
Coastal Sage Scrub	0.1
Disturbed Coastal Sage Scrub	0.3
Annual (Non-native) Grasslands	26.6
Agriculture	140.2
Disturbed Habitat	3.0
Developed Land	1.7
TOTAL	173.1

Note - Gross acreage is correct; columns will not precisely total due to rounding.

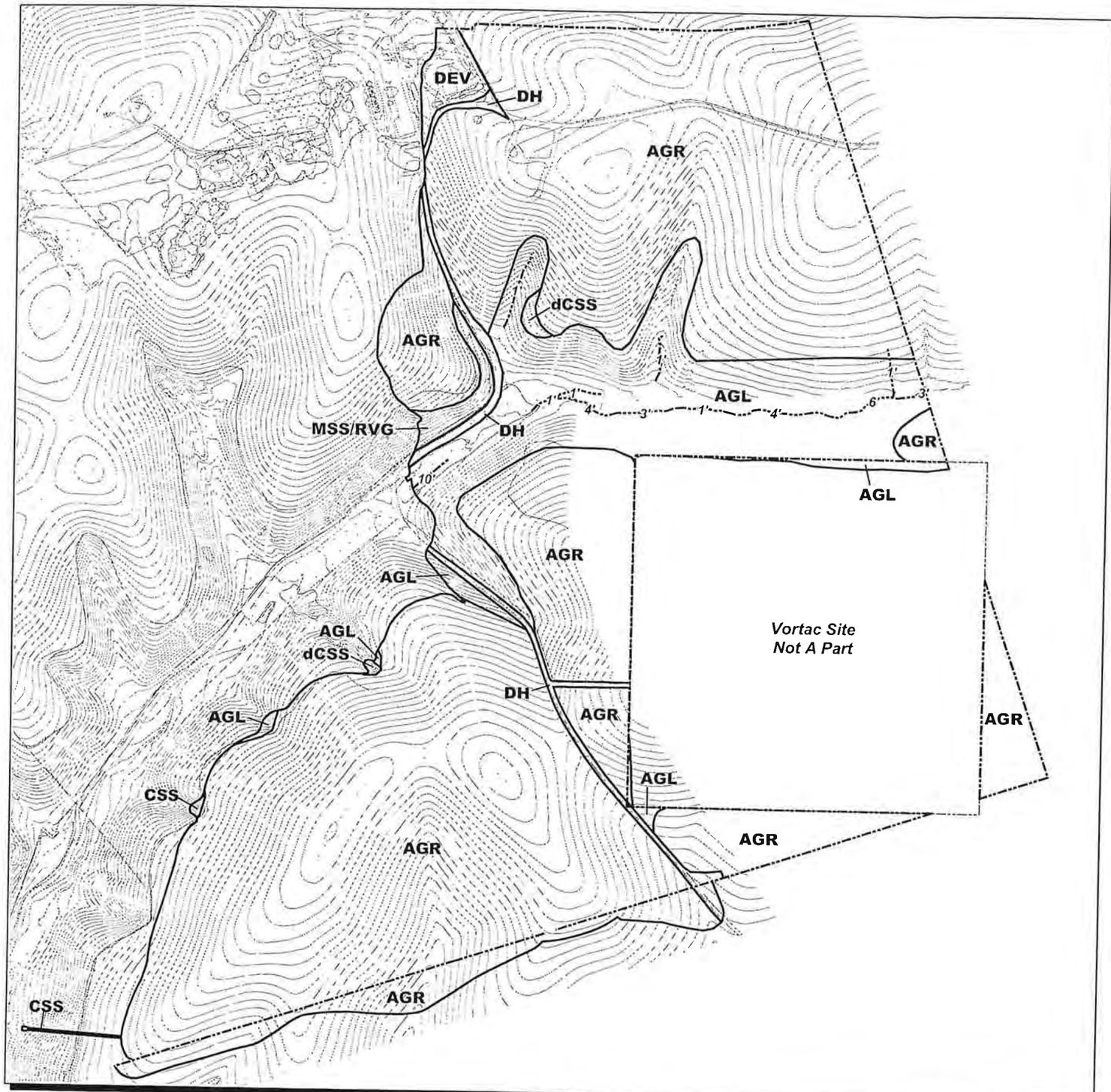
4.1.2 Coastal Sage Scrub

Coastal sage scrub is a native plant community composed of a variety of soft, low, aromatic shrubs, characteristically dominated by drought-deciduous species such as California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), and sages (*Salvia* spp.), with scattered evergreen shrubs, including lemonadeberry (*Rhus integrifolia*), laurel sumac (*Malosma laurina*), and toyon (*Heteromeles arbutifolia*). It typically develops on south-facing slopes and other xeric situations.

Onsite, this community consists primarily of lemonadeberry, California buckwheat and California sagebrush. A total of 0.1 acre of coastal sage scrub is found onsite.

4.1.3 Disturbed Coastal Sage Scrub

Disturbed coastal sage scrub is defined by 20-50% native shrub cover with typical coastal sage scrub species (California buckwheat, California sagebrush, and lemonadeberry), but a predominance of non-native grasses (*Avena* sp., *Bromus* spp.) and forbs (*Erodium* spp., *Brassica* and *Sisymbrium* spp.). A total of 0.3 acre of disturbed coastal sage scrub is found onsite.



Jurisdictional Waters *(with channel width measurements)*

Vegetation Types/Landcovers:

AGL = Annual Grassland

AGR = Agriculture

CSS = Coastal Sage Scrub

DEV = Developed

DH = Disturbed Habitat

MSS/RVG = Maritime Succulent Scrub (Revegetated Area)

dCSS = Disturbed Coastal Sage Scrub

N

Feet
0 500

GRADING SOURCE: Hunsaker & Associates, Feb. 2004

Otay Ranch, Village 7 - Biological Resources Report & Impact Analysis

Biological Resources Map

FIGURE 3

4.1.4 Annual Grassland

Where the native vegetation has been disturbed frequently or intensively by grazing, fire, agriculture, or other activities, the native community usually is incapable of recovering. These areas are characterized by weedy, introduced annuals, primarily grasses, including especially slender wild oat *(Avena barbata)*, bromes *(Bromus* spp.), mustards (*Brassica* and *Sisymbrium* spp.), broad-lobed filaree (*Erodium botrys*), and Russian-thistle *(Salsola tragus)*.

Annual grassland occurs on Village Seven generally on lower slopes where regular agricultural activities are precluded. Annual grassland occupies 26.6 acres of the project area.

4.1.5 Agriculture

Agricultural lands refer to areas which have been under cultivation or are pastures actively grazed by livestock and contain fewer than 20% native plant cover. These areas contain very few native shrubs and pastures are dominated by non-native grasses, doveweed and black mustard. The majority (140.2 acres) of the Village Seven site consists of agricultural lands.

4.1.6 Disturbed Habitat

For purposes of this document, disturbed habitat includes the dirt access road, graded areas, and other places that lack vegetation. In general, these areas have been subject to mechanical perturbations which have greatly limited the growth of any vegetation. A total of 3.0 acres of disturbed habitat occurs on the Village Seven site.

4.1.7 Developed Land

Developed land refers to areas that lack vegetation and support permanent or temporary structures and roads. Less than 1.7 acres of developed land occurs on the Village Seven site.

4.2 Jurisdictional Waters

Village Seven supports several unvegetated stream channels including Wolf Canyon itself. Tributaries to Wolf Canyon are ephemeral and do not contain a predominance of hydrophytic vegetation nor hydric soils. Offsite and within Wolf Canyon, the drainage may by intermittent as evidenced by occasional isolated individuals of mule fat *(Baccharis salicifolia)* or arroyo willow *(Salix lasiolepis)*. These unvegetated stream channels are mapped on *Figure 3* as line features. The unvegetated stream channels onsite total 0.2 acre and are considered waters of the United States under the jurisdiction of the ACOE and a waters of the State under the jurisdiction of the CDFG.

4.3 Zoology - Wildlife Diversity

Historic information and recent surveys are the basis for the generalized description of wildlife on the Village Seven project site. Wildlife expected to occur throughout the Village Seven project area are discussed.

4.3.1 Birds

A total of 50 species of birds were observed within the much larger Village 2/3 project area that includes most of Village 7. However, strictly within the Village 7 area, bird species are limited to those which are not dependent on native plant communities or roosting sites such as house finch (*Carpodacus mexicanus*), American crow *(Corvus brachyrhynchos)*, western meadowlark *(Sturnella neglecta),* and northern mockingbird (*Mimus polyglottos*).

4.3.2 Reptiles and Amphibians

Reptile and amphibian species are expected to be isolated within native habitat areas and annual grassland in Wolf Canyon. Potential species onsite include side-blotched lizard (*Uta stansburiana*), western rattlesnake (*Crotalus viridis*), western fence lizard (*Sceloporus occidentalis*), and western toad (*Bufo boreas*).

4.3.3 Mammals

Seven species of mammals have been detected within the combined Village 2/3/7 area by direct observation or sign: black-tailed jackrabbit *(Lepus californicus)*, brush rabbit *(Sylvilagus bachmani),* wood rat *(Neotoma* spp.*)*, Botta's pocket gopher *(Thomomys bottae)*, California ground squirrel, striped skunk *(Mephitis mephitis)*, and coyote (Canis latrans). Other mammal species that likely use the site include: Dulzura kangaroo rat (*Dipodomys simulans*), common raccoon (*Proctyon lotor*), and bobcat (*Lynx rufus*).

4.3.4 Invertebrates

Eight species of invertebrates, all butterflies, have been identified within the combined Village 2/3/7 area by direct observation. Common species onsite include Behr's metalmark *(Apodemia mormo virgulti),* California ringlet (*Coenonympha tullia*), and common white *(Pontia protodice).*

4.4 Sensitive Biological Resources

The following resources are discussed in this section: **(1)** plant and animal species present in the project vicinity that are given special recognition by federal, state, or local conservation

agencies and organizations owing to declining, limited, or threatened populations, that are the result, in most cases, of habitat reduction; and **(2)** habitat areas that are unique, are of relatively limited distribution, or are of particular value to wildlife. Sources used for determination of sensitive biological resources are as follows: **wildlife** -- U.S. Fish and Wildlife Service (USFWS 2001), California Department of Fish and Game (CDFG 2002), Remsen (1978), Everett (1979), McGurty (1980), and Murphy (1990); **plants** -- USFWS (2001), CDFG (2002), and CNPS (2001); and **plant communities** -- Holland (1986).

4.4.1 Sensitive Plant Species

No listed plant species were detected within the Village Seven project area, however comprehensive focused surveys have not been completed. Otay tarplant is known to occur within Wolf Canyon including within revegetated maritime succulent scrub. Focused surveys are being planned for the 2004 blooming season.

Table 2 provides a cumulative list of sensitive plant species which may potentially occur onsite. Species listed include all those within the range of the project site and the approximate general habitat requirements. For each species, a determination of potential to occur or brief description of the onsite occurrence is provided.

TABLE 2
SENSITIVE PLANT SPECIES DETECTED OR POTENTIALLY OCCURRING ON THE PROJECT SITE

Scientific Name	Common Name	Status Federal/State/ MSCP Coverage	CNPS List, R-E-D	Primary Habitat Associations/Life Form/Blooming Period	Status Onsite or Potential to Occur
Acanthomintha ilicifolia	San Diego thornmint	FT/SE/Covered Narrow Endemic	1B, 2-3-2	Chaparral, coastal sage scrub, Valley and foothill grassland, vernal pools, clays/annual herb/April-June	Low potential; lacking appropriate soils.
Achnatherum diegoense	San Diego County needlegrass	None/None/Not Covered	4, 1-2-1	Chaparral, coastal sage scrub/perennial herb/May-June	Low potential; limited suitable habitat.
Adolphia californica	California adolphia	None/None/Not Covered	2, 1-3-1	Chaparral, coastal sage scrub, Valley and foothill grassland, clays/shrub/ December-April	Low potential; limited suitable habitat.
Agave shawii	Shaw's agave	FSC/None/Covered	2, 3-3-1	Coastal bluff scrub, coastal sage scrub/shrub/May-July	Low potential; limited suitable habitat.

TABLE 2 (*Continued*)

Scientific Name	Common Name	Status Federal/State/ MSCP Coverage	CNPS List, R-E-D	Primary Habitat Associations/Life Form/Blooming Period	Status Onsite or Potential to Occur
Ambrosia chenopodiifolia	San Diego bur-sage	None/None/Not Covered	2, 3-3-1	Coastal sage scrub/shrub/ April-June	Low potential; limited suitable habitat.
Ambrosia pumila	San Diego ambrosia	FE/SE/Covered	1B, 3-3-2	Chaparral, coastal sage scrub, Valley and foothill grassland, vernal pools, clays/ perennial herb/June-September	Low potential; limited suitable habitat.
Aphanisma blitoides	Aphanisma	FSC/None/Covered	1B, 2-2-2	Coastal bluff scrub, coastal sage scrub, sandy soils/ annual herb/April-May	Low potential; limited suitable habitat.
Artemisia palmeri	San Diego sagewort	None/None/Not Covered	4, 1-2-1	Chaparral, coastal sage scrub, riparian forest and scrub, sandy soils/shrub/July-September	Low potential; limited suitable habitat.
Astragalus oocarpus	San Diego milk-vetch	FSC/None/Not Covered	1B, 3-2-3	Chaparral (openings), cismontane woodland/ perennial herb/May-August	Low potential; limited suitable habitat.
Atriplex pacifica	South Coast saltscale	FSC/None/Not Covered	1B, 3-2-2	Coastal bluff scrub, coastal sage scrub, playas/annual herb/March-October	Moderate potential.
Calindrinia breweri	Brewer's calindrinia	None/None/Not Covered	4, 1-2-2	Chaparral, coastal sage scrub, disturbed and burned areas/annual herb/March-June	Low potential; limited suitable habitat.
Calindrinia maritima	Seaside calindrinia	None/None/Not Covered	4, 1-2-1	Coastal bluff scrub, Valley and foothill grassland, sandy soils/annual herb/March-May	Moderate potential to occur onsite.
Calochortus dunnii	Dunn's mariposa lily	FSC/SR/Covered	1B, 2-2-2	Closed-cone conifer forest, chaparral, gabbroic soils/ perennial herb/May-June	Low potential; limited suitable habitat.
Camissonia lewisii	Lewis's evening primrose	None/None/Not Covered	3, ?-?-2	Coastal bluff scrub, cismontane woodland, coastal dunes, coastal sage scrub, Valley and foothill grassland, sandy or clay soils/ annual herb/March-June	Low potential; limited suitable habitat.

TABLE 2 (*Continued*)

Scientific Name	Common Name	Status Federal/State/ MSCP Coverage	CNPS List, R-E-D	Primary Habitat Associations/Life Form/Blooming Period	Status Onsite or Potential to Occur
Caulanthus simulans	Payson's jewelflower	FSC/None/Not Covered	4, 1-2-3	Chaparral, coastal sage scrub, sandy and granitic soils/annual herb/March-June	Low potential; limited suitable habitat.
Caulanthus stenocarpus	Slender-pod jewelflower	FSC/SR/Covered	None	Chaparral, coastal sage scrub/annual herb, fire follower/March-May	Low potential; limited suitable habitat.
Chamaebatia australis	Southern mountain misery	None/None/Not Covered	4, 1-2-1	Chaparral/shrub/November-May	Low potential; limited suitable habitat.
Chorizanthe leptotheca	Peninsular spineflower	None/None/Not Covered	4, 1-2-2	Chaparral, coastal sage scrub, lower montane conifer forest, alluvial fan, granitic soils/annual herb/May-August	Low potential; limited suitable habitat.
Chorizanthe orcuttiana	Orcutt's spineflower	FE/SE/Not Covered	1B, 3-3-3	Chaparral, closed-cone conifer forest, coastal sage scrub/annual herb/March-April	Low potential; limited suitable habitat.
Chorizanthe polygonoides var. *longispina*	Long-spined spineflower	FSC/None/Not Covered	1B, 2-2-2	Chaparral, coastal sage scrub, meadows and seeps, Valley and foothill grassland, often clay/annual herb/April-July	Low potential; limited suitable habitat.
Chorizanthe procumbens	Prostrate spineflower	None/None/Not Covered	None	Chaparral, coastal sage scrub, pinyon-juniper woodland, Valley and foothill grassland, gabbroic clay and granitic soils/annual herb/April-June	Moderate potential to occur onsite.
Clarkia delicata	Delicate clarkia	None/None/Not Covered	1B, 2-2-2	Chaparral, cismontane woodland/annual herb/May-June	Low potential; limited suitable habitat.
Comarostaphylis diversifolia ssp. *diversifolia*	Summer-holly	None/None/Not Covered	1B, 2-2-2	Chaparral/shrub/April-June	Low potential; limited suitable habitat.
Convolvulus simulans	Small-flowered morning-glory	None/None/Not Covered	4, 1-2-2	Coastal sage scrub, Valley and foothill grassland, clay, serpentinite seeps/annual	Moderate potential to occur.

TABLE 2 (*Continued*)

Scientific Name	Common Name	Status Federal/State/ MSCP Coverage	CNPS List, R-E-D	Primary Habitat Associations/Life Form/Blooming Period	Status Onsite or Potential to Occur
				herb/March-June	
Corethrogyne filaginifolia var. *incana*	San Diego sand aster	None/None/Not Covered	1B, 3-3-2	Coastal sage scrub/perennial herb/June-August	Low potential; limited suitable habitat.
Cupressus forbesii	Tecate cypress	FSC/NoneCovered	1B, 3-3-2	Closed-cone conifer forest, chaparral/tree/NA	Low potential; limited suitable habitat.
Deinandra [Hemizonia] conjugens	Otay tarplant	FT/SE/Covered Narrow Endemic	1B, 3-3-2	Coastal sage scrub, Valley and foothill grassland, clays/ annual herb/May-June	High potential with Wolf Canyon; moderate potential elsewhere.
Deinandra [Hemizonia] floribunda	Tecate tarplant	FSC/None/Not Covered	1B, 2-2-2	Chaparral, coastal sage scrub/annual herb/August-October	Low potential; limited suitable habitat.
Dichondra occidentalis	Western dichondra	None/None/Not Covered	4, 1-2-1	Chaparral, cismontane woodland, coastal sage scrub, Valley and foothill grassland/perennial herb/ March-May	Moderate potential to occur onsite.
Dudleya blochmaniae spp. *blochmaniae*	Blochman's dudleya	FSC/None/Not Covered	1B, 2-3-2	Coastal bluff scrub, coastal sage scrub, Valley and foothill grassland, rocky, often clay or serpentinite soil/perennial herb/April-June	Low potential; limited suitable habitat.
Dudleya brevifolia	Short-leaved dudleya	FSC/SE/Covered	1B, 3-3-3	Chaparral, coastal sage scrub, Torrey sandstone/ perennial herb/April	Low potential; limited suitable habitat.
Dudleya multicaulis	Many-stemmed dudleya	FSC/None/Not Covered	1B, 1-2-3	Chaparral, coastal sage scrub, Valley and foothill grassland, often clays/ perennial herb/May-July	Low potential; limited suitable habitat.
Dudleya variegata	Variegated dudleya	FSC/None/Covered Narrow Endemic	1B, 2-2-2	Chaparral, cismontane woodland, coastal sage scrub, Valley and foothill grassland, vernal pools/ perennial herb/May-June	Moderate potential.
Dudleya viscida	Sticky dudleya	FSC/None/Covered	1B, 2-2-3	Coastal bluff scrub, chaparral, coastal sage scrub,	Low potential; limited suitable habitat.

TABLE 2 (*Continued*)

Scientific Name	Common Name	Status Federal/State/ MSCP Coverage	CNPS List, R-E-D	Primary Habitat Associations/Life Form/Blooming Period	Status Onsite or Potential to Occur
				rocky areas/perennial herb/ May-June	
Ericameria palmeri ssp. *palmeri*	Palmer's goldenbush	FSC/None/Covered	2, 3-2-1	Coastal sage scrub/shrub/ September-November	Moderate potential to occur onsite.
Eryngium aristulatum var. *parishii*	San Diego button-celery	FE/SE/Covered	1B, 2-3-2	Coastal sage scrub, Valley and foothill grassland, vernal pools, mesic areas/annual-perennial herb/April-June	Low potential; limited suitable habitat.
Erysimum ammophilum	Coast wallflower	FSC/None/Covered	1B, 2-2-3	Coastal dunes/perennial herbs/February-June	Low potential; limited suitable habitat.
Euphorbia misera	Cliff spurge	None/None/Not Covered	2, 2-2-1	Coastal bluff scrub, coastal sage scrub, rocky areas/ shrub/January-August	Low potential; limited suitable habitat.
Fagonia laevis	Smooth-stemmed fagonia	None/None/Not Covered	None	Rocky hillsides and sandy washes/shrub/May-June	Moderate potential.
Ferocactus viridescens	San Diego barrel cactus	FSC/None/Covered Narrow Endemic	2, 1-3-1	Chaparral, coastal sage scrub, Valley and foothill grassland, vernal pools/ shrub/May-June	Moderate potential.
Fremontodendron mexicanum	Mexican flannelbush	FE/SR/Not Covered	1B, 3-3-2	Closed-cone conifer forest, chaparral, cismontane woodland, gabbroic or serpentinite soils/shrub/ March-June	Low potential; limited suitable habitat.
Grindelia hirsutula var. *hallii*	San Diego gumplant	None/None/Not Covered	1B, 2-2-3	Chaparral, lower montane conifer forest, meadows and seeps, Valley and foothill grassland/perennial herb/July-October	Low potential; limited suitable habitat.
Harpagonella palmeri	Palmer's grapplinghook	None/None/Not Covered	4, 1-2-1	Chaparral, coastal sage scrub, Valley and foothill grassland, clays/annual herb/March-April	Moderate potential.
Holocarpha virgata ssp. *elongata*	Graceful tarplant	FSC/None/Not Covered	4, 1-2-3	Coastal sage scrub, cismontane woodland, chaparral (?), Valley and	Moderate potential to occur onsite.

TABLE 2 (*Continued*)

Scientific Name	Common Name	Status Federal/State/ MSCP Coverage	CNPS List, R-E-D	Primary Habitat Associations/Life Form/Blooming Period	Status Onsite or Potential to Occur
				foothill grassland/annual herb/August-November	
Hordeum intercedens	Vernal barley	None/None/Not Covered	3, ?-2-2	Valley and foothill grassland (saline flats and depressions), vernal pools/annual herb/ March-June	Moderate potential.
Isocoma menziesii var. *decumbens*	Decumbent goldenbush	None/None/Not Covered	1B, 2-2-2	Coastal sage scrub (sandy, often disturbed areas)/shrub/ April-November	Moderate potential.
Iva hayesiana	San Diego marsh-elder	FSC/None/Not Covered	2, 2-2-1	Playas, riparian, floodplain-upland ecotone/perennial herb/April-September	Low potential; limited suitable habitat.
Juncus acutus spp. *leopoldii*	Southwestern spiny rush	None/None/Not Covered	4, 1-2-3	Coastal dunes, meadows and seeps (alkaline), saltwater marsh/perennial herb/May-June	Low potential; limited suitable habitat.
Lepidium virginicum var. *robinsonii*	Robinson's pepper-grass	None/None/Not Covered	1B, 3-2-2	Chaparral, coastal sage scrub/annual herb/January-July	Low potential; limited suitable habitat.
Lotus crassifolius var. *otayensis*	Otay Mtn. lotus	FSC/None/Not Covered	4, 1-2-3	Chaparral (often in disturbed areas)/perennial herb/May-August	Low potential; limited suitable habitat.
Lotus nuttallianus	Nuttall's lotus	FSC/None/Covered	1B, 3-3-2	Coastal dunes, coastal sage scrub/annual herb/March-June	Low potential; limited suitable habitat.
Lycium californicum	California box-thorn	None/None/Not Covered	4, 1-2-2	Coastal bluff scrub, coastal scrub/shrub/March-August	Moderate potential.
Microseris douglasii var. *platycarpha*	Small-flowered microseris	None/None/Not Covered	4, 1-2-2	Cismontane woodland, coastal sage scrub, Valley and foothill grassland, clays/annual herb/March-May	Moderate potential.
Mimulus aridus	Low bush monkeyflower	None/None/Not Covered	4, 1-1-2	Chaparral/shrub/April-July	Low potential; limited suitable habitat.

TABLE 2 (*Continued*)

Scientific Name	Common Name	Status Federal/State/ MSCP Coverage	CNPS List, R-E-D	Primary Habitat Associations/Life Form/Blooming Period	Status Onsite or Potential to Occur
Monardella linoides var. *viminea*	Willowy monardella	FE/SE/Covered	1B, 2-3-2	Closed-cone conifer forest, chaparral, riparian forest, woodland, and scrub/ perennial herb/June-August	Low potential; limited suitable habitat.
Muilla clevelandii	San Diego goldenstar	FSC/None/Covered	1B, 2-3-2	Chaparral, coastal sage scrub, Valley and foothill grassland, vernal pools/perennial herb/May	Moderate potential.
Myosurus minimus ssp. *apus*	Little mousetail	FSC/None/Not Covered	3, 2-3-2	Vernal pools (alkaline)/annual herb/March-June	Low potential; limited suitable habitat.
Navarretia fossalis	Spreading navarretia	FT/None/Covered	1B, 2-3-2	Chenopod scrub, shallow freshwater marsh and swamps, vernal pools/annual herb/April-June	Moderate potential.
Nolana cistmontana	Chaparral beargrass	FSC/None/Not Covered	1B, 3-2-3	Chaparral/perennial herb/June-July	Low potential; limited suitable habitat.
Ophioglossum californicum	California adder's-tongue	None/None/Not Covered	4, 1-2-2	Chaparral, Valley and foothill grassland, vernal pools (margins)/perennial herb/December-May	Low potential; limited suitable habitat.
Opuntia californica var. *californica*	Snake cholla	FSC/None/Covered Narrow Endemic	1B, 3-3-2	Chaparral, coastal sage scrub/shrub/April-May	Moderate potential.
Orcuttia californica	California Orcutt grass	FE/SE/Covered	1B, 3-3-2	Vernal pools/annual herb/April-June	Low potential; limited suitable habitat.
Orobranche parishii ssp. *brachyloba*	Short-lobed broom-rape	None/None/Not Covered	4, 1-2-2	Coastal bluff scrub, coastal dunes, coastal sage scrub, sandy soils/perennial herb/May-August	Low potential; limited suitable habitat.
Phacelia stellaris	Brand's phacelia	None/None/Not Covered	1B, 3-3-2	Coastal dunes, coastal sage scrub/annual herb/March-June	Low potential; limited suitable habitat.
Pogogyne abramsii	San Diego mesa mint	FE/SE/Covered	1B, 2-3-3	Vernal pools/annual herb/ April-June	Low potential; limited suitable habitat.
Pogogyne nudiuscula	Otay Mesa mint	FE/SE/Covered	1B, 3-3-2	Vernal pools/annual herb/ May-June	Low potential; limited suitable habitat.

TABLE 2 (*Continued*)

Scientific Name	Common Name	Status Federal/State/ MSCP Coverage	CNPS List, R-E-D	Primary Habitat Associations/Life Form/Blooming Period	Status Onsite or Potential to Occur
Quercus dumosa	Nuttall's scrub oak	FSC/None/Not Covered	1B, 2-3-2	Chaparral, coastal sage scrub, sandy and clay loam soils/shrub/February-March	Low potential; limited suitable habitat.
Quercus engelmannii	Engelmann oak	None/None/Not Covered	4, 1-2-2	Chaparral, cismontane woodland, riparian woodland, Valley and foothill grassland/ tree/April-May	Low potential; limited suitable habitat.
Rosa minutifolia	Small-leaved rose	FSC/SE/Covered	2, 3-3-1	Chaparral/shrub/January-June	Low potential; limited suitable habitat.
Salvia munzii	Munz's sage	None/None/Not Covered	2, 2-2-1	Chaparral, coastal sage scrub/shrub/February-April	Moderate potential.
Satureja chandleri	San Miguel savory	None/None/ Covered	1B, 2-2-2	Chaparral, cismontane woodland, coastal sage scrub, riparian woodland, Valley and foothill grassland/ perennial herb/March-May	Low potential; limited suitable habitat.
Senecio aphanactis	Rayless ragwort	None/None/Not Covered	2, 3-2-1	Cismontane woodland, coastal sage scrub, alkaline soils/annual herb/January-April	Low potential; limited suitable habitat.
Viguiera laciniata	San Diego County viguiera	None/None/Not Covered	4, 1-2-1	Chaparral, coastal sage scrub/shrub/February-June	High potential with coastal sage scrub and maritime succulent scrub.

FE: Federally-listed as endangered
FSC: Federal species of concern
FT: Federally-listed as threatened
PFE: Proposed for federal listing as endangered
SCE: State candidate for listing as endangered
SE: State-listed as endangered
SR: State rare

4.4.2 Sensitive Wildlife Species

No sensitive wildlife species have been historically or recently recorded from the project site. However, comprehensive focused surveys have not been conducted. *Table 3* provides a list of sensitive wildlife with a potential to occur onsite. For each species, remarks are given regarding the potential for the species to occur onsite. The choice of species listed is based on range and general habitat requirements of the species.

TABLE 3
SENSITIVE WILDLIFE SPECIES DETECTED OR POTENTIALLY OCCURRING ON THE PROJECT SITE

Species	Sensitivity Status	Habitat	Status Onsite
Invertebrates			
Euphydryas editha quino - quino checkerspot	Federal - Endangered State - None MSCP - Covered	host plant is dot-seed plantain; occurs in semi-open coastal sage scrub and chaparral	Low potential; no surveys required because site is outside of Subarea Plan Preserve.
Streptocephalus woottoni - Riverside fairy shrimp	Federal - Endangered State - None MSCP - Covered	vernal pools	Low potential; limited suitable habitat.
Branchinecta sandiegoensis - San Diego fairy shrimp	Federal - Endangered State - None MSCP - Covered	vernal pools	Low potential; limited suitable habitat.
Reptiles and Amphibians			
Bufo californicus - arroyo toad	Federal - Endangered State - CSC MSCP - Covered	riparian zones with dynamic, cobble-lined, shallow pools	Low potential; limited suitable habitat.
Crotalus ruber ruber - red-diamond rattlesnake	Federal - None State - CSC MSCP - Not Covered	coastal sage scrub, desert scrub, thorn scrub, and chaparral habitats	Moderate potential.
Scaphiopus hammondi - western spade-foot toad	Federal - None State - CSC MSCP - Not Covered	breeds in quiet streams, ephemeral ponds, and vernal pools	Low potential.
Clemmys marmorata pallida - southwestern pond turtle	Federal - None State - CSC MSCP - Covered	freshwater ponds and lakes	Low potential.
Anniella pulchra pulchra - Silvery legless lizard	Federal - None State - CSC MSCP - Not Covered	Loose soils (sand, loam, humus) in coastal dune, coastal sage scrub, woodlands, and riparian habitats	Moderate potential.
Charina [Lichanura] trivirgata roseofusca - Coastal rosy boa	Federal - None State - None MSCP - Not Covered	Rocky chaparral, coastal sage scrub, oak woodlands, desert and semi-desert scrub	Moderate potential.
Cnemidophorus tigris multiscutatus - Coastal western whiptail	Federal - None State - None MSCP - Not Covered	Coastal sage scrub, chaparral	Moderate potential.
Cnemidophorus hyperythrus beldingi - orange-throated whiptail	Federal - None State - CSC MSCP - Covered	coastal sage scrub, grasslands	Moderate potential.

TABLE 3 (*Continued*)

Species	Sensitivity Status	Habitat	Status Onsite
Phrynosoma coronatum blainvillei San Diego horned lizard	Federal - None State - CSC MSCP - Covered	coastal sage scrub	Moderate potential.
Birds			
Accipiter cooperii Cooper's hawk	Federal - None State - CSC MSCP - Covered	riparian woodlands, eucalyptus woodlands, oak woodlands	Moderate potential (low nesting potential).
Accipiter striatus sharp-shinned hawk	Federal - None State - CSC MSCP - Not Covered	riparian woodlands, eucalyptus woodlands, oak woodlands	Moderate potential (low nesting potential).
Aquila chrysaetos - golden eagle	Federal - None State - CSC MSCP - Covered	scrub habitats, grasslands, cliffs	Moderate potential (low nesting potential).
Circus cyaneus - northern harrier	Federal - None State - CSC MSCP - Covered	grasslands, salt and freshwater habitats	Moderate potential (low nesting potential).
Elanus leucurus- white-tailed kite	Federal - None State - CSC MSCP - Not Covered	open country where grasslands, marshes, and agricultural fields provide rodent prey	Moderate potential (low nesting potential).
Athene cunicularia - burrowing owl	Federal - None State - CSC MSCP - Covered	grasslands	High potential.
Empidonax traillii extimus - southwestern willow flycatcher	Federal - Endangered State - Endangered MSCP - Covered	riparian forest, riparian scrub	Low potential.
Eremophila alpestris actia - California horned lark	Federal - None State - CSC MSCP - Not Covered	open, sparsely vegetated habitats such as and grasslands, agriculture, etc.	High potential.
Campylorhynchus brunneicapillus cousei - coastal cactus wren	Federal - None State - CSC MSCP - Covered	cactus thickets in southern cactus scrub, maritime succulent scrub or sage scrub	Low potential.
Polioptila californica - California gnatcatcher	Federal - Threatened State - CSC MSCP - Covered	coastal sage scrub	Low potential.
Lanius ludovicianus - loggerhead shrike	Federal - None State - CSC MSCP - Not Covered	agricultural land, desert wash and desert-edge scrub, grassland or beach areas with scattered bushes, or broken chaparral	High potential.

TABLE 3 (*Continued*)

Species	Sensitivity Status	Habitat	Status Onsite
Vireo bellii pusillus - least Bell's vireo	Federal - Endangered State - Endangered MSCP - Covered	riparian, southern willow scrub	Low potential.
Amphispiza belli belli - Bell's sage sparrow	Federal - None State - CSC MSCP - Not Covered	chaparral and coastal sage scrub	Moderate potential.
Aimophila ruficeps canescens - southern California rufous-crowned sparrow	Federal - None State - CSC MSCP - Covered	coastal sage scrub	Moderate potential.
Ammodramus savannarum - grasshopper sparrow	Federal - None State - None MSCP - Not Covered	grassland	High potential.
Agelaius tricolor - tri-colored blackbird	Federal - None State - CSC MSCP - Covered	freshwater marsh for breeding; grasslands and agriculture for foraging	Moderate potential (low potential for breeding).
Icteria virens - yellow-breasted chat	Federal - None State - CSC MSCP - Not Covered	riparian woodlands, primarily in the coastal lowland but will also use the foothill zone	Low potential.
Dendroica petechia - yellow warbler	Federal - None State - CSC MSCP - Not Covered	breeding restricted to riparian woodlands	Low potential.
Mammals			
Perognathus longimembris pacificus - Pacific pocket mouse	Federal - Endangered State - CSC MSCP - Not Covered	fine or sandy soils with sparse coastal sage scrub or disturbed grassland	Low potential.
Chaetodipus fallax fallax - northwestern San Diego pocket mouse	Federal - None State - CSC MSCP - Not Covered	coastal sage scrub and chaparral	High potential.
Chaetodipus californicus femoralis - Dulzura California pocket mouse	Federal - None State - CSC MSCP - Not Covered	coastal sage scrub and chaparral	High potential.
Neotoma lepida intermedia - San Diego desert woodrat	Federal - None State - CSC MSCP - Not Covered	coastal sage scrub and chaparral	High potential.
Lepus californicus bennettii - San Diego black-tailed jackrabbit	Federal - None State - CSC MSCP - Not Covered	coastal sage scrub, grassland	High potential.

4.4.3 Sensitive Vegetation Communities

Sensitive habitats are those that are considered rare within the region, support sensitive plant and/or wildlife species, or are important to provide connections for wildlife movement. Habitat types found onsite that are considered sensitive include coastal sage scrub, disturbed coastal sage scrub, revegetated maritime succulent scrub, and annual (non-native) grassland.

4.4.4 Wildlife Corridors and Habitat Linkages

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the immigration and emigration of animals. Wildlife corridors contribute to population viability in several ways: **(1)** they allow the continual exchange of genes between populations, which helps maintain genetic diversity; **(2)** they provide access to adjacent habitat areas representing additional territory for foraging and mating; **(3)** they allow for a greater carrying capacity of wildlife populations; and **(4)** they provide routes for re-colonization of habitat lands following local population extinctions or habitat recovery from ecological catastrophes (*e.g.,* fires).

Habitat linkages are patches of native habitat that function to join two substantially larger patches of habitat. They serve as connections between distinct habitat patches and help reduce the adverse effects of habitat fragmentation. Although individual animals may not move through a habitat linkage, the linkage does represent a potential route for gene flow and long-term dispersal. Habitat linkages may serve as both habitat and avenues of gene flow for small animals such as reptiles and amphibians. Habitat linkages may be represented by continuous patches of habitat or by nearby habitat "islands" that function as "stepping stones" for dispersal.

To function effectively, a corridor must link two or more patches of habitat for which connectivity is desired and it must be suitable for the focal target species to achieve the desired demographic and genetic exchange between populations. The wildlife corridor study prepared by Ogden (1992) concluded that Wolf Canyon, located adjacent to Village Seven to the west, functions as a "local" corridor for mammal species, including mule deer *(Odocoileus hemionus)*, and as a "regional" connection for California gnatcatchers and cactus wrens located in Wolf Canyon. For Wolf Canyon to function even as an avian connection, one or two of the low passes that connect Poggi Canyon with Wolf Canyon would require revegetation. Currently, Wolf Canyon does not link two or more patches of habitat, as, by definition, is required of a corridor. Presently, there is no continuously vegetated connection of habitat occurring on the Village Seven site that connects Poggi and Wolf Canyons. Furthermore, the Ogden wildlife corridor report suggests that it may not be biologically justified to manufacture corridors for large mammals between Poggi and Wolf Canyons because of the

proximity to planned urban development. Further, in an agreement made as part of the adoption of the County of San Diego's MSCP Subarea Plan, the area potentially connecting Wolf Canyon to Poggi Canyon via the Otay Landfill was shown as non-preserve in exchange for areas considered to be more desirable for conservation. The City of Chula Vista's MSCP Subarea Plan does not show a connection between Wolf and Poggi Canyons. The reason for this action was the lack of evidence that this area could function as a viable avian corridor. Therefore, the Village Seven project site does not support habitat linkage or wildlife corridor functions.

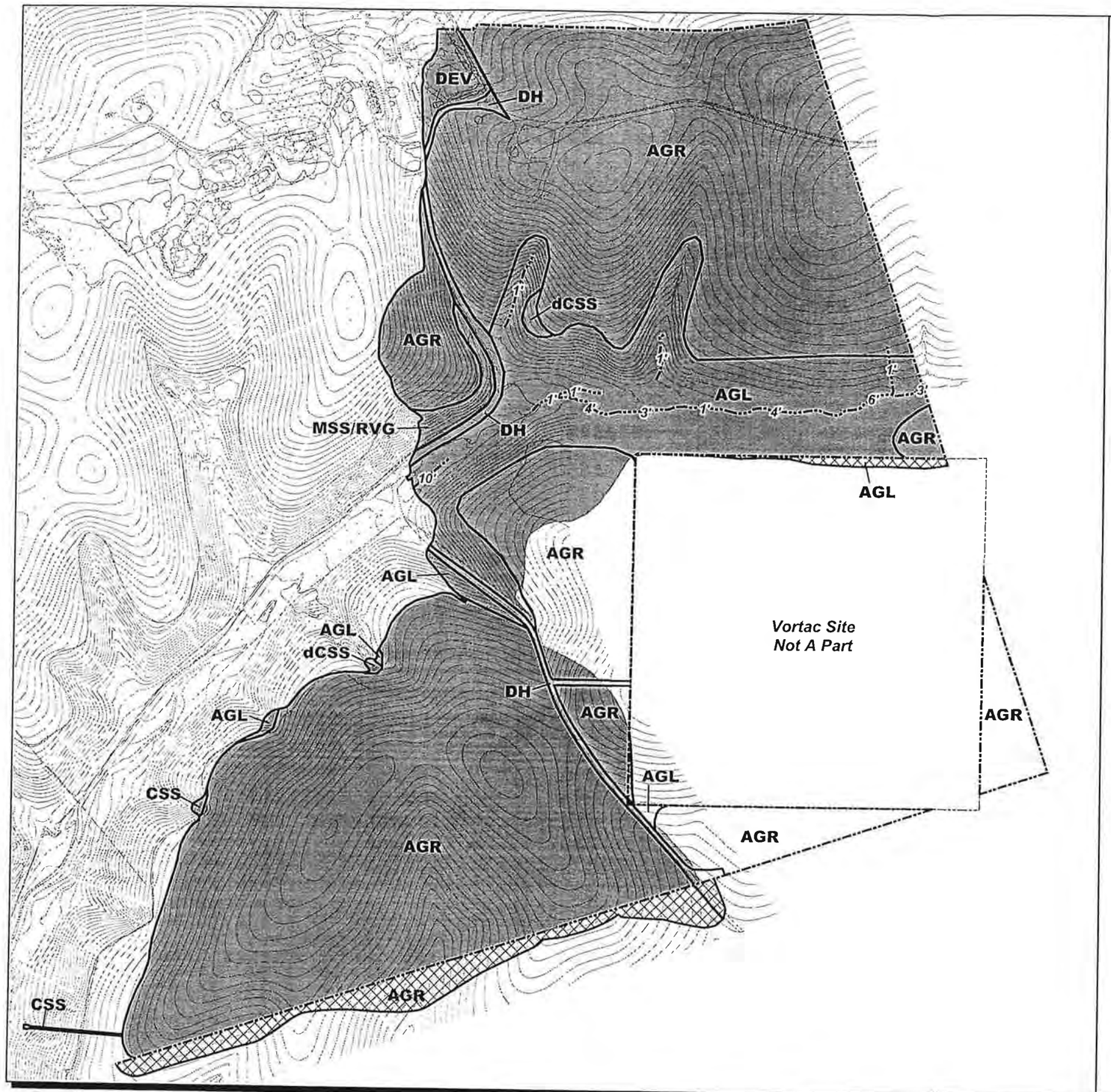
5.0 ANTICIPATED PROJECT IMPACTS

This section addresses direct, indirect, and cumulative impacts to biological resources that would result from implementation of the proposed project.

Direct impacts were quantified by overlaying the anticipated limits of grading on the biological resources map and quantifying impacts. The limits of grading are presumed to encompass all future development and use areas (*i.e.*, "worst case scenario") including lots, utilities, brush management, trails, etc. The limits of grading are depicted on *Figure 4*.

Indirect Impacts are very difficult to identify and quantify but are presumed to occur. They primarily result from adverse "edge effects," either short-term indirect impacts related to construction or long-term, chronic indirect impacts associated with the location of urban development in proximity to biological resources within natural open space. During construction of the project, short-term indirect impacts may include dust and noise which could disrupt habitat and species vitality temporarily and construction-related soil erosion and runoff. However, all project grading will be subject to the typical restrictions and requirements that address erosion and runoff, including the federal Clean Water Act, National Pollution Discharge Elimination System (NPDES), and preparation of a Stormwater Pollution Prevention Plan. These programs are expected to minimize project impacts to erosion/runoff. Long-term indirect impacts to adjacent open space may include intrusions by humans and domestic pets, noise, lighting, invasion by exotic plant and wildlife species, effects of toxic chemicals (fertilizers, pesticides, herbicides, and other hazardous materials), urban runoff from developed areas, soil erosion, litter, fire, and hydrological changes (*e.g.*, groundwater level and quality). However, the project is subject to RMP requirements due to the adjacency with the Wolf Canyon preserve and therefore Edge Plan restrictions will apply and will reduce potential long-term indirect impacts.

Cumulative Impacts refer to incremental individual environmental effects of two or more projects when considered together. These impacts taken individually may be minor, but collectively significant as they occur over a period of time.



Jurisdictional Waters *(with channel width measurements)*

Vegetation Types/Landcovers:

AGL = Annual Grassland

AGR = Agriculture

CSS = Coastal Sage Scrub

DEV = Developed

DH = Disturbed Habitat

MSS/RVG = Maritime Succulent Scrub (Revegetated Area)

dCSS = Disturbed Coastal Sage Scrub

Proposed Limits of Grading

Proposed Offsite Grading

Proposed Non-preserve Open Space

N

Feet
0 500

GRADING SOURCE: Hunsaker & Associates, Feb. 2004

Otay Ranch, Village 7 - Biological Resources Report & Impact Analysis

Biological Resources Map with Proposed Grading

FIGURE 4

5.1 Direct Impacts

5.1.1 Vegetation Communities

Implementation of the proposed project would result in the direct and complete loss of the vegetation community acreages presented in *Table 4*. Losses would occur as the result of grading and infrastructure installation. Impacts to sensitive vegetation communities (as noted in *Table 4*) are considered significant.

TABLE 4
IMPACTS TO VEGETATION COMMUNITIES/LAND COVER TYPES

Vegetation Type	Impacts			Non-Preserve Open Space*
	Onsite Development	Offsite Grading	Total Impacts	
Village Two				
Sensitive Vegetation Communities				
Revegetated Maritime Succulent Scrub	1.2	--	1.2	--
Coastal Sage Scrub	0.1	--	0.1	--
Disturbed Coastal Sage Scrub	0.3	--	0.3	--
Annual (Non-native) Grassland	25.7	0.6	26.3	0.2
Non-Sensitive Vegetation Communities				
Agriculture	135.1	5.1	140.2	26.6
Disturbed Habitat	2.7	0.2	2.9	0.2
Developed Land	1.7	--	1.7	--
Total	**166.8**	**6.0**	**172.8**	**15.0**

* Areas not impacted by project grading.
Note - Gross acreage is correct; columns may not precisely total due to rounding.

5.1.2 Sensitive Plants Species

The project has the potential to impact several sensitive species including Otay tarplant. Focused surveys are required to determine the extent of impacts to sensitive plant species.

5.1.3 Sensitive Wildlife Species

The project has the potential to impact several sensitive species including California gnatcatcher.

5.1.4 Jurisdictional Waters

Impacts to 0.2 acre jurisdictional waters would occur as a result of the Village Seven project. Impacted jurisdictional waters include ephemeral, which do not support hydrophytic vegetation, and intermittent waters within Wolf Canyon. Impacts to jurisdictional waters are considered significant.

5.1.5 Habitat Linkages/Movement Corridors

The Project area does not function as a habitat linkage or wildlife corridor, therefore no direct impacts are anticipated.

5.1.6 Regional Resource Planning

The project does not include modification of planned Preserve areas, therefore direct impacts to regional resource planning efforts are not expected to occur.

5.2 Indirect Impacts

Indirect impacts may occur to biological resources located west of the project site including Wolf Canyon.

5.2.1 Vegetation Communities

Indirect impacts to vegetation communities primarily would result from adverse "edge effects" as cited above. During construction of the project, edge effects may include dust which could disrupt plant vitality in the short term or construction-related soil erosion and runoff. Long-term indirect impacts on vegetation communities most likely would occur as a result of trampling of vegetation by humans and domestic pets, invasion by exotic species, alteration of the natural fire regime, and exposure to urban pollutants. Indirect impacts to vegetation communities are considered significant.

5.2.2 Sensitive Plant Species

Most of the indirect impacts to vegetation communities cited above can also affect sensitive plants. Of particular sensitivity is the population of Otay tarplant in Wolf Canyon, adjacent to the project site to the south. During construction of the project, indirect effects may include dust which could disrupt plant vitality in the short term or construction related soil erosion and runoff. Long-term edge effects could include intrusions by humans and domestic pets and possible trampling of individual plants, invasion by exotic plant and wildlife species,

exposure to urban pollutants (fertilizers, pesticides, herbicides, and other hazardous materials), soil erosion, litter, fire, and hydrological changes (*e.g.*, surface and groundwater level and quality). Indirect impacts to sensitive plants are considered significant.

5.2.3 Sensitive Wildlife Species

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

5.2.4 Jurisdictional Waters

Indirect, adverse edge effects to jurisdictional waters include potential runoff, sedimentation, erosion, exotics introduction, and habitat type conversion in the short and long-term, particularly within the Wolf Canyon drainage. Indirect impacts to jurisdictional waters are considered significant.

5.2.5 Habitat Linkages/Movement Corridors

According to the Wildlife Corridor studies conducted by Ogden (1992), the Project site does not support any existing wildlife corridors. Therefore, no impacts to habitat linkages or movement corridors will occur as a result of the project.

5.3 Cumulative Impacts

The project has been designed in conformance with regional resource planning documents which have analyzed cumulative impacts to biological resources. As such, no significant cumulative impacts to biological resource are anticipated.

6.0 MITIGATION

6.1 Vegetation Communities

As stated in *Section 5.1.1, Vegetation Communities*, impacts to sensitive vegetation communities are considered significant.

As a Covered Project, pursuant to the Otay Ranch RMP and Chula Vista Subarea Plan, conveyance of lands consistent with the directives of the RMP and Subarea Plan would fully offset impacts to sensitive upland habitats from both a CEQA (RMP) and Endangered Species Act (Subarea Plan) perspective. Therefore, impacts would be mitigated to a level below significant.

As stated in *Section 5.2.1, Vegetation Communities*, indirect impacts to vegetation communities are considered significant. In order to reduce indirect impacts to vegetation communities associated with construction, dust and erosion controls, as well as biological monitoring are required. These measures include the following:

(1) Prominently colored, well installed, fencing will be in place wherever the limits of grading is adjacent to sensitive vegetation communities or other biological resources, as identified by the qualified monitoring biologist. Fencing shall remain in place during all construction activities.

(2) A qualified biologist shall be onsite to monitor all vegetation clearing and periodically thereafter to ensure implementation of appropriate resource protection measures.

(3) A Storm Water Pollution Prevention Plan (SWPPP) shall be developed, approved, and implemented during construction to control storm water runoff such that erosion, sedimentation, pollution, etc. are minimized. Measures which may be incorporated into the plan include use of silt fencing, haybales, and straw wattles.

(4) Dewatering shall be conducted in accordance with standard regulations of the RWQCB. A permit to discharge water from dewatering activities will be required. This will minimize erosion, siltation, and pollution within sensitive communities.

(5) During construction, material stockpiles shall be placed such that they cause minimal interference with on-site drainage patterns. This will protect sensitive vegetation from being inundated with sediment laden run-off.

(6) Material stock-piles shall be covered when not in use. This will prevent fly-off that could damage nearby sensitive plant communities.

(7) Graded area shall be periodically watered to minimize dust affecting adjacent vegetation.

In order to reduce impacts to sensitive vegetation communities as a result of edge effects from development, application of directives in the Otay Ranch Edge Plan will be followed. Measures to reduce development-oriented indirect impacts include the following:

(1) No invasive non-native plant species shall be introduced into areas immediately adjacent to the Preserve. All slopes immediately adjacent to the Preserve should be planted with native species that reflect the adjacent native habitat.

(2) All agricultural uses, including animal-keeping activities, and recreational uses that use chemicals or general by-products such as manure, potentially toxic or impactive to sensitive habitats or plants need to incorporate methods onsite to reduce impacts cause by the application and/or drainage of such materials into Preserve areas.

These measures will short- and long-term indirect impacts associated with the project to a level below significant.

6.2 Sensitive Plant Species

Additional focused surveys are required to determine the precise level of impacts to sensitive plant species. However, impacts to any potentially significant sensitive plan species would be mitigated through conveyance of preserve land as required by the RMP.

As stated in *Section 5.2.2, Sensitive Plant Species*, indirect impacts to plant species would occur and are considered significant. Implementation of mitigation measures outline Section 6.1 would reduce short- and long-term indirect impacts to sensitive plant species to a level below significant. In particular, biological monitoring of construction activities adjacent to portions of Wolf Canyon occupied by Otay tarplant will ensure minimal indirect impacts to this species.

6.3 Sensitive Wildlife Species

Additional focused surveys are required to determine the precise level of impacts to sensitive wildlife species. However, impacts to any potentially significant sensitive wildlife species would be mitigated through conveyance of preserve land as required by the RMP.

As stated in *Section 5.2.3, Sensitive Wildlife Species*, indirect impacts to sensitive wildlife species would occur. In order to reduce indirect impacts to nesting birds during construction, mitigation measures outlined in Section 6.1 as well as the following mitigation measure, consistent with *Section 7.5.2* of the Subarea Plan, are required:

(1) When clearing, grading or grubbing activities occur during the breeding season for California gnatcatcher (February 15 to August 15, annually) or raptors (January 15 to July 31, annually), nesting bird surveys shall be conducted by a qualified biologist to identify active nest locations. Construction activities shall be restricted such that

noise levels related to those activities are below 60 LEQ at the location of the active nest site.

In order to reduce impacts to sensitive wildlife as a result of edge effects from development (lighting, noise, domestic animal predation, etc.), application of directives in the Village Two Edge Plan will be followed. In addition to measures outlined in Section 6.1, the following measures to reduce these types of indirect impacts include the following:

(1) Lighting of all developed areas adjacent to the Preserve shall be directed away from the Preserve, wherever feasible and consistent with public safety. Where necessary, development shall provide adequate shielding with non-invasive plant materials (preferably native), berming, and/or other methods to protect the Preserve and sensitive species from night lighting. Consideration shall be given to the use of low-pressure sodium lighting.

(2) Uses in or adjacent to the Preserve shall be designed to minimize noise impacts. Berms or walls shall be constructed adjacent to commercial areas and any other use that may introduce noises that could impact or interfere with wildlife utilization of the Preserve. Excessively noisy uses or activities adjacent to breeding areas must incorporate nose reduction measures or be curtailed during the breeding season of sensitive bird species.

(3) All agricultural uses, including animal-keeping activities, and recreational uses that use chemicals or general by-products such as manure, potentially toxic or impactive to sensitive wildlife need to incorporate methods onsite to reduce impacts caused by the application and/or drainage of such materials into Preserve areas.

Implementation of these mitigation measures will reduce potential indirect impacts to sensitive wildlife to a level below significant.

6.4 Jurisdictional Waters

As stated in *Section 5.1.4, Jurisdictional Waters*, a total of 0.2 acre of ephemeral and intermittent waters onsite will be permanently impacted as a result of the project. In order to mitigate for direct impacts to jurisdictional waters, the following mitigation measure is required:

(1) A total of 0.2 acres of wetlands will be created. Creation will occur within the Otay River watershed in accordance with a Conceptual Wetlands Mitigation and Monitoring Plan approved by the City and wetland resource agencies.

Implementation of this mitigation measure would reduce direct impacts to jurisdictional waters to a level below significant.

As stated in *Section 5.2.4, Jurisdictional Waters*, significant indirect impacts to jurisdictional waters would occur as a result of the project. Indirect impacts to jurisdictional waters will be mitigated by the following:

(1) Implementation of stormwater and drainage BMPs (See Section 6.1).

(2) Design of drainage facilities to incorporate long-term control of pollutants and storm flow to minimize pollution and hydrologic changes.

Implementation of these measures would reduce indirect impacts to jurisdictional waters, including potential affects on the Wolf Canyon drainage and Otay River, to a level below significant.

6.5 Habitat Linkages/Movement Corridors

As stated in *Sections 5.1.6 and 5.2.6, Habitat Linkages/Movement Corridors*, the project would not impact known habitat linkages or movement corridors. Therefore, no mitigation is required.

6.6 Regional Resource Planning Context/Cumulative Impacts

As stated in *Sections 5.1.7* and *5.3* no significant impacts to regional resource planning efforts are expected, and therefore no mitigation is required.

7.0 ACKNOWLEDGMENTS

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APPENDIX A

VASCULAR PLANT SPECIES

APPENDIX A

VASCULAR PLANT SPECIES

LYCOPODIAE

SELAGINELLACEAE - SPIKE-MOSS FAMILY

Selaginella cinerascens - ashy spike-moss

ANGIOSPERMAE (DICOTYLEDONES)

ANACARDIACEAE - SUMAC FAMILY

Malosma laurina - laurel sumac
Rhus integrifolia - lemonadeberry

APIACEAE - CARROT FAMILY

Daucus pusillus - rattlesnake weed
* *Foeniculum vulgare* - sweet fennel

ASTERACEAE - SUNFLOWER FAMILY

Achillea millefolium var. *californica* - yarrow
Ambrosia confertifolia - weak-leaved burweed
Artemisia californica - coastal sagebrush
Baccharis salicifolia - mule fat
Baccharis sarothroides - chaparral broom
* *Centaurea melitensis* - star thistle
Chaenactis glabriuscula var. *glabriuscula* - yellow pincushion
* *Chrysanthemum coronarium* - garland chrysanthemum
Deinandra conjugens - Otay tarplant
Deinandra fasciculata - fascicled tarweed
Gnaphalium bicolor - bicolor cudweed
Gnaphalium stramineum - cotton-batting plant
Grindelia camporum - gum plant
Heterotheca grandiflora - telegraph weed
Hymenoclea monogyra - winged ragweed
* *Hypochaeris glabra* - smooth cat's-ear
Isocoma menziesii ssp. *veneta* - coastal goldenbush
Lessingia filaginifolia - virgate cudweed aster
Osmadenia tenella - rosin-weed
Pentachaeta aurea - golden-rayed pentachaeta

APPENDIX A *(Continued)*

* *Picris echioides* - bristly ox-tongue
* *Sonchus asper* - prickly sow-thistle
Stephanomeria exigua - small wreathplant
Stephanomeria virgata - twiggy wreathplant
Stylocline gnaphaloides - everlasting nest-straw
Viguiera laciniata - San Diego County viguiera

BORAGINACEAE - BORAGE FAMILY
Cryptantha intermedia - common forget-me-not

BRASSICACEAE - MUSTARD FAMILY
* *Brassica nigra* - black mustard

CACTACEAE - CACTUS FAMILY
Ferocactus viridescens - San Diego barrel cactus
* *Opuntia littoralis* - coastal prickly-pear
Opuntia parryi - valley cholla
Opuntia prolifera - coast cholla

CAPPARACEAE - CAPER FAMILY
Isomeris arborea - bladderpod

CARYOPHYLLACEAE - PINK FAMILY
Cardionema ramosissimum - ncn
* *Silene gallica* - common catchfly

CHENOPODIACEAE - GOOSEFOOT FAMILY
Atriplex canescens - four-winged saltbush
Atriplex pacifica - south coast saltbush
* *Salsola tragus* - Russian-thistle

CONVOLVULACEAE - MORNING-GLORY FAMILY
Calystegia macrostegia - western bindweed
* *Convolvulus arvensis* - bindweed

CRASSULACEAE - STONECROP FAMILY
Dudleya variegata - variegated dudleya

APPENDIX A *(Continued)*

CUCURBITACEAE - GOURD FAMILY

Cucurbita foetidissima - coyote-melon, calabazilla

EUPHORBIACEAE - SPURGE FAMILY

Eremocarpus setigerus - doveweed

FABACEAE - PEA FAMILY

Astragalus trichopodus - Santa Barbara locoweed
Lupinus bicolor - Lindley's annual lupine
Lupinus sparsiflorus - Coulter's lupine
Lupinus succulentis - arroyo lupine
* *Medicago polymorpha* - California burclover
* *Melilotus indica* - yellow sweet-clover
* *Vicia villosa* - winter vetch

GERANIACEAE - GERANIUM FAMILY

* *Erodium botrys* - broad-lobed filaree
* *Erodium cicutarium* - red-stemmed filaree

HYDROPHYLLACEAE - WATERLEAF FAMILY

Phacelia cicutaria - caterpillar phacelia

LAMIACEAE - MINT FAMILY

Acanthomintha ilicifolia - San Diego thronmint
* *Marrubium vulgare* - horehound
Salvia apiana - white sage

MALVACEAE - MALLOW FAMILY

Malocothamnus fasciculatus - mesa bushmallow
Sidalcea malvaeflora - checker mallow

NYCTAGINACEAE - FOUR O'CLOCK FAMILY

Mirabilis californica var. *californica* - California wishbone-bush

ONAGRACEAE - EVENING-PRIMROSE FAMILY

Camissonia bistorta - California sun cup

PLANTAGINACEAE - PLANTAIN FAMILY

Plantago erecta - dot-seed plantain

APPENDIX A *(Continued)*

POLEMONIACEAE - PHLOX FAMILY
Navarretia fossalis - prostrate navarretia

POLYGONACEAE - BUCKWHEAT FAMILY
Chorizanthe sp. - spineflower
Chorizanthe procumbens - prostrate spineflower
Eriogonum fasciculatum - California buckwheat
* *Rumex crispus* - curly dock

PRIMULACEAE - PRIMROSE FAMILY
* *Anagallis arvensis* - scarlet pimpernel
Dodecatheon clevelandii - shooting star

RUBIACEAE - MADDER FAMILY
Galium angustifolium - narrow-leaved bedstraw

SALICACEAE - WILLOW FAMILY
Salix lasiolepis- arroyo willow

SCROPHULARIACEAE - FIGWORT FAMILY
Castilleja exserta - common owl's-clover

SIMAROUBACEAE - QUASSIA FAMILY
Simmondsia chinensis - jojoba

SOLANACEAE - NIGHTSHADE FAMILY
Lycium andersonii - box-thorn

TAMARICACEAE - TAMARISK FAMILY
* *Tamarix* sp. - tamarisk

VERBENACEAE - VERVAIN FAMILY
Verbena sp. - verbena

ZYGOPHYLLACEAE - CALTROP FAMILY
Fagonia laevis - smooth-stemmed fagonia

APPENDIX A *(Continued)*

ANGIOSPERMAE (MONOCOTYLEDONES)

CYPERACEAE - SEDGE FAMILY

Carex triquetra - triangular-fruited sedge

IRIDACEAE - IRIS FAMILY

Sisyrinchium bellum - blue-eyed grass

LILIACEAE - LILY FAMILY

Bloomeria crocea var. *crocea* - common goldenstar
Brodiaea jolonensis - dwarf brodiaea
Calochortus splendens - lilac mariposa
Yucca schidigera - Mohave yucca

POACEAE - GRASS FAMILY

* *Avena barbata* - slender oat
Brachypodium distachyon - ncn
* *Bromus diandrus* - ripgut grass
* *Bromus madritensis* ssp. *rubens* - foxtail chess
Distichlis spicata - salt grass
Hordeum sp. - barley
* *Lamarckia aurea* - goldentop
* *Lolium multiflorum* - English ryegrass
Melica imperfecta - California melic
Nassella lepida - foothill stipa
Nassella pulchra - purple needlegrass
* *Schismus barbatus* - Mediterranean schismus
* *Vulpia myuros* - rattail fescue

* signifies introduced (non-native) species

APPENDIX B

WILDLIFE SPECIES

APPENDIX B

WILDLIFE SPECIES -VERTEBRATES

REPTILES

IGUANIDAE - IGUANID LIZARDS

Sceloporus occidentalis - western fence lizard
Uta stansburiana - side-blotched lizard

BIRDS

ACCIPITRIDAE - HAWKS

Accipiter striatus - sharp-shinned hawk
Buteo jamaicensis - red-tailed hawk
Circus cyaneus - northern harrier

FALCONIDAE - FALCONS

Falco sparverius - American kestrel

PHASIANIDAE - PHEASANTS & QUAILS

Callipepla californica - California quail

CHARADRIIDAE - PLOVERS

Charadrius vociferus - killdeer

LARIDAE - GULLS & TERNS

Larus sp. - gull

COLUMBIDAE - PIGEONS & DOVES

Zenaida macroura - mourning dove
Columba livia - rock dove

CUCULIDAE - CUCKOOS & ROADRUNNERS

Geococcyx californianus - greater roadrunner

TROCHILIDAE - HUMMINGBIRDS

Calypte anna - Anna's hummingbird
Calypte costae - Costa's hummingbird

APPENDIX B *(Continued)*

PICIDAE - WOODPECKERS
Picoides nuttallii - Nuttall's woodpecker

TYRANNIDAE - TYRANT FLYCATCHERS
Empidonax difficilis - Pacific slope flycatcher
Myiarchos cinerascens - ash-throated flycatcher
Sayornis nigricans - black phoebe
Sayornis saya - Say's phoebe
Tyrannus vociferans - Cassin's kingbird
Tyrannus verticalis - western kingbird

ALAUDIDAE - LARKS
Eremophila alpestris actis - California horned lark

HIRUNDINIDAE - SWALLOWS
Hirundo pyrrhonota - cliff swallow
Stelgidopteryx serripennis - northern rough-winged swallow

CORVIDAE - JAYS & CROWS
Aphelocoma coerulescens - scrub jay
Corvus corax - common raven

AEGITHALIDAE - BUSHTITS
Psaltriparus minimus - bushtit

TROGLODYTIDAE - WRENS
Thryomanes bewickii - Bewick's wren
Troglodytes aedon - house wren

MUSCICAPIDAE - KINGLETS, GNATCATCHERS, THRUSHES & BABBLERS
Chamaea fasciata - wrentit
Polioptila californica californica- coastal California gnatcatcher

MIMIDAE - THRASHERS
Mimus polyglottos - northern mockingbird
Toxostoma redivivum - California thrasher

APPENDIX B *(Continued)*

PTILOGONATIDAE - SILKY-FLYCATCHERS

Phainopepla nitens - phainopepla

LANIIDAE - SHRIKES

Lanius ludovicianus - loggerhead shrike

STURNIDAE - STARLINGS

* *Sturnus vulgaris* - European starling

EMBERIZIDAE - WOOD WARBLERS, TANAGERS, BUNTINGS & BLACKBIRDS

Agelaius phoeniceus - red-winged blackbird
Aimophila ruficeps - rufous-crowned sparrow
Dendroica coronata - yellow-rumped warbler
Dendroica nigrescens - black-throated gray warbler
Euphagus cyanocephalus - Brewer's blackbird
Guiraca caerulea - blue grosbeak
Icterus cucullatus - hooded oriole
Melospiza melodia - song sparrow
Molothrus ater - brown-headed cowbird
Passerina amoena - lazuli bunting
Pipilo crissalis - California towhee
Pipilo maculatus - spotted towhee
Sturnella neglecta - western meadowlark
Zonotrichia leucophrys - white-crowned sparrow

FRINGILLIDAE - FINCHES

Carpodacus mexicanus - house finch
Carduelis psaltria - lesser goldfinch

MAMMALS

LEPORIDAE - HARES & RABBITS

Lepus californicus bennettii - San Diego black-tailed jackrabbit
Sylvilagus bachmani - brush rabbit

SCIURIDAE - SQUIRRELS

Spermophilus beecheyi - California ground squirrel

APPENDIX B *(Continued)*

GEOMYIDAE - POCKET GOPHERS
Thomomys bottae - Botta's pocket gopher

MURIDAE - RATS & MICE
Neotoma sp. - woodrat (midden)

CANIDAE - WOLVES & FOXES
Canis latrans - coyote

MUSTELIDAE - WEASELS, SKUNKS, & OTTERS
Mephitis mephitis - striped skunk

WILDLIFE SPECIES - INVERTEBRATES

BUTTERFLIES AND MOTHS

PAPILIONIDAE - SWALLOWTAILS
Papilio zelicaon - Anise swallowtail

PIERIDAE - WHITES AND SULFURS
Pieris rapae - cabbage butterfly
Pontia protodice - common white

RIODINIDAE - METALMARKS
Apodemia mormo virgulti - Behr's metalmark

LYCAENIDAE - BLUES, HAIRSTREAKS, & COPPERS
Leptotes marina - marine blue

NYMPHALIDAE - BRUSH-FOOTED BUTTERFLIES
Vanessa annabella - West Coast lady
Junonia coenia - buckeye
Coenonympha tullia - California ringlet

APPENDIX C

SPECIES SENSITIVITY CATEGORIES

APPENDIX C

SPECIES SENSITIVITY CATEGORIES

Federal

Endangered:	Taxa threatened throughout all or a significant portion of their range.
Threatened:	Taxa likely to become endangered in the foreseeable future.
Candidate:	Taxa for which the USFWS currently has on file substantial information on biological vulnerability and threat(s) to support the appropriateness of proposing to list them as endangered or threatened species.
Federal Species of Concern:	Taxa that were formerly Category 2 Candidates for listing as threatened or endangered. This category is an "unofficial" designation for species that may warrant listing, but for which substantial information to support the listing is lacking.

State of California

Endangered:	Taxa which are in serious danger of becoming extinct throughout all, or a significant portion, of their range due to one or more causes including loss of habitat, change in habitat, over exploitation, predation, competition, or disease (Section 2062 of the Fish and Game Code).
Threatened	Taxa which, although not presently threatened with extinction, are likely to become endangered species in the foreseeable future (Section 2067 of the Fish and Game Code).
Rare:	Taxa which, although not presently threatened with extinction, are present in such small numbers throughout their range that they may become endangered if the present environment worsens (Section 1901 of the Fish and Game Code).
Candidate:	Taxa which the Fish and Game Commission has formally noticed as being under review by the Department in addition to the list of threatened and endangered species.

APPENDIX C *(Continued)*

California or CDFG Species of Special Concern: Taxa that appear to be vulnerable to extinction because of declining populations, limited ranges, and/or continuing threats.

California Native Plant Society (1994)

Lists

1A: Presumed Extinct in California
1B: Rare or Endangered in California and Elsewhere
2: Rare or Endangered in California, More Common Elsewhere
3: Need More Information
4: Plants of Limited Distribution

Note: Plants on CNPS list 1B meet California Department of Fish and Game Criteria for Rare or Endangered listing.

R-E-D code

R (Rarity)
1- Rare, but found in sufficient numbers and distributed widely enough that the potential for extinction or extirpation is low at this time.
2- Occurrence confined to several populations or to one extended population.
3- Occurrence limited to one or a few highly restricted populations, or present in such small numbers that it is seldom reported.

E (Endangerment)
1- Not endangered
2- Endangered in a portion of its range
3- Endangered throughout its range

D (Distribution)
1- More or less widespread outside of California
2- Rare outside California
3- Endemic to California

APPENDIX H-3

SPRING 2004 RARE PLANT SURVEYS FOR VILLAGE 7, VILLAGE 4, AND OFFSITE PORTIONS OF VILLAGE 2

DUDEK
& ASSOCIATES, INC.
Professional Teams for Complex Projects

Engineering, Planning,
Environmental Sciences and
Management Services

Corporate Office:
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May 14, 2004 1469-02

Ms. Rainie Hunter
Otay Ranch Company
610 West Ash Street, Suite 1500
San Diego, CA 92101

Re: Spring 2004 Rare Plant Surveys for Village Seven, Village Four, and Offsite Portions of Village Two - City of Chula Vista, California

Dear Ms. Hunter:

Introduction and Methodology

Dudek and Associates, Inc. (Dudek) biologist, Vipul R. Joshi, conducted a rare plant survey of the portions of the Village Two project site. The survey area included all of the proposed development within Village Four (*i.e.,* the Borrow Site) and Village Seven (*i.e.,* the Park Site), including offsite grading areas *(Figures 1 and 2)*. The entire area was surveyed on 11 May 2004 to determine the presence/absence of spring annuals. These areas were previously surveyed for other sensitive flora including the state-listed endangered and federally-listed threatened Otay tarplant *(Denindra conjugens)* and sensitive perennial species. The previous survey efforts are documented in the *Biological Resources Report and Impact Assessment for Villages Two and Three* (Dudek April 2004).

Due to the active agricultural operations over the majority of the survey area, habitat assessments were conducted and only where habitat was considered suitable for sensitive spring annuals were walkover surveys conducted. Where walkover surveys were conducted, standard meandering transects were walked while recording all plant species present. The timing of the survey was adequate for detection of potentially sensitive spring annuals as well as Otay tarplant. The previous winter rainfall was considerably less than average. Although abundances of native annuals in the area are less than normal, the full diversity of native plant species was observed germinating in adjacent areas *(e.g.* Village Three and Rock Mountain).

Results

The majority of Village Four and Village Seven was determined to have no potential for sensitive spring annuals. Walkover surveys were conducted within Wolf Canyon, in the southern portion of Village Four, and along the northern edge of Village Seven *(Figure 2)*. Previous mappings of San Diego sunflower *(Viguiera laciniata)* were confirmed within the Village Four portion of Wolf Canyon and within 50 feet of the northern limits of Village Seven. New occurrences of sensitive plants species were limited to two locations of Otay tarplant within approximately 30 feet of the northern limits of Village Seven *(Figure 2)*. Approximately 200 individuals were observed in one location and 30 individuals were observed in an adjacent area. No other sensitive species were detected or are considered to have a high likelihood of occurring within the study area.

Conclusions

The assessment of direct and indirect impacts resulting from the proposed development of the project presented in the Dudek 2004 *Biological Resources Report and Impact Analysis* includes determinations for direct impacts to San Diego sunflower and indirect impacts to Otay tarplant. The findings of this current survey do not change the severity of impact and therefore do not affect the impact analysis or determination of significance. Likewise the determination of mitigation presented in the report addresses potential impacts to species observed during this current survey. Therefore no changes to the *Biological Resources Report and Impact Analysis* are recommended.

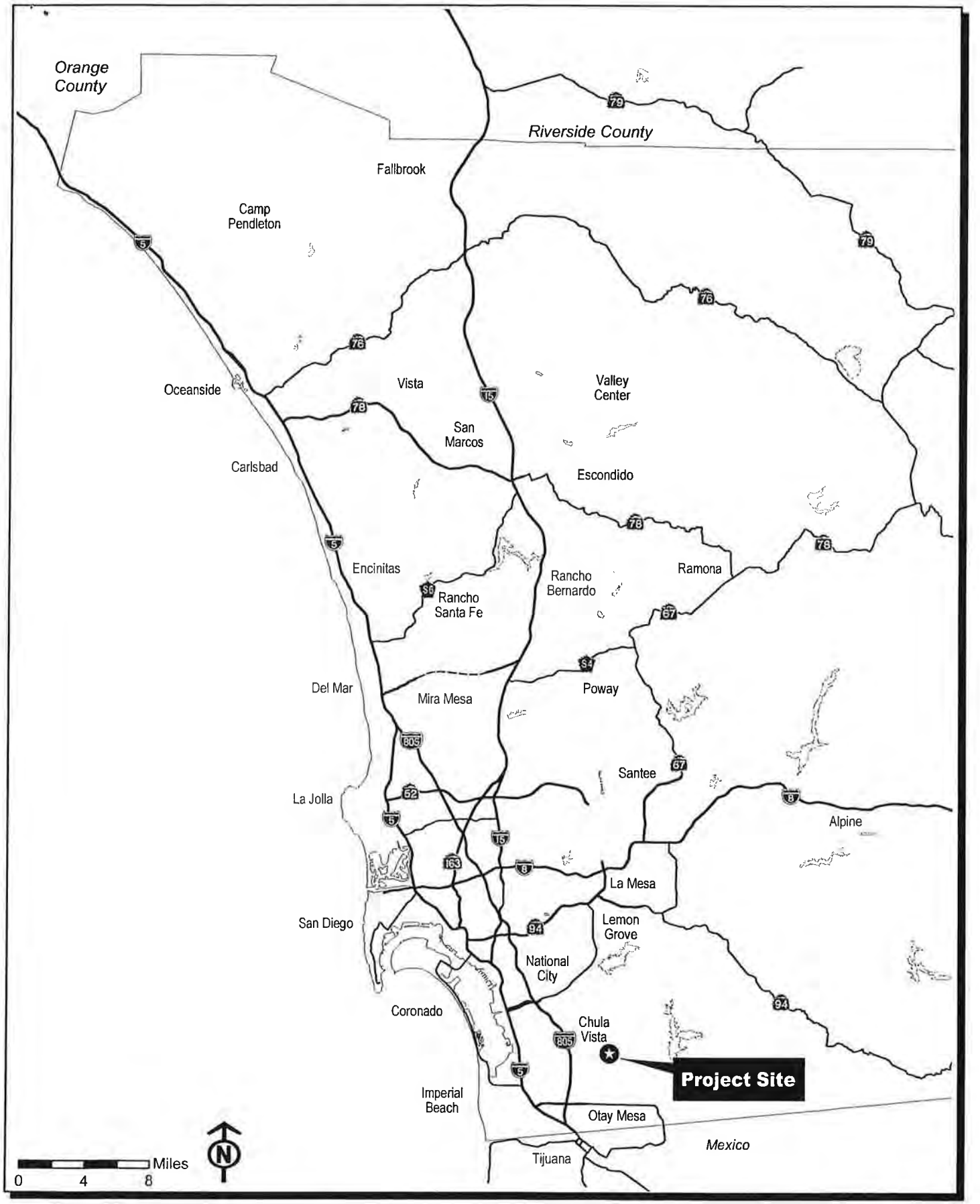
If you have any questions or concerns regarding this project area, please contact myself or Joe Monaco.

Very truly yours,
Dudek & Associates, Inc.

Vipul Joshi
Biologist
Environmental Science Division

att: *Figures 1-2*

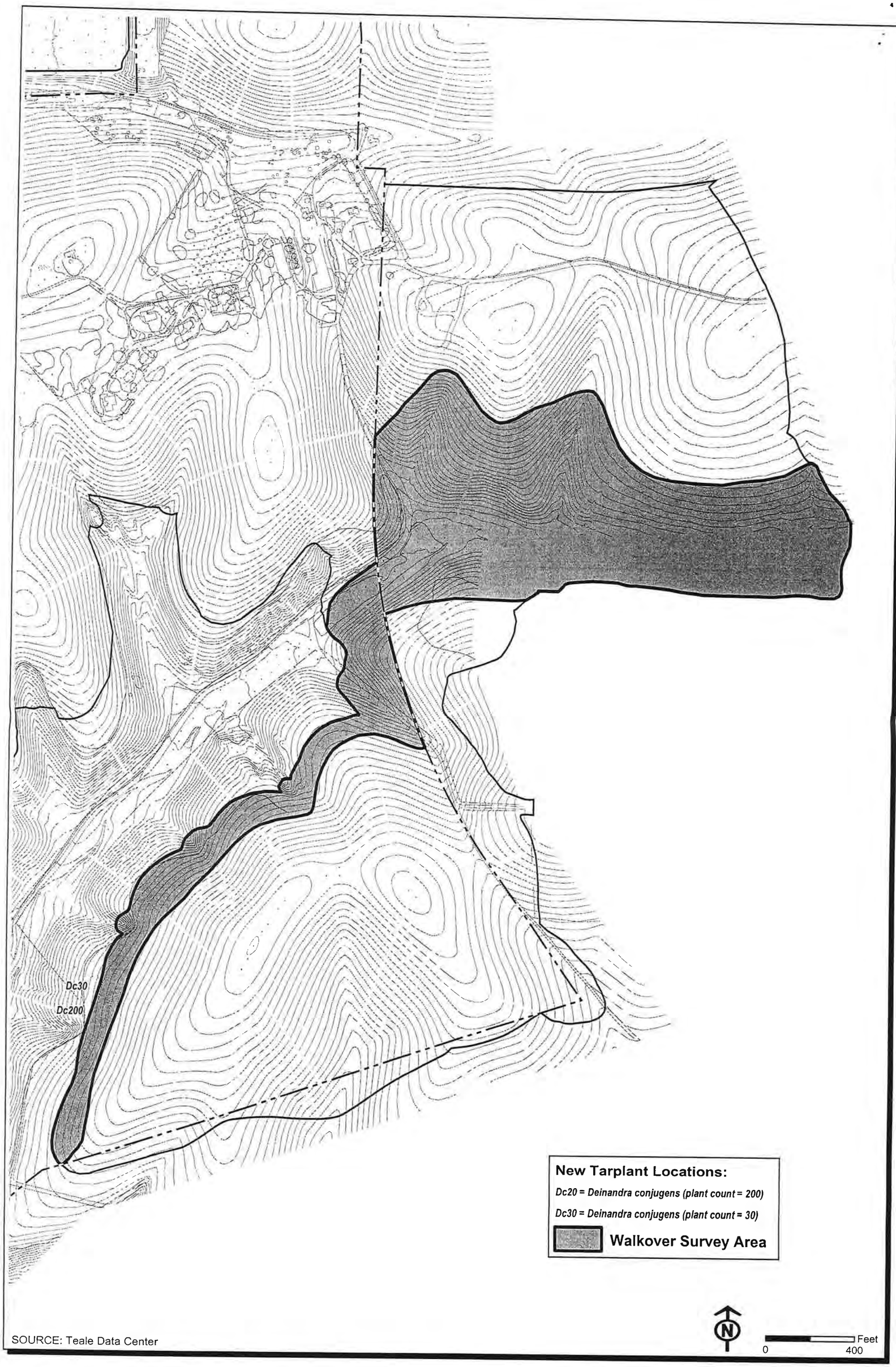
cc: *Joe Monaco - Dudek*



Otay Ranch Villages 4, 7 and Offsite Portions of Village 2 - Spring 2004 Rare Plant Survey

Regional Map

FIGURE 1



SOURCE: Teale Data Center

Otay Ranch Villages 4, 7 and Offsite Portions of Village 2 - Spring 2004 Rare Plant Survey

Survey Area and Otay Tarplant Locations

FIGURE 2

APPENDIX H-4

BIOLOGICAL CONSTRAINTS ANALYSIS FOR OTAY RANCH VILLAGE 7 CONNECTOR ROAD LETTER REPORT

BonTerra
CONSULTING
An Environmental Planning/Resource Management Corporation

June 9, 2004

Ms. Elysian Mah, AICP
David Evans & Associates
8989 Rio San Diego Drive, Suite 335
San Diego, California 92108

VIA FACSIMILE AND MAIL
(619) 260-3428

Subject: Biological Constraints Analysis for Otay Ranch Village 7 Connector Road, City of Chula Vista, California

Dear Ms. Mah:

This report summarizes the findings of a biological constraints analysis on Otay Ranch Village 7 site (hereinafter referred to as the project site) in the City of Chula Vista, San Diego County, California (Exhibit 1, see attached). The purpose of this assessment is to evaluate any potential biological constraints that may be present on the project site.

PROJECT LOCATION AND DESCRIPTION

The project site is located in the area designated as Otay Ranch Village 7 in the City of Chula Vista's Otay Ranch General Development Plan (Exhibit 2, see attached). The project site is bounded on the north by a Federal Aviation Administration (FAA) VHF Omni Range Radio/Tactical Air Navigation (VORTAC) facility. The western project site boundary is currently a dirt road that appears to exist within the Right-of-Way (ROW) of the proposed extension of La Media Road. The proposed extension of Magdalena Avenue, and the location of a proposed high school, forms the eastern boundary. The southern boundary of the project site occurs within an area currently used to dry-farm feed grasses, presumably for livestock and/or horses.

Active agriculture is the dominant current land use within the project site and the surrounding area. The one exception to the current agricultural land use is the fenced area within the FAA VORTAC facility, which is generally undeveloped and supports disturbed vegetation and non-native grasses. Topography on the project site tends to be sloped with elevations ranging from approximately 500 to 540 feet above mean sea level (msl). Soils on the project site have been mapped as two associations of Diablo clay: DaC with two to nine percent slopes and DaD with nine to 15 percent slopes (Bowman 1973). The project site is not "sectioned" due to a historic land grant, but it is located in Range 1 West, Township 18 South of the Otay Mesa U.S. Geological Survey (USGS) 7.5 x 15-minute quadrangle.

The proposed project is the construction of a connector road between the proposed extension of La Media Road and the proposed extension of Magdalena Avenue. The connector road will originate at La Media Road to the west and will terminate without connecting to Magdalena Avenue to the east.

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SURVEY METHODS

Prior to conducting the survey, the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Vascular Plants of California (CNPS 2004), the California Department of Fish and Game's (CDFG) Natural Diversity Database (CNDDB), the City of Chula Vista Multiple Species Conservation Plan (MSCP) Subarea Plan, the Otay Ranch Resource Management Plan (Ogden, 1993), and the San Diego Association of Governments (SANDAG) SanGIS website (SanGIS 2004) were reviewed. Other pertinent information was obtained from studies and other documentation prepared by biologists who have previously conducted studies in the immediate vicinity. Documents reviewed that addressed the biological conditions on the project site in the recent past include the City of Chula Vista Multiple Species Conservation Plan (MSCP) Subarea Plan, the Otay Ranch Resource Management Plan (Ogden, 1993), the San Diego Association of Governments (SANDAG) SanGIS website (SanGIS 2004), the *Biological Technical Report for the Sweetwater Union High School No. 13* prepared by REC Consultants (REC 2004), the *Draft Biological Resources Report for Otay Ranch Village Seven City of Chula Vista, San Diego County, California* prepared by Dudek & Associates (Dudek 2004), and a *Wetland Delineation on Otay Land Co. Parcel B* letter report prepared by URS Corporation (URS 2004). REC (2004), Dudek (2004) and URS (2004) address the biological resources within the project site either in whole or in part and are incorporated into this biological resources assessment by reference.

A general survey and vegetation mapping was conducted on June 1, 2004 by BonTerra Consulting Ecologist Jeff Galizio. The purpose of the survey was to describe the vegetation present in the project area and evaluate the potential of the habitats to support special status resources. Plant species were identified in the field or collected for later identification. Plants were identified using taxonomic keys in Hickman (1993) and Abrams (1923, 1960). Taxonomy follows Hickman (1993) or current scientific journals for scientific and common names. Due to the fact that the site is underlain entirely by Diablo clay substrates and the site visit occurred during the typical blooming period of the Otay tarplant (*Deinandra conjugens*), accessible areas were actively searched for the presence of this species. It should be noted that Mr. Galizio is familiar with Otay tarplant based upon previous successful surveys for the species in the Chula Vista area (i.e., San Miguel Ranch and Auld Golf Course). Vegetation in the project area was classified using Holland (1986) for consistency with the MSCP. During the surveys, the project area was also evaluated for its potential to support special status wildlife species that are known or are expected to occur in the region. Active searches for reptiles and amphibians included lifting, overturning, and carefully replacing rocks and debris. Birds were identified by visual and auditory recognition. Surveys for mammals included searching for and identifying diagnostic sign, including scat, footprints, scratch-outs, dust bowls, burrows, and trails. Taxonomy and nomenclature for wildlife generally follows Collins and Taggart (2002) for amphibians and reptiles, American Ornithologists Union (1998) for birds, and Kays and Wilson (2002) for mammals. Permission or right-of-entry was not granted to enter the FAA VORTAC site; therefore, this area was surveyed remotely from behind the barbed-wire fence along the project site boundary.

SURVEY RESULTS

Existing Vegetation

A review of aerial photographs available through the USDA soil maps (Bowman 1973) and TerraServer (2004 [1994 aerial photography]), agriculture appears to have been the predominant land use on the project site for decades; therefore, consistent with this land use, remnants of the native plant communities that occurred prior to this land use have been removed. The portions of the site characterized as agriculture include areas within and proximal to the project site that are actively, or have been recently, use to dry-farm feed grasses (possibly wheat [*Triticum* sp.]). The

portions of the project site characterized as non-native grassland support ruderal (e.g., adapted to waste or disturbance) species such as tocolote (*Centaurea melitensis*), sweet fennel (*Foeniculum vulgare*), dove weed (*Eremocarpus setigerus*), as well as non-native grasses dominated by brome grasses (*Bromus* spp.) and oats (*Avena* sp.).

Existing Wildlife

The disturbed, agricultural and non-native grassland vegetation types on the project site provide low quality habitat for native wildlife species. Sight or sign of only a few wildlife species were observed during the site visit. No reptile or amphibian species where observed, though species potentially occurring on the project site include western fence lizard (*Sceloporus occidentalis*) and side-blotched lizard (*Uta stansburiana*). Bird species observed on the project site include bushtit (*Psaltriparus minimus*) and American crow (*Corvus brachyrynchos*). Mammal species that occur on the project site include Botta's pocket gopher (*Thomomys bottae*) and California ground squirrel (*Spermophilus beecheyi*).

Special Status Resources

Special status resources include plant and wildlife species and vegetation types. Special status plant and wildlife species have generally been afforded this recognition by Federal and/or State resource agencies. In general, the principal reason an individual taxon (e.g., species, subspecies, or variety) is given such recognition as the documented or perceived decline or limitations of its population size, or geographic range, and/or distribution resulting in most cases from habitat loss. The MSCP implements in upland habitat-based mitigation strategy for impacts to covered special status species and vegetation types. Preserve areas have been designated through the MSCP process in order to ensure that habitat preserved would adequately conserve MSCP covered plant and animal species. The project site occurs within the Otay Ranch Planning Component of the City of Chula Vista's MSCP Subarea Plan within the Otay Mesa USGS 7.5-minute quadrangle map.

Special Status Plant Species

Federally- and/or state-listed Threatened and/or Endangered plant species known to occur in the Otay Ranch area include the San Diego button-celery (*Eryngium aristulatum* var. *parishii*), San Diego ambrosia (*Ambrosia pumila*), and Otay tarplant. San Diego button-celery and San Diego ambrosia have not been identified on the project site during previous biological and monitoring surveys performed in support of the Otay Ranch project and the MSCP. Vernal pool or playa habitats with the potential to support these species do not occur within the project site, so these species are not expected to occur on the site. Habitats and or soils (i.e., Diablo clays) with the potential to support the Otay tarplant do occur within the project site. As mentioned previously the site visit occurred during the typical blooming period for Otay tarplant, so an active search of accessible areas was made in an attempt to identify any occurrences of this species on the site. The Otay tarplant was not observed, and is not expected to occur, within the accessible portions of the project site due to the history of agricultural use and the impact that this use has had on the topsoil. The FAA VORTAC site was not actively searched on foot, but was scanned with the aid of binoculars from the barbed-wire fence surrounding the facility. Though there is a low potential for this species to occur within the non-native grassland within the FAA VORTAC facility, the Otay tarplant is unlikely to occur due to the history of disturbance (e.g., agriculture prior to FAA development) and the density of the non-native vegetation observed within the proposed project footprint. All three of these plants are "covered" species in the City of Chula Vista's MSCP Subarea Plan.

Several CNPS List 1B and List 2 plant species are known to occur in the Otay Ranch area. These species may meet the criteria in Section 15380 of the California Environmental Quality Act (CEQA), which states that if a species meets the definition of Threatened or Endangered, it may be treated as such under CEQA. Therefore, if a population of these species is found, impacts to these species may be considered significant according to CEQA. CNPS List 1B and 2 species known to occur in the project area include the decumbent goldenbush (*Isocoma meziesii* var. *decumbens*), San Diego bur-sage (*Ambrosia chenopodifolia*), Palmer's goldenbush (*Ericameria palmeri* ssp. *palmeri*), San Diego barrel cactus (*Ferocactus viridens*), and San Diego marsh elder (*Iva hayesiana*). Palmer's goldenbush and the San Diego barrel cactus are MSCP covered species. The San Diego barrel cactus and the San Diego marsh elder have been previously identified within Otay Ranch (associated with Wolf Canyon and/or its tributary). The other mentioned CNPS List 1B or List 2 plant species have not been identified on the project site during previous biological and monitoring surveys performed in support of the proposed project, the Otay Ranch project (e.g., REC 2004 and Dudek 2004) or the MSCP, so are considered unlikely to occur within the boundaries of the proposed project.

Special Status Wildlife Species

Federally- and/or state-listed Threatened or Endangered wildlife species known to occur in the Otay Ranch area include the San Diego fairy shrimp (*Branchinecta sandiegoensis*), Riverside fairy shrimp (*Streptocephalus woottoni*), Quino checkerspot butterfly (*Euphydryas editha quino*), coastal California gnatcatcher (*Polioptila californica californica*), southwestern willow flycatcher (*Empidonax traillii extimus*), and least Bell's vireo (*Vireo bellii pusillus*). None of these species are expected to occur on the project site due to lack of suitable habitat.

Several federal Species of Concern and state Species of Special Concern are known to occur in the project region. These species may meet the criteria in Section 15380 of the CEQA, which states that if a species meets the definition of Threatened or Endangered, it may be treated as such under CEQA. Therefore, if a population of these species is found, impacts to these species may be considered significant according to CEQA. Federal Species of Concern and/or state Species of Special Concern known to occur in the Otay Ranch region include the tricolored blackbird (*Agelaius tricolor*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), orange-throated whiptail (*Aspidoscelis hyperythrus*), coastal cactus wren (*Campylorhynchus brunneicapillus couesi*), Dulzura pocket mouse (*Chaetodipus californicus femoralis*), monarch butterfly (*Danaus plexippus*), southwestern pond turtle (*Emys marmorata pallida*), arroyo chub (*Gila orcutti*), San Diego desert woodrat (*Neotoma lepida intermedia*), coast horned lizard (*Phrynosoma coronatum*) [Blainvillei population], western spadefoot (*Spea hammondii*), and two-striped garter snake (*Thamnophis hammondii*). None of these species are expected to occur on the proposed project site due to lack of suitable habitat.

Special Status Habitats

Section 404 of the Clean Water Act (CWA) regulates the placement of dredged and fill material into waters of the United States, including wetlands. Discharges of dredged and fill material are commonly associated with activities such as channel construction and maintenance, fills to create development sites, transportation improvements, and water resource projects (such as dams, jetties, and levees). Excavation activities (e.g., mechanized land clearing, ditching, channelization, runoff from disposal areas, and others) also result in at least some discharge of dredged materials, and are thus regulated. The CWA authorizes the issuance of permits for such discharges as long as the proposed activity complies with environmental requirements specified in Section 404(b)(1) of the CWA. Section 404 is the primary federal program regulating activities in wetlands. The Section 404 program is administered by both the ACOE and the U.S. Environmental Protection Agency

(USEPA), while the U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), and several state agencies play important advisory roles.
The ACOE has primary responsibility for the permit program and is authorized, after notice and opportunity for a public hearing, to issue Section 404 permits. In evaluating individual Section 404 permit applications, the ACOE determines compliance with Section 404(b)(1) guidelines and carries out a public-interest review. This review involves balancing such public-interest factors as conservation, economics, aesthetics, wetlands protection, cultural values, navigation, fish and wildlife values, water supply, and water quality. The ACOE also considers comments received from the USEPA, USFWS, NMFS, and state resource agencies. The ACOE is obligated to permit the "least environmentally damaging practicable alternative," provided one exists. Also, the ACOE may not issue a permit before the local RWCQB has issued a water quality "certification" or "waiver" of compliance with Section 401 of the federal CWA.

The CDFG has jurisdictional authority over riparian resources associated with rivers, streams, and lakes under California Fish and Game Code Sections 1600-1607. Activities of state and local agencies and public utilities that are project proponents are regulated by the CDFG under Section 1602 of the code and regulates work that will: substantially divert, obstruct, or change the natural flow of a river, stream, or lake; substantially change the bed, channel, or bank of a river, stream, or lake; or use material from a streambed. CDFG enters into a Streambed Alteration Agreement with a project proponent and can impose conditions on the agreement to ensure no net loss of riparian values or acreage.

Due to the fact that the CDFG includes under its jurisdiction streamside habitats that under the federal definition may not qualify as jurisdictional waters and/or wetlands of the U.S. on a particular project site, CDFG jurisdiction may be broader than that of the ACOE. As an example, riparian forests in California often lie outside the plain of ordinary high water regulated under Section 404 of the CWA, and often do not have all three parameters (wetland hydrology, hydrophytic vegetation, and hydric soils) sufficiently present to be regulated as a wetland. However, riparian forests are frequently within CDFG regulatory jurisdiction under Section 1602.

REC (2004), Dudek (2004), and URS (2004) did not identify ACOE and/or CDFG jurisdictional waters and/or wetlands or streambeds or banks within the project site. Indications of the presence of ACOE or CDFG jurisdictional wetland plants or water/wetland hydrology were not observed, and are not expected to occur within the project site; therefore ACOE and/or CDFG jurisdictional areas do not occur.

CONCLUSIONS/RECOMMENDATIONS

The proposed project would permanently impact approximately 7.6 acres of the agricultural and 4.4 acres of the non-native grassland vegetation types (Exhibit 3, see attached). It is estimated that temporary construction impacts associated with the proposed project would impact approximately 2.2 acres of the agricultural and 2.3 acres of the non-native grassland vegetation types (Exhibit 3, see attached). Under the MSCP, the agricultural vegetation type is a Tier IV habitat and the non-native grassland vegetation type is a Tier III habitat, which do not typically result in significant constraints to development.

The project site contains no special status habitat types or native or non-native vegetation types that are likely to provide any potential to support special status plants or wildlife species. Though unlikely to occur, there is some potential for the Otay tarplant to occur within the FAA VORTAC portion of the proposed project footprint. The Otay tarplant is a covered species within the MSCP and any plants subsequently observed would not represent a major population meriting 100 percent conservation as per the MSCP. The stockpiling of topsoil for later rebroadcast within the immediate

project area is recommended. No other potential biological constraints to development currently exist on the project site. No other recommendations or restrictions pertaining to biological resources would apply.

Respectfully submitted,

BONTERRA CONSULTING

Jeffrey C. Galizio

Jeffrey C. Galizio
Senior Project Manager, Biological Services

Attachments: Exhibits 1, 2, and 3

R:\Projects\DEA\J017\Bio Constraints-060904.DOC

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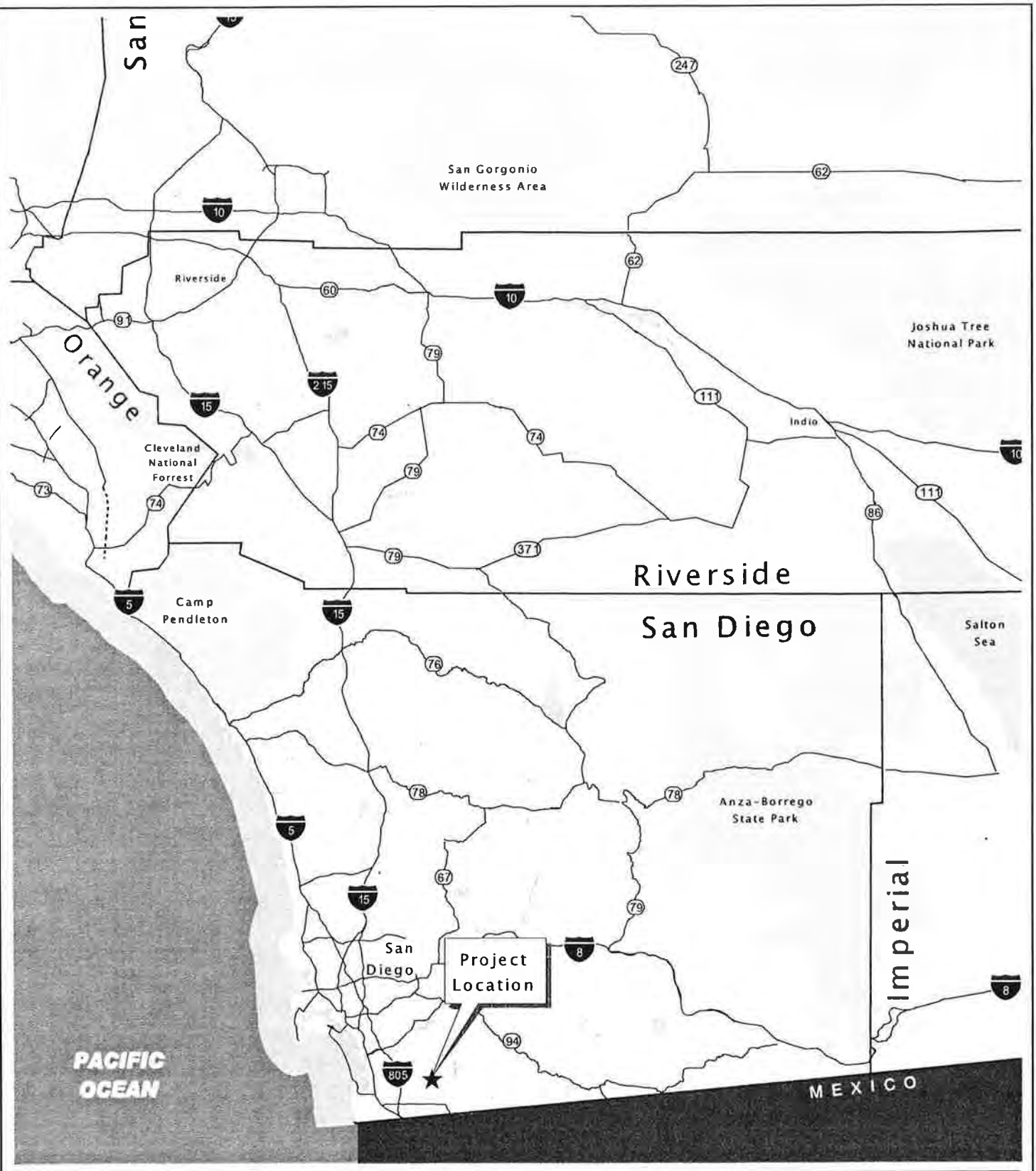

Regional Location

Exhibit 1

Otay Ranch Village 7 Road Extension

10 0 10 20 Miles

Bonterra CONSULTING

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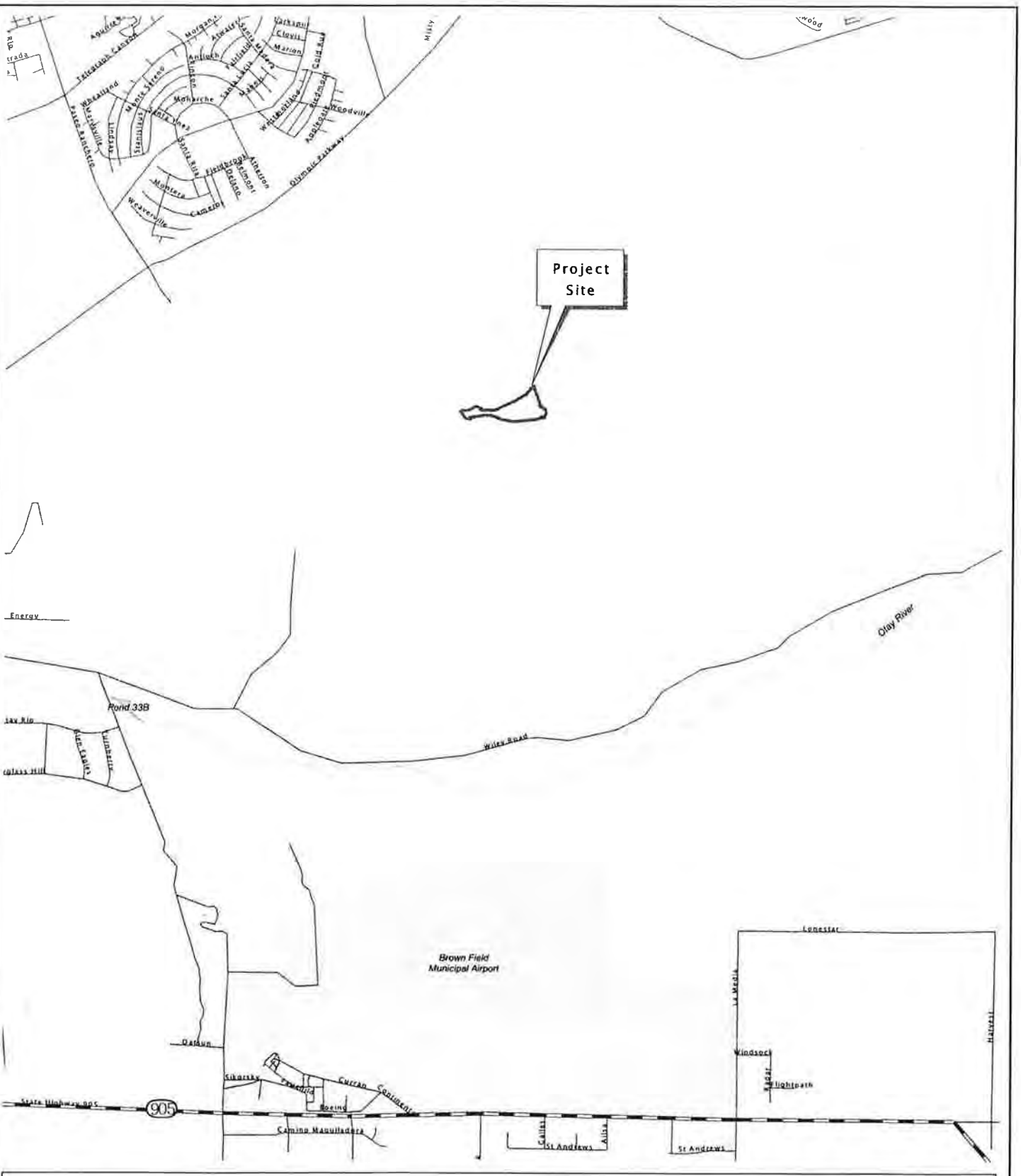

Local Vicinity

Exhibit 2

Otay Ranch Village 7 Road Extension

BonTerra CONSULTING

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Biological Resources

Exhibit 3

Otay Ranch Village 7 Road Extension

300 0 300 Feet

BonTerra CONSULTING

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APPENDIX H-5

WETLAND DELINEATION ON OTAY LAND COMPANY PARCEL B

URS

May 11, 2004

Mr. Jon Rilling
Otay Land Company, LLC
1903 Wright Place
Suite 220
Carlsbad, California 92008-6528

Subject: Wetland Delineation on Otay Land Co. Parcel B, URS Project No. 27653064.00020

Dear Mr. Rilling:

This letter reports the results of the survey for jurisdictional wetlands and other Waters of the U.S. that was conducted on Otay Land Co. Parcel B by URS Corporation biologists.

Introduction
URS Corporation biologists conducted a survey to identify potential wetlands or other Waters of the U.S. within Otay Land Co. Parcel B on the north side of the Otay River Valley, northeast of Coors Amphitheatre in the southeastern portion of Chula Vista, California (Figure 1).

Methods
Potential wetlands and waters were assessed onsite by surveying for indicators of hydrophytic vegetation, wetland hydrology, and hydric soils. Conclusions regarding the presence or absence of wetlands or waters onsite included consideration of potentially different areas of regulation by the Corps and California Department of Fish and Game (CDFG). URS Corporation biologists conducted the assessment on April 19, 2004.

The survey area was walked, and topographic low areas were investigated for evidence of hydrophytic vegetation or a channel with a well-defined bed and bank. Soil pits were not excavated because there was no evidence of wetland or other Waters of the U.S. in the survey area. Photographs of the survey area were taken and representative photos are attached.

Results and Conclusion
The survey area is dominated by dense non-native grasses such as Hare Barley (*Hordeum murinum* ssp. *leporinum*) and Wild Oat (*Avena barbata*) with broad-leaved species such as Black Mustard (*Brassica nigra*) and Russian Thistle (*Salsola tragus*). Hydrophytic vegetation was not observed within the survey area. The area is mostly flat to gently sloping terrain with no wetland hydrology. A formal wetland delineation per the U.S. Army Corps of Engineers was not conducted because of the lack of any of the three

URS Corporation
1615 Murray Canyon Road
Suite 1000
San Diego, CA 92108
Tel: 619.294.9400
Fax: 619.293.7920

criteria: hydrophytic vegetation, wetland hydrology, and hydric soils. The survey area does not support jurisdictional wetlands or Other Waters of the U.S.

Please call me at (619) 294-9400 if you have any comments or questions.

Sincerely,

Patrick Mock for
Senior Biologist

Attached: Figure1 and Site Photographs

Cc: Steve Power, City of Chula Vista

SOURCES: SDDPC (1995 Aerial);
SanGIS (April 2004 parcels).

OTAY PARCEL B
OTAY LAND COMPANY

URS

500 0 500 1000 Feet

SCALE: 1" = 1,000" (1:12,000)

CHECKED BY: JR	DATE: 5-12-04	FIG. NO: 1
PM: PM	PROJ. NO: 27653064.00020	

G:\gis\projects\157\27653064\aprs\parcel_b_surveyarea.apr

Site Photographs

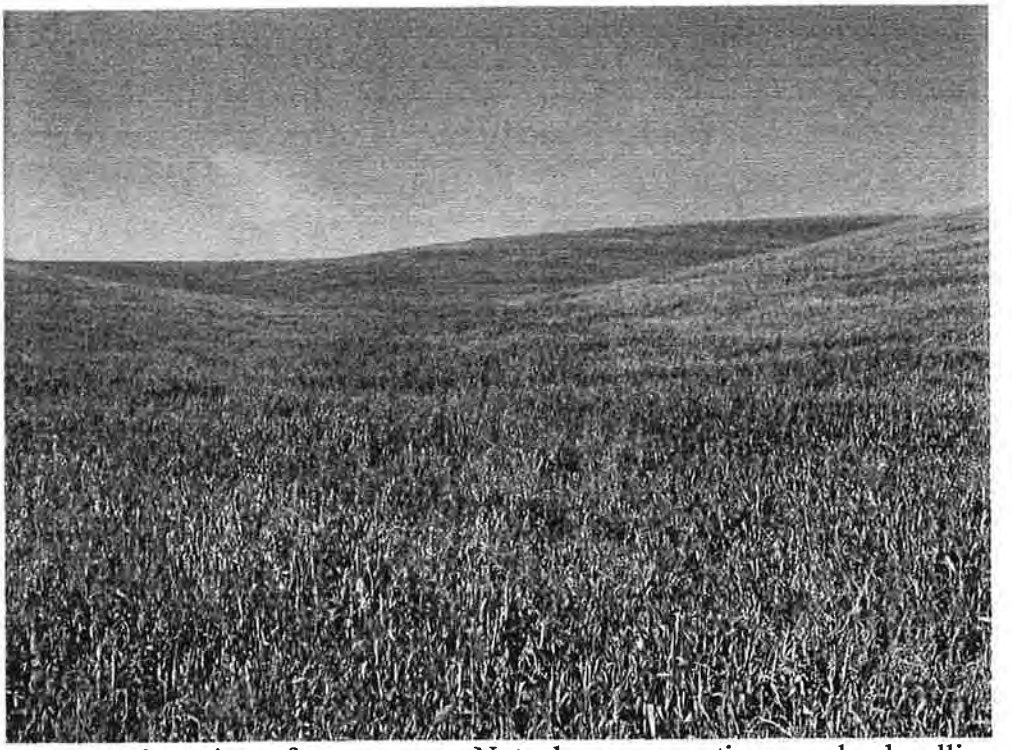

Photo 1. Overview of survey area. Note dense non-native grassland, rolling terrain, and lack of wetland hydrology.

Photo 2. Overview of survey area looking north.

Photo 3. View of non-native grassland at north end of the survey area.

Photo 4. View of survey area looking east.

APPENDIX H-6

BIOLOGICAL TECHNICAL REPORT FOR THE SWEETWATER UNION HIGH SCHOOL NO. 13

BIOLOGICAL TECHNICAL REPORT
FOR THE
SWEETWATER UNION HIGH
SCHOOL NO. 13

PREPARED FOR:

ProjectDesign Consultants
701 B Street, Suite 800
San Diego, CA 92101
(619) 234-0349

PREPARED BY:

REC Consultants, Inc.
9517 Grossmont Summit Drive
La Mesa, California 91941
(619) 466-0107

March 2004

Elyssa Robertson
Certified Biologist

Table of Contents

Table of Contents Continued

SUMMARY

The proposed project is the construction of the Sweetwater Union High School No. 13 and the associated roads on approximately 135.86 acres within the City of Chula Vista. The project is located west of Otay Lakes and south of Birch Road in east Chula Vista. The project is located within the City of Chula Vista's Subarea Plan of the Multiple Species Conservation Plan (MSCP) and is subject to the requirements of the Otay Ranch General Development Plan (GDP) and Otay Ranch Resource Management Plan (RMP).

This report describes and assesses the biological resources onsite, identifies impacts to these resources from the proposed development, and identifies mitigation measures that conform to the GDP and RMP, therefore reducing any impacts to below a level of significance.

The biological resources onsite include two habitat types: general agriculture and non-native grassland. No federally or state listed plant or animal species were observed onsite. One Army Corps of Engineers (ACOE) jurisdictional drainage exists onsite. Sweetwater Union High School No. 13 proposes to develop on approximately 135.86 acres with access roads, and public high school facilities including classrooms, parking lots, and playing fields.

The Otay Ranch GDP considers non-native grasslands as sensitive habitat under the MSCP. One sensitive plant species, the San Diego sunflower (*Viguiera laciniata*), was observed near the road alignment, but offsite.

Implementation of the project would impact 135.86 acres onsite, consisting of approximately 82.9 acres of general agriculture and 1.5 acres of non-native grassland. There are no proposed offsite impacts. All water and sewer utilities supporting the proposed development would be connected to existing underground lines.

The loss of general agriculture habitats would not be considered significant. The loss of non-native grassland habitats would be considered a significant impact.

Mitigation for habitats will be consistent with the Otay Ranch Environmental Impact Report and Resource Management Plan. The mitigation measures contained within the RMP and GDP meet or exceed those set by the Multiple Species Conservation Plan. The RMP's Preserve Conveyance Plan sets the policies which govern the orderly transfer of land to open space for resource protection and management by the preserve manager. The current ratio in the Conveyance Plan is 1.118 acres of mitigation for every acre of native habitat impacted regardless of the habitat type. Mitigation is not required for "common use areas" which the plan defines as "local parks, schools, arterials, SR 125, and lands designated as a public use area". Therefore, mitigation will not be required for the construction of the Sweetwater Union High School.

1.0 INTRODUCTION

The following report summarizes the results of biological surveys for the Sweetwater Union High School No. 13. The primary objectives of the survey are to assess existing conditions of onsite biological resources and to identify potential impacts of the proposed development to these resources.

The Sweetwater Union High School project proposes to develop on the approximate 135.86 acre site with three access roads, three borrow areas and public high school facilities, including classrooms, parking lots, and playing fields. The project proposes the clearing and grading of 135.86 acres onsite.

2.0 GEOGRAPHY & GEOLOGY

The 135.86 acres Sweetwater Union High School project is located west of Otay Lakes and south of Birch Road in east Chula Vista, California (Figure 1 and 2). The property is bounded by active construction to the north, future Rock Mountain Road to the south, future State Route 125 to the east, and future Magdalena Avenue to the west. Currently, the proposed project site is undeveloped and has been historically used for agriculture. The project falls within the boundaries of the City of Chula Vista's Multiple Species Conservation Plan (MSCP) Subarea Plan and will be consistent with the development framework/requirements stated in the southern portion of the Otay Ranch General Development Plan (GDP).

Topography onsite consists of gentle rolling hills that have been used for agricultural purposes and ranges from 480 to 590 feet above mean sea level. There is an onsite ephemeral drainage in the Wolf Canyon and Otay watershed. The site is located within the USGS Otay Mesa 7.5' Quad, Township 18 South, Range 1 West. According to the *Soil Survey of San Diego Area, California* (Bowman 1973), two soils occur onsite. These are Diablo clay loams of 2-9% (DaC) and 9-15% (DaD) slopes.

3.0 SURVEY METHODOLOGY

Biological mapping of the habitat onsite was conducted on foot by REC biologists Victor Novik and Valerie Walsh on January 7, 2004. Observations were documented on a topographic map scaled at 1"=200'. Wildlife species were identified directly by sight and/or vocalizations, and indirectly by scat, track, or burrows. Field notes were maintained throughout the surveys and species of interest were mapped. All species observed are noted in Appendices A and B and sensitive plant and wildlife species with potential to occur are listed in Appendices C and D. The presence or absence of suitable habitat for sensitive species was also identified. No focused surveys for sensitive plant or animal species were conducted.

Scientific nomenclature and common names for animal species referred to in this report follow American Ornithological Union (AOU 2000) for birds, Jones (1992) for mammals, Jennings (1983) and Stebbins (2003) for reptiles and amphibians, and Powell (1979) for insects. Scientific

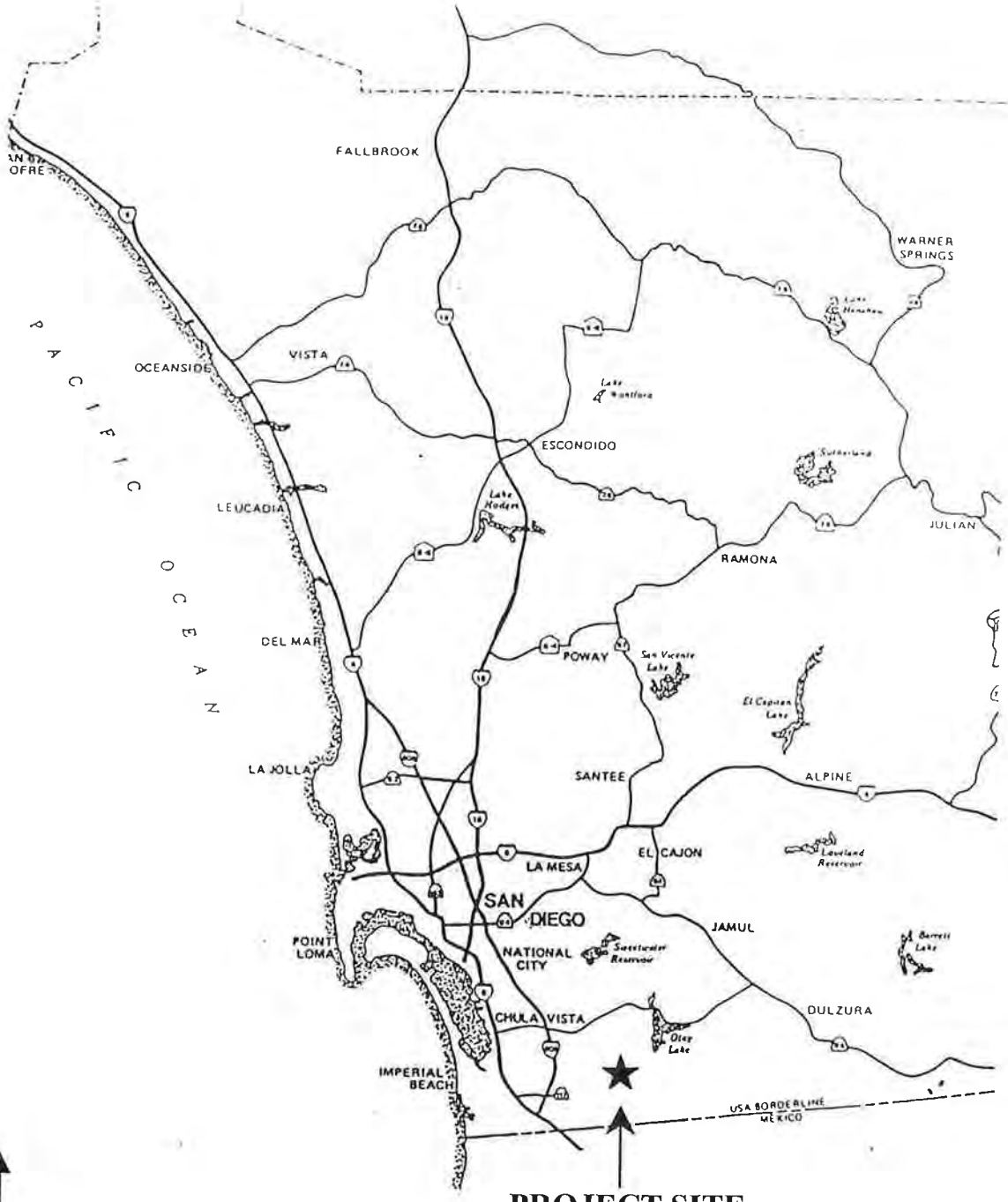

Figure not to scale

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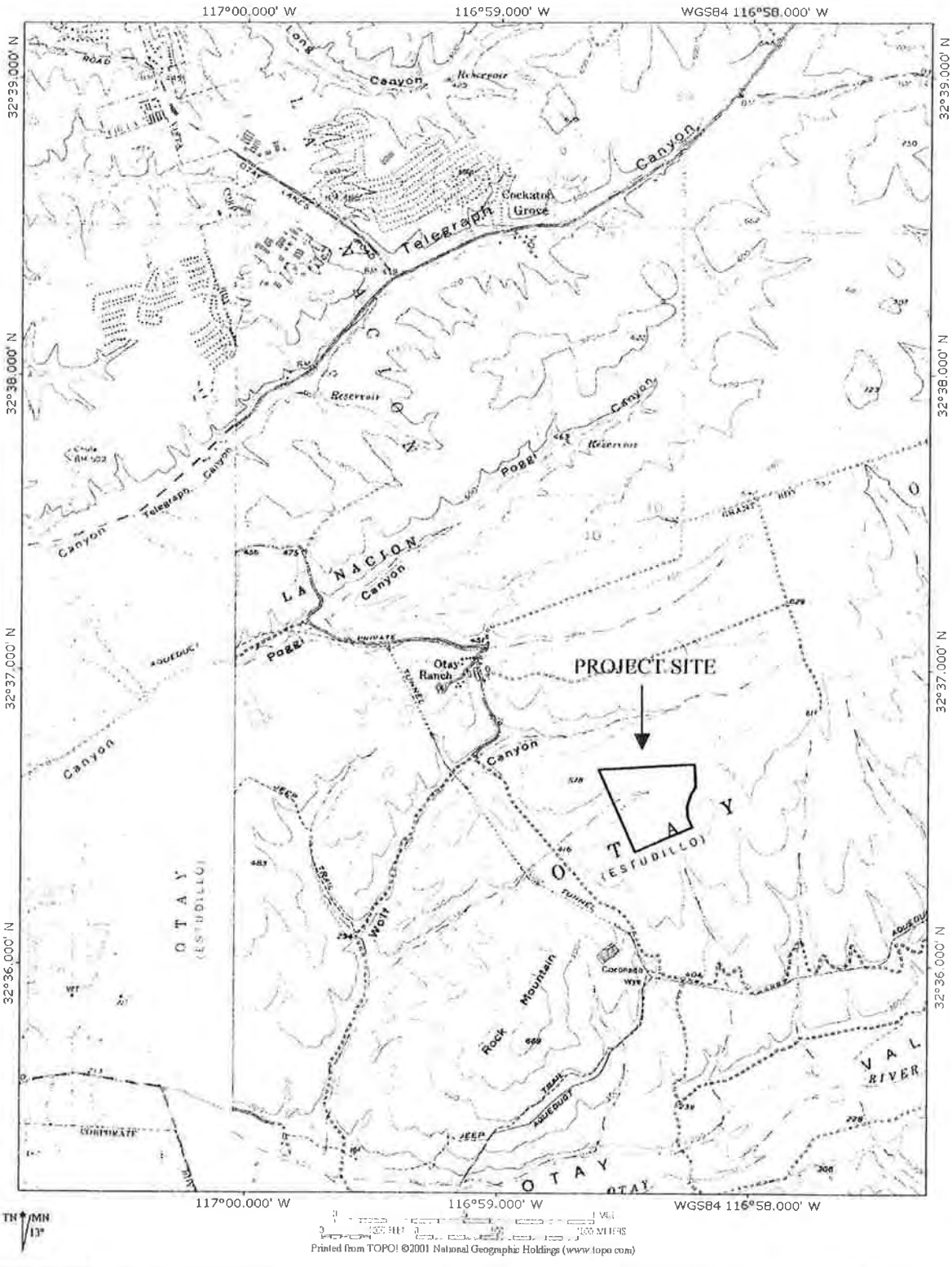
REGIONAL LOCATION MAP
Sweetwater Union High School No. 13

Figure 1



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SITE LOCATION
Sweetwater Union High School No. 13

Figure 2

nomenclature for plants follows the *Jepson Manual: Higher Plants of California* (Hickman 1993), and common names follow Hickman or Beauchamp (1986), as updated by Simpson & Rebman (2001).

Sensitive or special interest plant and wildlife species are those considered rare, threatened, or endangered within the state or region by local, state, or federal resource conservation agencies. Sensitive species are so called because of their limited distribution, restricted habitat requirements, particular susceptibility to human disturbance, degradation due to development or invasion by non-native species, or a combination of all of these factors. Sources used for the determination of sensitive biological resources include: U.S. Fish and Wildlife Service (USFWS 2003), California Department of Fish and Game (CDFG 2003), California Natural Diversity Data Base (CNDDB 2001), and California Native Plant Society (2001).

4.0 EXISTING CONDITIONS

The following discussion summarizes the existing biological resources onsite including habitats and vegetation, wildlife, and sensitive biological resources. All habitats and sensitive resources are shown on Figure 3.

4.1 Vegetation

REC's site surveys identified seventeen plant species (including nine non-native species) onsite. Habitat descriptions are based on the Holland's Preliminary Descriptions of the Terrestrial Natural Communities of California (1986), as updated by Oberbauer (1996). There were two habitat types on the project site: general agriculture and non-native grassland.

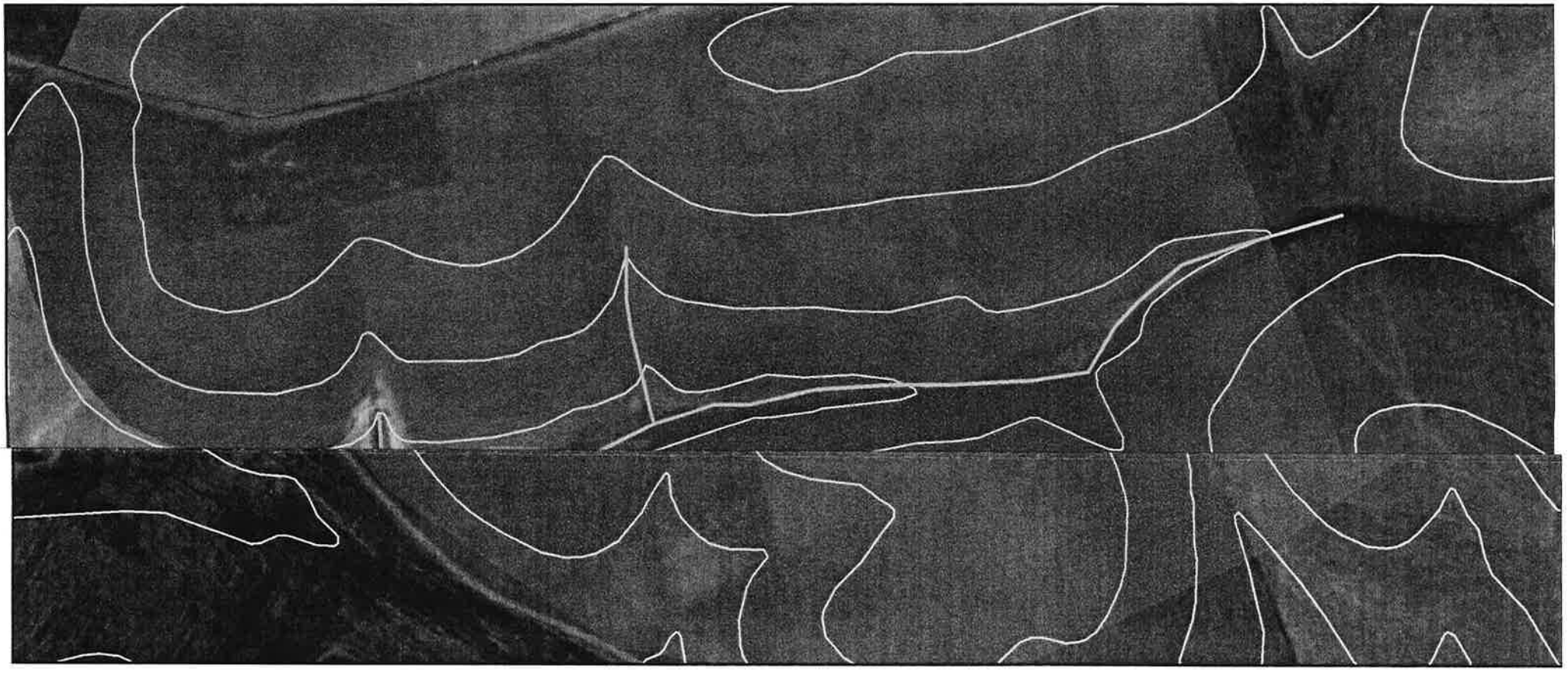
General Agriculture (Habitat Code 18000) 125.82 acres
Habitat mapped as general agricultural onsite include land that is currently or recently used to produce wheat (*Triticum* sp.). This habitat is located over the majority of the site. Otay Ranch has long been used for agricultural purposes.

Non-native Grassland (Habitat Code 42200) 10.04 acres
Non-native grassland is a community with dense to sparse cover of annual non-native grasses and herbs. This habitat type is usually associated with fine textured clay soils and is located near the Wolf Canyon drainage that bisects the site. Common species onsite include filaree (*Erodium* sp.), doveweed (*Eremocarpus setigerus*), brome grasses (*Bromus sp*), mustard (*Brassica* sp.), tocalote (*Centaurea melitensis*), and sweet fennel (*Foeniculum vulgare*).

4.2 Wildlife

Eleven different animal species were identified onsite: two invertebrate species, seven birds species, and two mammal species. Black phoebe (*Sayornis migricans*), Brewer's blackbird (*Euphagus cyanocephalus*), common raven (*Corvus corax*), house finch (*Carpodacus mexicanus*), and western meadowlark (*Sturnella neglecta*) were typical species onsite. Onsite mammals include evidence of Botta's pocket gopher (*Thomomys bottae*), and three coyotes (*Canis latrans*). No reptiles or amphibians were observed onsite.

Biological Resources



Sweeetwater Union High School

Figure

3

Legend

- Non-wetland Water
- Agricultural
- San Diego Sunflower
- non-native grassland

0 155 310 620 930 Feet

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March 2004

4.3 Sensitive Resources

Sensitive species are those, which are considered rare, threatened, or endangered within the state or region by local, state, or federal resource conservation agencies. Sensitive habitats generally support plant or wildlife species considered sensitive by these resource protection agencies or groups. Sensitive species and habitats are so called because of their limited distribution, restricted habitat requirements, particular susceptibility to human disturbance, degradation due to development or invasion by non-native species, or a combination of all of these factors. Sources used for the determination of sensitive biological resources include: U.S. Fish and Wildlife Service (USFWS) (USFWS, 1996 and 1997); California Department of Fish and Game (CDFG) (CDFG, 1992, 1994 and 1997); California Native Plant Society (CNPS 2001), and the City of Chula Vista's MSCP Subarea Plan.

Habitats

The onsite non-native grassland habitat is considered sensitive. Non-native grasslands, while common, are afforded some level of protection. Non-native grassland is a vegetation type that, although dominated by exotic weedy species, has become naturalized and provides ecological value for small mammals and raptor foraging.

Plant Species

Sensitive or special interest plant species are those considered rare, threatened, or endangered within the state or region by local, state, or federal resource conservation agencies. Sensitive plant species are so called because of their limited distribution, restricted habitat requirements, particular susceptibility to human disturbance, or a combination of these factors. One individual sensitive plant was observed in the non-native grassland near the road alignment: the San Diego sunflower (*Viguiera laciniata*).

Wildlife Species

Sensitive animal species include those species listed by the U.S. Fish and Wildlife Service (USFWS 1996) and California Department of Fish and Game (CDFG 2001).

No sensitive wildlife species were found onsite.

STATE AND FEDERAL REGULATORY REQUIREMENTS

The State of California passed the Natural Communities Conservation Planning (NCCP) Act in 1991. The NCCP is broader in its orientation and objectives than the California and Federal Endangered Species Acts. These laws are designed to identify and protect individual species that have already declined significantly in number. The objective of the NCCP is to conserve natural communities and accommodate compatible land use. The pilot program is a cooperative effort between the state and federal governments and numerous private partners. The focus of the pilot program is the coastal sage scrub habitat of Southern California. This habitat is home to the California gnatcatcher, a federally threatened species, and approximately 100 other potentially threatened or endangered species. The habitat is fragmented and distributed over more than

6,000 square miles encompassing San Diego, Orange, Riverside, Los Angeles, and San Bernardino Counties.

Otay Ranch is divided into areas of development and areas to be preserved. The proposed high school is located within a development area.

No federally threatened species or federal Species of Special Concern were found onsite. The proposed project is consistent with the City's of Chula Vista's MSCP Subarea Plan. The MSCP allows the City to issue approvals for incidental take of State and federally listed species, which are covered under the Plan. This report addresses consistency with the MSCP.

Army Corps of Engineers (ACOE)

Pursuant to Section 404 of the Clean Water Act, any onsite wetlands and waters of the U.S., if they occur, would be subject to permit provisions regulating activities within their boundaries. The ACOE, as well as the EPA enforce these provisions, with technical input from the USFWS. Three factors are considered in the designation of wetlands: the presence of hydrophytic vegetation, hydric soils, and site hydrology. According to ACOE methodology, all three wetland indicators must be present to make a jurisdictional ruling (Environmental Laboratory 1987). Areas indicated as wetlands by all three factors during the rainy season may lack the indicators of hydrology and/or vegetation during the dry season, or the vegetation may have been altered or removed through human disturbance. Such areas may still be regarded as wetlands by resource agencies.

The onsite blue-line drainage in Wolf Canyon would be regulated by the ACOE. The ACOE has jurisdiction over "Waters of the U.S." and regulates areas that are not wetlands but have a defined bank and transport water during rain events.

California Department of Fish and Game (CDFG)

The CDFG regulates streambeds under Section 1602 of the California Fish and Game Code through their Streambed Alteration Agreement Program. Any alteration of any stream course within the State of California requires a Streambed Alteration Agreement from the CDFG.

A stream is defined by the California Code of Regulations (14 CCR 1.72) 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 wildlife. This includes watercourses having a surface or subsurface flow that supports or has supported riparian habitat.

The limits of CDFG jurisdiction are defined in the code (Section 1602) as the bed, channel, or bank of any river, stream or lake.

Since the onsite blue-line drainage in Wolf Canyon has a defined bed and bank, it would be regulated by the CDFG. Any alteration of the drainage onsite will require a permit from the CDFG.

City of Chula Vista

The proposed high school site is located within the City of Chula Vista's Multiple Species Conservation Program (MSCP) area. The General Development Plan for Otay Ranch has identified areas of the Ranch which will be 100% conserved. It has also identified areas that will be developed.

5.0 PROJECT IMPACTS

Impacts on biological resources can be categorized as direct, indirect, or cumulative. Direct impacts are a result of project implementation, and generally include: the loss of vegetation and sensitive habitats and populations; the introduction of non-native species that may out compete and displace native vegetation; activity related to mortalities of wildlife; loss of foraging, nesting, or borrowing habitat; destruction of breeding habitats and fragmentation of wildlife corridors. Cumulative impacts occur as a result of on-going direct and indirect impacts for unrelated or fragmented projects overall. Cumulative impacts are assessed on a regional basis and determined by the overall effect of numerous activities on a sensitive resource over a larger area.

There are three levels of adverse impacts associated with biological resources: significant, locally important, and not significant. Significant impacts would result if the project would affect regionally important or unique species or habitat. These resources include federal or state-listed species or their habitat; biotic communities, vegetation associations, and habitats of plants and animal species that are highly restricted on a regional basis; habitat that serves as a concentrated breeding, feeding, resting, or migrating ground and is limited in availability; biotic resources of scientific interest because they are at the extreme of either their physical or geographical limits or represent an unusual variation in a population or community; and areas that serve as habitats to regional plant, wildlife and game populations and fisheries.

Significant impacts occur if the activities of the proposed project would affect federal or state candidate species, regionally sensitive species, or species of special concern. The determination of significance is dependent upon the extent of impact with respect to the regional distribution of the resource.

Locally important impacts may occur on resources that support the functioning and integrity of adjacent areas of high significance. These resources include habitats that are key to the maintenance of localized plant and animal populations, even if not significant; and corridors of zones that serve to link areas of high significance and facilitate their ecological interactions.

Insignificant impacts include activities which affect natural resources, but would not change or stress the sensitive biological resources in the region. These areas are commonly occurring habitats and areas where biological resources are previously removed or significantly altered. It should be noted, however, that common habitats could take on increased importance in places where they function as buffer zones, sensitive habitats, or wildlife corridors.

The proposed Sweetwater Union High School project creates an impact footprint of approximately 135.86 acres (Table 1). This area includes all proposed development (Figure 4). Management directives will be implemented according to a RMP.

Table 1. Anticipated Impacts for the Sweetwater Union High School Project

Habitat Type	Total Onsite (acres)	Proposed Impacts (acres)	% Impacted
General Agriculture	125.82	125.86	100
Non-native Grassland	10.04	10.04	100
TOTAL	**135.86**	**135.86**	100

5.1 Significance of Impacts

Non-native grassland is considered sensitive habitat by resource agencies and the City of Chula Vista.

Non-native Grassland

The proposed project will impact 1.5 acres of non-native grassland habitat through grading and fuel modification zones. Non-native grassland provides nesting and foraging habitat for a variety of raptor species. Any impacts to this habitat are considered significant.

Jurisdictional Areas

The project will affect 0.14 acres of non-wetland Waters of the U.S. Impacts to these areas is considered significant and will require federal and state permits, along with mitigation.

5.2 Sensitive Species

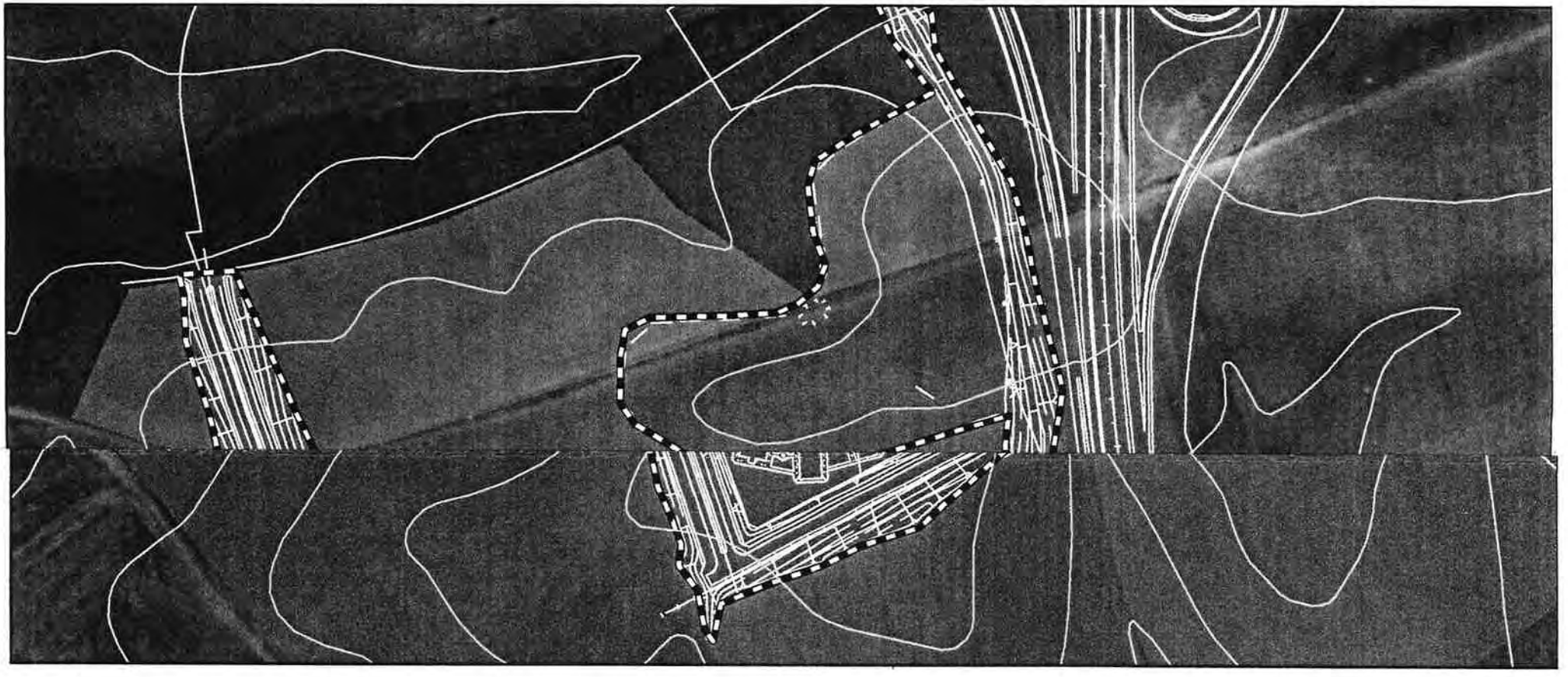
Direct Impacts

The San Diego sunflower is a sensitive species covered under the City of Chula Vista MSCP Subarea Plan, however, impacts to this species would not be considered significant because a single individual does not substantiate a population. Also, single specimen was identified offsite and will not be impacted by project.

5.3 Wildlife Corridors

The Sweetwater Union High School project site is located south of Wolf Canyon and north of the Otay River. The tributary/drainage onsite is located within the same watershed. The movement of wildlife is of local importance, especially for those species that may have limited home ranges and/or dispersal capabilities. The drainage onsite may create a corridor for species moving through the property. Drainages are particularly effective habitat linkages for reptiles, amphibians, and small mammals. These natural corridors also offer cover and suitable microclimate for many species that tend to avoid making overland migrations.

Anticipated Impacts



Sweeetwater Union High School

Legend

- Agricultural
- non-native grassland
- Project boundary
- Non-wetland Water
- San Diego Sunflower

0 200 400 800 Feet

Figure 4

R·E·C Consultants, Inc.

March 2004

5.4 Other Impacts

Erosion

Erosion from construction activities or irrigation runoff may potentially degrade the water quality of any drainages offsite and within the watershed. This erosion can also disturb native vegetation and facilitate the establishment of exotic plant species. Impacts to water quality offsite related to onsite erosion would be considered adverse but not significant due to the limited area of their potential affect.

Landscaping

Revegetation efforts can potentially introduce exotic or cultivated species that can affect the integrity of preserved habitat within open space regions adjacent to development. These exotic plant species may subsequently upset the ecology of adjacent habitats through resource competition and/or allelopathy. Indirect impacts associated with exotic species introduction during landscaping would be adverse, but not significant, because of the relatively small amount of landscaping proposed.

Predator and Exotic Species Impacts

Non-native plants and animals can have harmful and far-reaching impacts to the ecological integrity of preserve areas. Habitats are dynamic systems that are dependent upon biotic interactions and predator prey relationships that maintain the various trophic levels upon which they are built. Any disturbance of this mosaic resulting from the introduction of a non-native plant or animal can interrupt this ecology of the area, speeding up the replacement of endemic plants and wildlife with exotic species, which are opportunistic in penetrating disturbed biological systems. Impacts associated with these introductions would be adverse, but not significant due to the limited area of their potential affect.

Feral, Domestic, and Native Animal Control

The development of the high school can upset the ecology of an area by introducing sources of food for many nuisance animals in the form of food and trash. These sources of food may influence the populations of rodents and change the behavior of many animals that would typically forage for food in native habitats. Impacts associated with the introduction of non-native species would impact biological resources on a local scale, and therefore considered adverse, but not significant because of the isolated nature of the school.

Exotic Plant Control

When conditions allow, non-native plants can dramatically alter habitat areas, often facilitating sweeping changes in soil chemistry and resident wildlife assemblages. Since plants are a very important element in the trophic chain, conservation and wise stewardship of these biological resources is the most effective technique for maintaining the viability of native habitats. Impacts associated with the introduction of non-native species would impact biological resources on a local scale; therefore, these impacts are considered adverse, but not significant, due to the relatively small area impacted.

6.0 PROPOSED MITIGATION

The proposed Sweetwater Union High School project will impact general agriculture and non-native grassland habitats. The following mitigation measures are required to reduce potentially significant impacts to below a level of significance. Impacts to biological resources, per habitat, are discussed below with corresponding mitigation and level of significance after mitigation. Recommendations for resolving adverse impacts are provided where appropriate.

6.1 Sensitive Habitats

General Agriculture

The clearing of agricultural habitat is not considered significant and will not require any mitigation.

Non-native grassland

Mitigation for habitats will be consistent with the Otay Ranch Environmental Impact Report and Resource Management Plan. The mitigation measures contained within the RMP and GDP meet or exceed those set by the Multiple Species Conservation Plan. The RMP's Preserve Conveyance Plan sets the policies which govern the orderly transfer of land to open space for resource protection and management by the preserve manager. The current ratio in the Conveyance Plan is 1.118 acres of mitigation for every acre of native habitat impacted regardless of the habitat type. Mitigation is not required for "common use areas" which the plan defines as "local parks, schools, arterials, SR 125, and lands designated as a public use area". Therefore, mitigation will not be required for the construction of the Sweetwater Union High School.

6.2 Sensitive Plant Species

There would not be a significant impact to sensitive plant species, therefore, no mitigation is required.

6.3 Sensitive Animal Species

There would be no significant impact to sensitive animal species, therefore, no mitigation would be required.

6.4 Jurisdictional Areas

Mitigation for the impact of 0.14 acres of non-wetland Waters of the U.S. would require the creation of at least 0.14 acres (1:1 to 3:1) of non-wetland waters of the U.S. The agencies will determine the final mitigation amount. Mitigation will be sought in an offsite approved mitigation bank, preferably in the same watershed.

Victor Novik and Valerie Walsh prepared this report.

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APPENDIX A

PLANTS OBSERVED ON THE SWEETWATER UNION HIGH SCHOOL PROJECT

APPENDIX A PLANTS OBSERVED ON THE SWEETWATER UNION HIGH SCHOOL PROJECT			
Species Name	**Common Name**	**Family**	**Habitat**
Baccharis sarothroides	broom Baccharis	Asteraceae	NNG
Brassica sp.	mustard	Brassicaceae	NNG
Bromus sp.	brome grass	Poaceae	NNG
Calystegia macrostegia	morning-glory	Convolvulaceae	NNG
*Centaurea melitensis**	tocalote	Asteraceae	NNG
Chenopodium sp.	Chenopodium	Chenopodiaceae	NNG
*Cirsium vulgare**	bull thistle	Asteraceae	NNG
Eremocarpus setigerus	doveweed	Euphorbiaceae	NNG
*Erodium sp.**	storks bill, filaree	Geraniaceae	NNG
*Foeniculum vulgare**	sweet fennel	Apiaceae	NNG
Isocoma menziesii var. menziesii	spreading goldenbush	Asteraceae	NNG
*Malva parviflora**	cheeseweed	Malvaceae	NNG
*Nicotiana glauca**	tree tobacco	Solanaceae	NNG
*Salsola tragus**	Russian thistle, tumbleweed	Chenopodiaceae	NNG
*Sinapis arvensis**	charlock	Brassicaceae	NNG
*Triticum sp.**	wheat	Poaceae	AG
Viguiera laciniata!	San Diego sunflower	Asteraceae	NNG

* non-native
! sensitive

NNG = Non-native grassland
AG = General agriculture

APPENDIX B

WILDLIFE SPECIES OBSERVED ON THE SWEETWATER UNION HIGH SCHOOL PROJECT

APPENDIX B ANIMALS OBSERVED ON THE SWEETWATER UNION HIGH SCHOOL PROJECT		
Common Name	**Species Name**	**Habitat Observed**
Invertebrates		
Cricket	Family Gryllidae	NNG
Snail	Class Gastropoda	NNG
Birds		
Black phoebe	*Sayornis nigricans*	NNG
Brewer's blackbird	*Euphagus cyanocephalus*	NNG
Common raven	*Corvus corax*	NNG
House finch	*Carpodacus mexicanus*	NNG
Hummingbird	Family Trochilidae	NNG
Song sparrow	*Melospiza melodia*	NNG
Western meadowlark	*Sturnella neglecta*	NNG
Mammals		
Botta's pocket gopher	*Thomomys bottae*	NNG
Coyote	*Canis latrans*	NNG

* Listed as Threatened or Endangered by USFWS or CDFG, or CDFG Species of Special Concern or Fully Protected

** Non-native species

NNG = Non-native grassland

APPENDIX C

SENSITIVE PLANT SPECIES WITH THE POTENTIAL TO OCCUR WITHIN OR ADJACENT TO THE SWEETWATER UNION HIGH SCHOOL PROJECT

APPENDIX C
SENSITIVE PLANTS WITH THE POTENTIAL TO OCCUR ON THE SWEETWATER UNION HIGH SCHOOL PROJECT
(USGS OTAY MESA QUAD, 147 - 179 METERS)

Species Name	Common Name	Family	CNPS	R-E-D	CA/US	MSCP	Growth form, bloom time	Habitat	Potential to Occur Onsite
Acanthomintha ilicifolia	San Diego thornmint	Lamiaceae	1b	2-3-2	CE/FE	Y	Annual herb, Apr-Jun	Chaparral, coastal scrub, valley & foothill grassland, vernal pool/clay; 10-935 m	Low; habitat onsite unsuitable.
Achnatherum diegoensis	San Diego needlegrass	Poaceae	4	1-2-1	-		Perennial herb, Feb-Jun	Chaparral, coastal scrub/rocky, often mesic; 10-700 m	Low; this cryptic grass species is difficult to find in the field, however not known to occur historically onsite, and no known associate species onsite.
Adolphia californica	spineshrub	Rhamnaceae	2	1-3-1	-		Shrub (deciduous), Dec-May	Chaparral, coastal scrub, valley & foothill grassland/clay; 45-300 m	Low; this spiny shrub would have been observed onsite.
Ambrosia chenopodiifolia	San Diego bur-sage	Asteraceae	2	3-3-1	-		Shrub, Apr-Jun	Coastal scrub; 55-155 m	Low; habitat unsuitable onsite.
Ambrosia pumila	San Diego ambrosia	Asteraceae	1b	3-3-2	FE	Y	Perennial herb, May-Sep	Chaparral, coastal scrub, valley & foothill grassland, vernal pools/ often in disturbed areas; 20-415 m	Low; rare throughout San Diego County, this sub-shrub would be likely observed onsite.
Artemisia palmeri	Palmer's sagewort	Asteraceae	4	1-2-1	-		Shrub (deciduous), May-Sep	Chaparral, coastal scrub, riparian scrub, riparian woodland/sandy, mesic; 15-915 m	Low; habitat unsuitable onsite.
Asplenium vespertinum	western spleenwort	Aspleniaceae	4	1-2-2	-		Perennial herb (rhizomatous), Feb-Jun	Chaparral, cismontane woodland, coastal scrub/rocky; 180-1000 m	Low; habitat unsuitable onsite.
Astragalus deanei	Deane's locoweed/milkvetch	Fabaceae	1b	3-3-3	-		Perennial herb, Jan-May	Chaparral, coastal scrub, riparian scrub; 75-670 m	Low; very rare to San Diego County, prefers sandy substrates.
Atriplex coulteri	Coulter's saltbush	Chenopodiaceae	1b	2-2-2	-		Perennial herb, Mar-Oct	Coastal bluff scrub, coastal dunes, coastal scrub, valley & foothill grassland/alkaline or clay; 3-460 m	Low; recent occurences rare, seriously threatened by development.
Baccharis vanessae	Encinitas Baccharis	Asteraceae	1b	2-3-3	CE/FT	Y	Shrub (deciduous), Aug-Nov	Chaparral (maritime, sandstone); 60-720 m	Low; this shrub is likely to have been observed during surveys.
Bergerocactus emoryi	velvet cactus, golden-club cactus	Cactaceae	2	2-2-1	-		Shrub (stem succulent), May-Jun	Closed-cone coniferous forest, chaparral, coastal scrub/sandy; 3-395 m	Low; would have been observed during surveys, threatened by development, and habitat not suitable onsite.
Brodiaea orcuttii	Orcutt's Brodiaea	Themidaceae [Liliaceae]	1b	1-3-2	-	Y	Perennial herb (bulbiferous), May-Jul	Closed-cone coniferous forest, chaparral, cismontane woodland, meadows and seeps, valley & foothill grassland, vernal pools/ mesic, clay, sometimes serpentinite; 30-1615 m	Low; not documented previously onsite.
Calandrinia breweri	Brewer's Calandrinia	Portulacaceae	4	1-2-2	-		Annual herb, Mar-Jun	Chaparral, coastal scrub/ sandy or loamy, disturbed sites and burns; 10-1220 m	Low; uncommon, widely scattered herb, likes sandy substrates.

Species Name	Common Name	Family	CNPS	R-E-D	CA/US	MSCP	Growth form, bloom time	Habitat	Potential to Occur Onsite
Calandrinia maritima	seaside Calandrinia, sea kisses	Portulacaceae	4	1-2-1	-		Annual herb, Feb-Aug	Coastal bluff scrub, coastal scrub, valley & foothill grassland/ sandy; 5-300 m	Low; prefers sandy substrate though may have missed bloom time.
Calochortus catalinae	Catalina mariposa lily	Liliaceae	4	1-2-3	-		Perennial herb (bulbiferous), Feb-May	Chaparral, cismontane woodland, coastal scrub, valley & foothill grassland; 15-700 m	Low; habitat onsite is not ideal for this species.
Camissonia lewisii	Lewis's evening-primrose	Onagraceae	3	?-?-2	-		Annual herb, Mar-Jun	Coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub, valley & foothill grassland/ sandy or clay; 0-300 m	Low; habitat onsite is not ideal for this species.
Caulanthus simulans	Payson's Caulanthus	Brassicaceae	4	1-2-3	-		Annual herb, Mar-Jun	Chaparral, coastal scrub/ sandy, granitic; 90-2200 m	Low; prefers sandy substrate, habitat onsite unsuitable.
Ceanothus verrucosus	wart-stem-lilac	Rhamnaceae	2	2-2-1	-	Y	Shrub (evergreen), Dec-Apr	Chaparral; 1-380 m	Low; habitat unsuitable for this plant species, would have been observed during surveys.
Comarostaphylis diversifolia ssp. diversifolia	summer-holly	Ericaceae	1b	2-2-2	-		Shrub (evergreen), Apr-Jun	Chaparral; 30-550 m	Low; species would have been observed from onsite surveys. Habitat ussuitable onsite.
Convolvulus simulans	bindweed	Convolvulaceae	4	1-2-2	-		Annual herb, Mar-Jul	Chaparral (openings), coastal scrub, valley & foothill grassland/clay, serpentinite seeps; 30-700 m	Low; rare in southern California prefers clay, serpentine soils.
Coreopsis maritima	San Diego sea-dahlia	Asteraceae	2	2-2-1	-		Perennial herb, Mar-May	Coastal bluff scrub, coastal scrub; 5-150 m	Low; habitat onsite not ideal, prefers more coastal environments.
Cylindropuntia californica var. californica	snake cholla	Cactaceae	1b	3-3-2	-	Y	Shrub (stem succulent), Apr-May	Chaparral, coastal scrub; 30-150 m	Low; threatened by development, species would have been observed
Deinandra conjugens	Otay tarplant	Asteraceae	1b	2-2-2	-	Y	Annual herb, May-Jun	Coastal scrub, valley & foothill grassland/ clay; 25-300 m	Low; species threatened by development, habitat unsuitable.
Deinandra paniculata	San Diego tarplant	Asteraceae	4	1-2-2	-		Annual herb, Apr-Nov	Coastal scrub, valley & foothill grassland/ usually vernally mesic; 25-940 m	Low; prefers sandy substrate, and is uncommon in San Diego County.
Dichondra occidentalis	western Dichondra, western ponyfoot	Convolvulaceae	4	1-2-1	-		Perennial herb (rhizomatous), Mar-Jul	Chaparral, cismontane woodland, coastal scrub, valley & foothill grassland; 50-500 m	Low; habitat onsite not ideal.
Dudleya variegata	variegated Dudleya	Crassulaceae	1b	2-2-3	-	Y	Perennial herb, May-Jun	Chaparral, cismontane woodland, coastal scrub, valley & foothill grassland, vernal pools/ clay; 3-550 m	Low; unlikely to occur onsite.
Ericameria palmeri var. palmeri	Palmer's goldenbush	Asteraceae	2	3-2-1	-	Y	Shrub (evergreen), Jul-Nov	Chaparral, coastal scrub/ mesic; 30-600 m	Low; this evergreen shrub would have been observed onsite, rare to the County.

Species Name	Common Name	Family	CNPS	R-E-D	CA/US	MSCP	Growth form, bloom time	Habitat	Potential to Occur Onsite
Eryngium aristulatum var. parishii	San Diego button-celery	Apiaceae	1b	2-3-2	CE/FE	Y	Annual/perennial herb, Apr-Jun	Coastal scrub, valley & foothill grassland, vernal pools/ mesic; 20-620 m	Low; prefers vernal pool habitat.
Euphorbia misera	cliff spurge	Euphorbiaceae	2	2-2-1	-		Shrub, Dec-Aug	Coastal bluff scrub, coastal scrub/ rocky; 10-500 m	Low; prefers maritime sage scrub habitat.
Ferocactus viridescens var. viridescens	coast barrel cactus	Cactaceae	2	1-3-1	-	Y	Shrub (stem succulent), May-Jun	Chaparral, coastal scrub, valley & foothill grassland, vernal pools; 3-450 m	Low; habitat unsuitable onsite.
Fremontodendron mexicanum	southern fremontia, southern flannelbush	Sterculiaceae	1b	3-3-2	CR/FE		Shrub (evergreen), Mar-Jun	Closed-cone coniferous forest, chaparral, cismontane woodland/gabbroic, metavolcanic, or serpentinite; 10-490 m	Low; a conspicuous species if onsite, unsuitable habitat onsite, rare to the County.
Harpagonella palmeri	Palmer's grappling-hook	Boraginaceae	4	1-2-1	-		Annual herb, Mar-May	Chaparral, coastal scrub, valley & foothill grassland/ clay; 20-830 m	Moderate; soil onsite appropriate, may have missed bloom time, plant may possibly occur onsite.
Hesperevax caulescens	hogwallow starfish	Asteraceae	4	1-2-3	-		Annual herb, Mar-Jun	Valley and foothill grassland (mesic, clay); 0-505 m	Low; habitat unsuitable onsite.
Holocarpha virgata ssp. elongata	graceful tarplant	Asteraceae	4	1-2-3	-		Annual herb, Jul-Nov	Chaparral?, cismontane woodland, coastal scrub, valley & foothill grassland; 60-1100 m	Moderate; plant may possibly occur onsite, habitat suitable.
Iva hayesiana	San Diego marsh-elder	Asteraceae	2	2-2-1	-		Perennial herb, Apr-Sep	Marshes & swamps, playas; 10-500 m	Low; habitat unsuitable for this plant species.
Juglans californica var. californica	Southern Californica black walnut	Juglandaceae	4	1-2-3	-		Tree (deciduous), Mar-May	Chaparral, cismontane woodland, coastal scrub/ alluvial; 50-900 m	Low; would have been observed during surveys.
Lasthenia glabrata ssp. coulteri	Coulter's salt-marsh daisy	Asteraceae	1b	2-3-2	-		Annual herb, Feb-Jun	Marshes & swamps (coastal salt), playas, vernal pools; 1-1220 m	Low; this species is rapidly declining from wetland degradation, onsite habitat unsuitable.
Lathyrus splendens	Campo pea, pride of California	Fabaceae	4	1-1-2	-		Perennial herb, Mar-Jun	Chaparral; 200-1525 m	Low; habitat unsuitable for this plant species.
Lilium humboldtii ssp. ocellatum	ocellated lily	Liliaceae	4	1-2-3	-		Perennial herb (bulbiferous), Mar-Jul	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland/ openings; 30-1800 m	Low; habitat unsuitable for this plant species.
Lycium californicum	California desert thorn	Solanaceae	4	1-2-1	-		Shrub, Mar-Aug	Coastal bluff scrub, coastal scrub; 5-150 m	Low; this species typically grows along the coast, onsite habitat is unsuitable.
Machaeranthera juncea	rush chaparral-star, rush-like bristleweed	Asteraceae	4	1-1-1	-		Perennial herb, Jun Jan	Chaparral, coastal scrub; 240-1000m	Low; declining due to development, prefers chaparral and recent burns.
Microseris douglasii ssp. platycarpha	small-flower Microseris	Asteraceae	4	1-2-2	-		Annual herb, Mar-May	Cismontane woodland, coastal scrub, valley & foothill grassland, vernal pools/ clay; 15-1070 m	Low; prefers vernal pool habitat, declining from development.

Species Name	Common Name	Family	CNPS	R-E-D	CA/US	MSCP	Growth form, bloom time	Habitat	Potential to Occur Onsite
Monardella linoides ssp. viminea	willowy Monardella	Lamiaceae	1b	2-3-2	CE/FE	Y	Perennial herb, Jun Aug	Closed-cone coniferous forest, chaparral, coastal scrub, riparian scrub, riparian woodland; 50-400 m	Low; rare throughout San Diego County, this species is threatened by development.
Mucronea californica	California spineflower	Polygonaceae	4	1-2-3	-		Annual herb, Mar-Aug	Chaparral, cismontane woodland, coastal dunes, coastal scrub, valley & foothill grassland; 0-1400 m	Low; habitat onsite not ideal, prefers more coastal environments.
Muilla clevelandii	San Diego goldenstar	Themidaceae [Liliaceae]	1b	2-3-2	-	Y	Perennial herb (bulbiferous), May	Chaparral, coastal scrub, valley & foothill grassland, vernal pools/ clay; 50-465 m	Low; appropriate habitat not found onsite.
Myosurus minimus	little mousetail	Ranunculaceae	3	2-3-2	-		Annual herb, Mar-Jun	Valley & foothill grassland, vernal pools (alkaline); 20-640 m	Low; unsuitable habitat onsite.
Nama stenocarpum	mud Nama	Hydrophyllaceae	2	3-2-1	-		Annual/perennial herb, Jan-Jul	Marshes & swamps (lake margins, riverbanks); 5-500 m	Low; unsuitable habitat onsite.
Navarretia fossalis	-	Polemoniaceae	1b	2-3-2	FT	Y	Annual herb, Apr-Jun	Chenopod scrub, marshes & swamps (assorted shallow freshwater), playas, vernal pools; 30-1300 m	Low; unsuitable habitat onsite.
Navarretia prostrata	flat Navarretia	Polemoniaceae	1b	2-3-3	-		Annual herb, Apr-Jul	Coastal scrub, valley and foothill grassland (alkaline), vernal pools/mesic; 15-700 m	Low; prefers vernal pool habitats.
Nemacaulis denudata var. gracilis	slender wooly-heads	Polygonaceae	2	2-2-1	-		Annual herb, Mar-May	Coastal dunes, desert dunes, Sonoran desert scrub; 50-400 m	Low; dunes and desert scrub do not occur onsite.
Ophioglossum californicum	California adder's-tongue	Ophioglossaceae	4	1-2-2	-		Perennial herb (rhizomatous), Dec May	Chaparral, valley & foothill grassland, vernal pools (margins)/ mesic; 60-525 m	Low; habitat unsuitable onsite.
Opuntia californica var. californica	(see *Cylindropuntia californica*)				-				(see *Cylindropuntia californica*)
Orcuttia californica	California Orcutt grass	Poaceae	1b	3-3-2	CE/FE	Y	Annual herb, Apr-Aug	Vernal pools; 15-660 m	Low; habitat unsuitable onsite.
Ornithostaphylos oppositifolia	Baja California birdbush	Ericaceae	2	3-3-1	CC		Shrub (evergreen), Jan-Apr	Chaparral; 55-800 m	Low; rare to California, habitat unsuitable onsite.
Pentachaeta aurea	golden rayed Pentachaeta	Asteraceae	4	1-2-2	-		Annual herb, Mar-Jul	Cismontane woodland, coastal scrub, lower montane coniferous forest, valley & foothill grassland; 80-1850 m	Low; threatened by development, unlikely to occur onsite.
Perideridia gairdneri ssp. gairdneri	Gairdner's yampah	Apiaceae	4	1-2-3	-		Perennial herb, Jun Oct	Broadleaved upland forest, chaparral, coastal prairie, valley & foothill grassland, vernal pools/ mesic; 0-365 m	Low; appropriate habitat not found onsite.
Phacelia stellaris	Brand's Phacelia	Hydrophyllaceae	1b	3-3-2	-		Annual herb, Mar-Jun	Coastal dunes, coastal scrub; 5-400 m	Low; very rare to southern California, historically occurrences extirpated by development.

Species Name	Common Name	Family	CNPS	R-E-D	CA/US	MSCP	Growth form, bloom time	Habitat	Potential to Occur Onsite
Piperia cooperi	chaparral rein orchid	Orchidaceae	4	1-2-2	-		Perennial herb, Mar-Jun	Chaparral, cismontane woodland, valley & foothill grassland; 15-1585 m	Low; appropriate habitat not found onsite.
Pogogyne nudiuscula	Otay mesa mint	Lamiaceae	1b	3-3-2	CE/FE	Y	Annual herb, May-Jul	Vernal pools; 90-250 m	Low; prefers vernal pool habitats.
Polygala cornuta var. fishiae	Fish's milkwort	Polygalaceae	4	1-1-2	-		Shrub (deciduous), May-Aug	Chaparral, cismontane woodland, riparian woodland; 100-1100 m	Low; would have been observed onsite.
Quercus dumosa	Nuttall's scrub oak	Fagaceae	1b	2-3-2	-		Shrub (evergreen), Feb-Apr	Closed-cone coniferous forest, chaparral, coastal scrub/ sandy, clay loam; 15-400 m	Low; this conspicuous tree would have been observed onsite.
Quercus engelmannii	Engelmann/mesa blue oak	Fagaceae	4	1-2-2	-		Tree (deciduous), Mar-May	Chaparral, cismontane woodland, riparian woodland, valley & foothill grassland; 120-1300 m	Low; this conspicuous tree would have been observed onsite.
Ribes viburnifolium	Santa Catalina Island currant, evergreen currant	Grossulariaceae	1b	2-2-2	-		Shrub (evergreen), Feb-Apr	Chaparral, cismontane woodland; 30-305 m	Low; habitat unsuitable onsite.
Romneya coulteri	Coulter's Matilija poppy	Papaveraceae	4	1-2-3	-		Perennial herb (rhizomatous), Mar-Jul	Chaparral, coastal scrub/ often in burns; 20-1200 m	Low; habitat onsite unsuitable.
Rosa minutifolia	small-leaf rose, desert rose	Rosaceae	2	3-3-1	CE	Y	Shrub (deciduous), Jan-Jun	Chaparral, coastal scrub; 150-160 m	Low; known from only one occurrence in Otay Mesa. Seriously threatened by development and vehicles.
Salvia munzii	Munz's sage	Lamiaceae	2	2-2-1	-		Shrub (evergreen), Feb-Apr	Chaparral, coastal scrub; 120-1065 m	Low; this shrub would have been observed during surveys.
Satureja chandleri	San Miguel savory	Lamiaceae	1b	2-2-2	-	Y	Perennial herb, Mar-Jul	Chaparral, cismontane woodland, coastal scrub, riparian woodland, valley & foothill grassland; rocky, gabbroic or metavolcanic; 120-1075 m	Low; preferred habitat and soil not suitable onsite.
Senecio aphanactis	California groundsel	Asteraceae	2	3-2-1	-		Annual herb, Jan-Apr	Chaparral, cismontane woodland, coastal scrub/ alkaline; 15-800 m	Low; widely distributed though rare to this region. No historical records of this species onsite.
Tetracoccus dioicus	Parry's Tetracoccus	Euphorbiaceae	1b	3-2-2	-		Shrub (deciduous), Apr-May	Chaparral, coastal scrub; 165-1000 m	Low; this conspicuous shrub would have been observed onsite.
Viguiera laciniata	San Diego sunflower	Asteraceae	4	1-2-1	-		Shrub, Feb-Jun	Chaparral, coastal scrub; 60-750 m	Onsite; one small bush was observed onsite.

Listing Designations

CNPS Lists

1 Plants of highest priority

1A Plants presumed extinct in California

1B Plants rare, threatened or endangered in California and elsewhere

Federal Species Designations (2003)

FE Federal Endangered species

FT Federal Threatened species

State Species Designations (2003)

CE California Endangered

CT California Threatened

CR California Rare

Species Name	Common Name	Family	CNPS	R-E-D	CA/US	MS CP	Growth form, bloom time	Habitat	Potential to Occur Onsite

2 Plants rare, threatened or endangered in California, but common elsewhere

3 Plants about which we need more information. (A Review List)

4 Plants of limited distribution (A Watch List)

CC California candidate for listing

R-E-D Code

R (Rarity)

1 Rare, but found in sufficient numbers and distributed widely enough that the potential for extinction is low at this time

2 Distributed in a limited number of occurrences, occasionally more if each occurrence is small

3 Distributed in one to several highly restricted occurrences, or present in such small numbers that it is seldom reported

E (Endangerment)

1 Not endangered

2 Endangered in a portion of its range

3 Endangered throughout its range

D (Distribution)

1 More or less widespread outside California

2 Rare outside California

3 Endemic to California

APPENDIX D

SENSITIVE WILDLIFE SPECIES WITH THE POTENTIAL TO OCCUR WITHIN OR ADJACENT TO THE SWEETWATER UNION HIGH SCHOOL PROJECT

APPENDIX D
SENSITIVE ANIMALS WITH THE POTENTIAL TO OCCUR ON THE SWEETWATER UNION HIGH SCHOOL PROJECT

Common Name	Species Name	CA/US	MSCP	Habitat	Potential to Occur Onsite
INVERTEBRATES					
Hermes copper	*Lycaena hermes*	-	(Co)	Coastal sage scrub, mixed chaparral and chamise chaparral; 0-3000ft. Host plant is *Rhamnus crocea* .	Low, species uncommon, host plant not detected onsite
Quino checkerspot	*Euphydryas editha quino*	FE		Open grassy areas, interior foothills, host-plant is *Plantago erecta* , *Plantago ovata* , *Castilleja exserta;* 0-1000ft.	Low; host plant not observed onsite.
Riverside fairy shrimp	*Streptocephalus woottoni*	FE	X	Vernal pools; 0-500ft.	Low, no vernal pools onsite
San Diego fairy shrimp	*Branchinecta sandiegonensis*	FE	X	Vernal pools; 0-3000ft.	Low, no vernal pools onsite
AMPHIBIANS					
Arroyo toad	*Bufo californicus*	CSSC/FE	X	Semi-arid regions near washes or intermittent streams. Habitats used include valley-foothill and desert riparian as well as a variety of more arid habitats including desert wash, palm oasis, and Joshua tree, mixed chaparral and sagebrush; 500-3000ft. Nocturnal.	Low; habitat unsuitable onsite.
Western spadefoot	*Spea hammondii*	CSSC		Grassland, scrub, and chaparral locally but could occur in oak woodlands. Nocturnal. Activity limited to wet season, summer storms or during evenings with elevated substrate moisture levels. 0-3000 ft.	Low; habitat unsuitable onsite.
REPTILES					
Coast patch-nosed snake	*Salvadora hexalepis virgultea*	CSSC		Grass, chaparral, woodland, desert and coastal sage scrub. Found near rock outcrops with adjacent seasonal drainages; 0-3000ft.	Low; unlikely to occur onsite, habitat unsuitable.
Northern red rattlesnake	*Crotalus ruber ruber*	CSSC		Coastal sage scrub, mixed chaparral, open grassy areas and agricultural areas, chamise chaparral, pinon juniper and desert scrub; 0-3000ft.	Low to moderate; large open grassy agricultural area onsite.
Orange-throated whiptail	*Cnemidophorus hyperythrus*	CSSC	X	Coastal sage scrub, mixed chaparral, grassland, riparian, and chamise chaparral habitats. Open hillsides with brush and rock, well drained soils; 1-1000ft	Low; unlikely to occur onsite, habitat unsuitable.

Common Name	Species Name	CA/US	MSCP	Habitat	Potential to Occur Onsite
Silvery legless lizard	*Anniella pulchra pulchra*	CSSC		Coastal sage scrub, grassland, riparian and coastal desert dunes. Found in sandy loam and areas of accumulated leaf litter beneath shrubs and trees; 0-3000ft.	Low; soil and habitat unsuitable onsite.
Skilton's skink (including former Coronado skink)	*Eumeces skiltonianus*	CSSC		Coastal sage scrub, grassland, riparian, near vernal pools, oak woodlands, chamise chaparral, mixed conifer, closed cone forests, and freshwater marshes. Found during the winter after rainfalls or during spring; 0-3000ft.	Low; habitat unsuitable onsite.
BIRDS					
Burrowing owl	*Athene cunicularia*	CSSC 2nd	X	Open, dry grasslands agricultural and range lands, and desert habitats of low growing vegetation (associated with burrowing animals); 0-1000ft.	Moderate; habitat suitable, past observations located south of project site.
California horned lark	*Eremophila alpestris actia*	CSSC Ad		Open patches of bare land alternating with low vegetation in grasslands, montane meadows, and sagebrush plains; 0 to over 3000ft.	Low; habitat unsuitable onsite.
Ferruginous hawk	*Buteo regalis*	CSSC Ad	X	Grasslands and desert scrub (winter). Prefers to nest in trees, but will nest in a bush or on the ground on a ledge, riverbank or hillside; 0-3000ft.	Low, uncommon winter resident
Golden eagle	*Aquila chrysaetos*	CSSC 3rd	X	Mountains, foothills, and adjacent grassland, open areas and canyons; 0-3000ft. (nesting/wintering)	Low-moderate; possible area for species to hunt.
Harris' hawk	*Parabuteo unicinctus*	CSSC 1st		Often perches conspicuously near roads on utility poles, fence posts, and trees; hunts in pairs of trios for birds and mammals in brush.	Low; unlikely visitor, prefers desert habitats.
Loggerhead shrike	*Lanius ludovicianus*	CSSC Ad		Roadside vegetation, thickets, savanna, coastal sage scrub, grasslands, riparian, oak woodlands and desert scrub and wash or any open country with high perches as lookouts; 0-3000ft.	Low; habitat too disturbed
Mountain plover	*Charadrius montanus*	CSSC Ad/ FPT	X	Grasslands (winter); 0-500ft.	
Northern harrier	*Circus cyaneus*	CSSC 2nd	X	Grasslands and salt, alkali and freshwater marshes; 0-1000ft. Nests on ground in shrubby vegetation, usually emergent wetlands or along rivers or lakes. May also nest in grasslands, grain fields, or on sagebrush flats several miles from water.	Low-moderate; may prefer grasslands for foraging.

Common Name	Species Name	CA/US	MSCP	Habitat	Potential to Occur Onsite
Prairie falcon	*Falco mexicanus*	CSSC 3rd		Mountainous grasslands, open hills, open plains; 0 to over 3000ft.	Low; uncommon, though it may search for food in the the non-native grassland.
Short-eared owl	*Asio flammeus*	CSSC 2nd		Grassland and freshwater marsh (winter); 0-500ft	Low; habitat not appropriate
Turkey vulture	*Cathartes aura*	-	(Co)	Dry open country or along roadsides; coastal sage scrub, mixed and chamise chaparral, grassland, riparian, mixed conifer and closed cone forest; 0 to over 3000ft.	Moderate; foraging habitat may be suitable onsite.
MAMMALS					
Black-tailed jackrabbit	*Lepus californicus bennettii*	CSSC Ad		Coastal sage scrub, mixed chaparral, oak woodlands, chamise chaparral, mixed conifer, and closed cone forest and open areas. Common in irrigated pastures and row crops; 0 to over 3000ft.	Moderate; known to occur in the vicinity, habitat suitable onsite.
Los Angeles pocket mouse	*Perognathus longimembris brevinasus*	CSSC 1st		Mixed chaparral, grasslands, oak woodlands and chamise chaparral; 1000-3000ft.	Low; habitat not appropriate, prefers fine, firm, gravelly and sandy substrates.
Pacific pocket mouse	*Perognathus longimembris pacificus*	CSSC 1st/FE		Coastal sage scrub and grasslands; 0-500ft.	Low; habitat not appropriate, prefers fine, firm, gravelly and sandy substrates.
Southern grasshopper mouse	*Onychomys torridus ramona*	CSSC Ad		Coastal sage scrub, mixed chaparral, grassland, and chamise chaparral. Nocturnal. Low to moderate shrub cover is preferred; 500-3000ft. Food of preference is grasshoppers but will consume seeds, other insects and lizards.	Low; unlikely to occur onsite.
Stephens' kangaroo rat	*Dipodomys stephensi*	CT/FE		Coastal sage scrub and grasslands; 500-3000ft.	Low; unlikely to occur onsite.
Western mastiff bat	*Eumops perotis*	CSSC 2nd		Open semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban. Crevices in cliff faces, high buildings, trees, and tunnels are required for roosting; 500-3000ft.	Low; this species is uncommon, especially throughout San Diego County.

*Listing Designations

Federal Listing (USFWS 2003)
FE - Federal Endangered
FT - Federal Threatened
FPD - Federal Proposed for Delisting
FPT - Federal Proposed for Listing: Threatened
FSC - Federal Species of Concern

State Listing (CDFG 2003)
CE - California endangered
CT - California Threatened
CSSC - California Species of Concern
1st - Highest priority
2nd - Second priority
3rd - Third priority

Ad - Addition to list
FP - DFG Fully Protected

Other
MSCP - X indicates covered by MSCP
(Co) - of interest to County biologists