

CAMPUS PARK PROJECT

APPENDIX G

BIOLOGICAL TECHNICAL REPORT

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State Clearinghouse No. 2005011092

for the

DRAFT FINAL SUBSEQUENT ENVIRONMENTAL IMPACT REPORT

DECEMBER 3, 2010

FINAL ENVIRONMENTAL IMPACT REPORT

BIOLOGICAL TECHNICAL REPORT

INFORMATION FOR THE READER

This document consists of the Biological Technical Report (BTR) for the Campus Park Project (Proposed Project or Project) and analyzes biological-related elements associated with construction and operation of the Project. Since circulation of the Project Draft Environmental Impact Report (EIR) and associated technical reports, refinements in Project description have been implemented in response to comments received.

The majority of Project refinements occur west of future Horse Ranch Creek Road and all of them would be south of proposed Harvest Glen Lane. The majority of the developed uses and their construction footprints (residential, office professional, recreational and commercial) remain the same as previously analyzed.

South of future Harvest Glen Lane and west of future Horse Ranch Creek Road, the Proposed Project has been refined to: (1) eliminate some development areas, (2) modify specifics of development detail in some areas, and (3) eliminate the potential for connection to an off-site future wastewater treatment plant (WTP) to be constructed by others. Specifics of road design improvements also vary.

Overall, primary design changes result in 325 fewer multi-family homes, or a reduction of 41 percent, and an increase in biological open space preserve by 20.7 acres, or 11 percent. See Figure A for a comparison of the Project evaluated in the Draft EIR versus the current plan.

Project refinements relevant to this technical report are addressed below.

Relevant Refinements to Project Description

The Draft EIR included two multi-family residential areas (MF-1 and MF-4) west of future Horse Ranch Creek Road and north of SR 76. These areas were proposed to contain a total of 300 residential units sited on a total of 21.1 acres. Both have been eliminated and now would largely be in open space.

A 2.4-acre detention basin was previously located south of MF-1. With the elimination of MF-1, this basin has been relocated northerly, and the basin shape has been elongated to incorporate additional detention capacity. Similarly, a 2.6-acre potential wet weather storage pond would be eliminated.

A sewer lift or pump station and trail staging area would be moved from an isolated small Project parcel west of future Pankey Road and north of SR 76 to east of future Pankey Road, in the old area of MF-4.

Changes have been made to specific design of an off-site portion of Pala Mesa Drive, Pankey Road, and on-site Pankey Place. With regard to Pala Mesa Drive/Pankey Road, modifications

resulted from a request by the abutting Campus Park West Project to shift a portion of the alignment, and this shift has been worked out in coordination with the Department of Public Works. For Pankey Place, modification is related to deletion of MF-4 on the south side of the road, and retention of open space. A potential modification to the intersection of the SR 76/Old Highway 395 identified in the Draft EIR is not required (no direct significant impacts to this intersection result from Project traffic) and that potential footprint impact has been eliminated from the final Project. Transportation impact fees (TIF) payments will address cumulative impacts.

Figure B shows the vegetation for the off-site areas associated with the Project alignment of Pankey Place.

Technical Analysis Modifications Based on Project Description Refinements

The Proposed Project specifically changes the BTR with regard to impacts and mitigation acreages (see attached summary Table 1 and revised impact map [Figure B]), the Proposed Conceptual Wetland Revegetation/Mitigation Plan (refer to Figure C, On-site Wetland Mitigation), and the Resource Management Plan (refer to Figure C for proposed open space).

Specific changes to the BTR impact and mitigation acreages are shown on Table 1 (see below). Overall, there would be a reduction of on-site impacts from 243.7 acres to 226.7 acres and a reduction of off-site impacts from 50.5 acres to 49.1 acres, as presented below.

- **Southern riparian forest:** Draft EIR Project would impact 10.5 acres; refined Project would impact 2.1 acres, which would be mitigated by preservation (on-site creation and enhancement) of 6.3 acres
- **Southern willow scrub:** Draft EIR Project would impact 1.66 acres; refined Project would impact 2.4 acres, which would be mitigated by preservation (on-site creation and enhancement) of 7.2 acres
- **Freshwater marsh:** Draft EIR Project would impact 7.9 acres; refined Project would impact 0.11 acre, which would be mitigated by preservation (on-site creation and enhancement) of 0.33 acre
- **Coast live oak woodland:** Draft EIR Project and refined Project would impact 1.31 acres, which would be mitigated by preservation of 2.9 acres
- **Diegan coastal sage scrub:** Draft EIR Project would impact 46.7 acres; refined Project would impact 46.3 acres, which would be mitigated by preservation of 92.6 acres
- **Non-native grassland:** Draft EIR Project would impact 47.6 acres; refined Project would impact 44.8 acres, which would be mitigated by preservation of 22.4 acres
- **Non-native vegetation:** Draft EIR Project and refined Project would impact 0.8 acre
- **Pasture:** Draft EIR Project would impact 114.7 acres; refined Project would impact 144.6 acres, which would be mitigated by preservation of 72.3 acres
- **Disturbed Habitat:** Draft EIR Project would impact 18.2 acres; refined Project would impact 17.7 acres
- **Developed Land:** Draft EIR Project would impact 4.2 acres; refined Project would impact 3.9 acres

- **Eucalyptus Woodland:** Draft EIR Project would impact 1.8 acres; refined Project would impact 0.4 acre
- **Orchard:** Draft EIR Project would impact 11.9 acres; refined Project would impact 11.4 acres

As shown in Table 1, as well as above, the majority of the reduction in impact results from the decrease in direct and indirect impacts to southern riparian forest and freshwater marsh habitat. The removal of MF-1 and MF-4 greatly reduces impacts to these sensitive wetland habitats and the species within them.

With the reduction of wetland impacts, mitigation for habitat types that previously required off-site mitigation can now be accommodated on site; accordingly, the Off-site Wetland Revegetation Plan is no longer required under the refined Project. Mitigation for wetland impacts would include 1:1 creation of habitat and 2:1 enhancement of habitat. Figure C depicts the location of the wetland enhancement and creation areas on site. Creation would occur within areas that currently support pasture. Therefore, approximately 4.6 acres of on-site pasture would be converted to southern riparian forest.

With the removal of MF-4 south of Pankey Place, southern riparian forest and non-native grassland that was once considered impacted would now be preserved within open space. Indirect edge effects occurring between SR 76 and Pankey Place would be mitigated through the enhancement of southern riparian forest within the contiguous block of habitat to the north of Pankey Place.

Based on the new Project configuration, overall impacts would be reduced and open space would be increased. The BTR should be considered modified to reflect these changes both in decreasing the amount of impacts to several habitats as well as changing the open space configuration and allowing mitigation to occur on site.

The refined Project would not directly impact any locations where least Bell's vireos were observed (the Draft EIR Project would have directly impacted one location). A pair of least Bell's vireos is adjacent to proposed Pankey Place that would be indirectly impacted by implementation of the refined Project. Accordingly, the refined Project would still impact least Bell's vireo.

All other significant impacts presented in the BTR (e.g., sensitive plant and animal species [with the exception of least Bell's vireo, as addressed above], and indirect edge effects, including wetland buffer impacts) would remain unchanged by the refined Project, and no new significant impacts would occur.

In addition, no changes were made to environmental design considerations and no other significant impacts would arise from the refined Project that were not presented for the Proposed Project. (E.g., impacts to wildlife corridors and cumulative impacts would remain less than significant under the refined Project.)

Proposed Modifications to the Conceptual Revegetation Plan

Prior to Final Map, the Conceptual Revegetation Plan will be updated and detailed per the new site design. Previously, creation of wetlands (as mitigation for impacts to wetlands) was to be completed off site; however, with the new configuration of the site design, on-site creation can be achieved. All wetland enhancement mitigation would stay the same. Figure C depicts the available on-site locations that could be used for revegetation.

Proposed Modifications to the Conceptual Resource Management Plan

Prior to Final Map, the Resource Management Plan will be updated and detailed per the new site design. The Resource Management Plan will remain predominantly the same with the exception of additional open space acreage due to the elimination of old PAs MF-1 and MF-4.

Each of the above-cited specific revisions are now included as part of the public record and will be before the Board of Supervisors during their consideration of the Project.

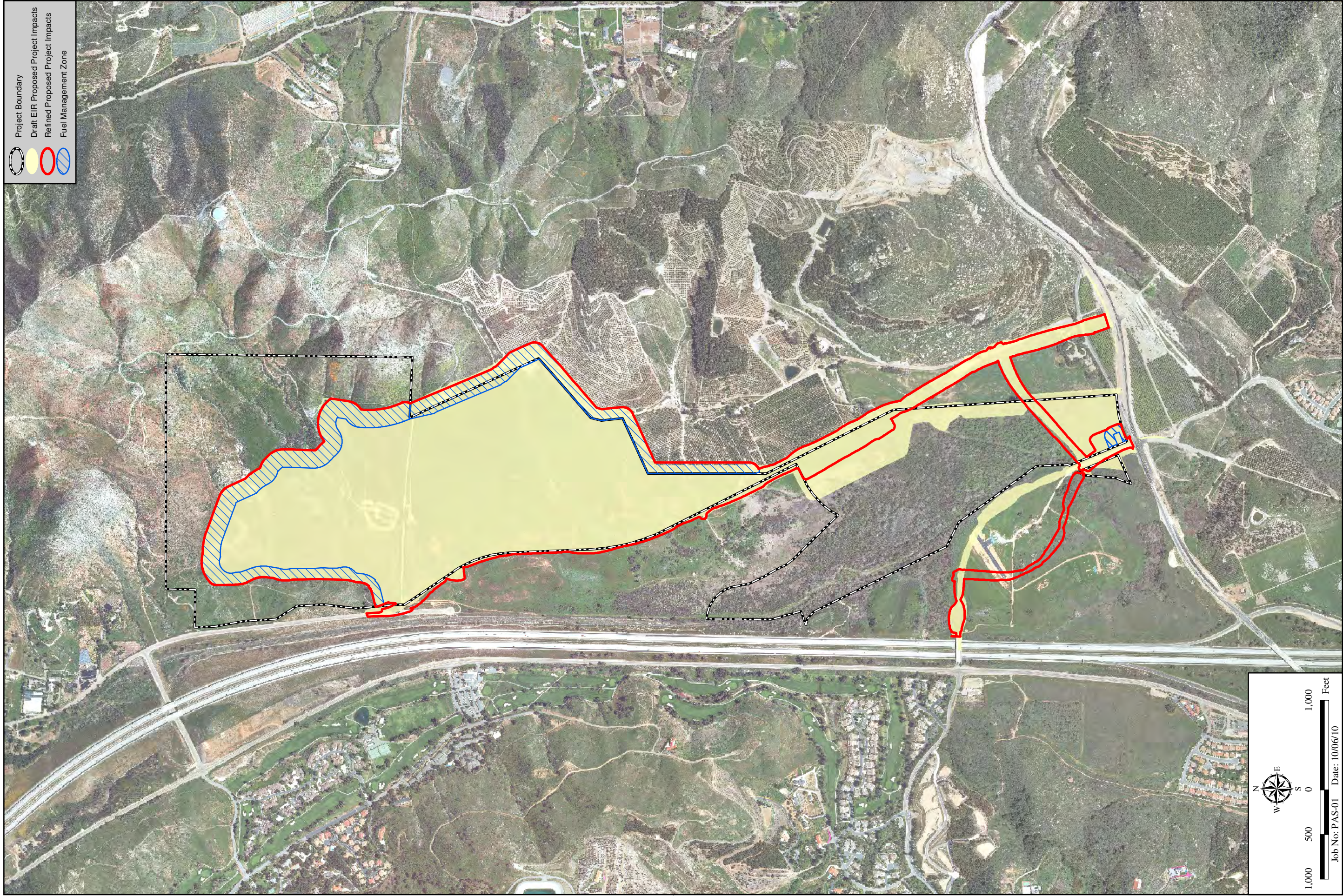
Table 1
CAMPUS PARK HABITAT/VEGETATION COMMUNITIES, IMPACTS, AND MITIGATION

Habitat / Vegetation Community	Existing (acres)	Impacts (acres)	Off-site Impacts (acres)	Mitigation Ratio	Mitigation Required (acres)	Preserved On Site (acres)	Mitigation and/or Off-site Mitigation (acres)
Southern riparian forest	85.6	1.4	0.7	3:1	6.3 (2.1 creation, 4.2 enhancement)	84.2	2.1 acres of pasture adjacent to on-site riparian woodland will be used to create riparian woodland habitat. The remaining 4.2 acres of mitigation will be done with enhancement within the 84.2 acres of habitat remaining on site.
Southern willow scrub	1.6	1.6	0.8*	3:1	7.2 (2.4 creation, 4.8 enhancement)	0.0	2.4 acres of pasture adjacent to on-site riparian woodland will be used to create southern willow scrub habitat. The remaining 4.8 acres of mitigation will be done with enhancement within the 84.2 acres of southern riparian forest remaining on site.
Freshwater marsh	10.3	0.01	0.1*	3:1	0.33 (0.11 creation, 0.22 enhancement)	10.29	0.11 acre of pasture adjacent to on-site riparian woodland will be used to create freshwater marsh habitat. The remaining 0.22 acre of mitigation will be done with enhancement within the 84.2 acres of southern riparian forest or 10.29 acre of freshwater marsh remaining on site.
Coast live oak woodland	2.8	1.3 (1.0 FMZ and 0.3 grading)	0.01 (grading)	2:1 (FMZ) 3:1 (grading)	2.9	1.5	1.4 (off site)
Diegan coastal sage scrub	129.6	42.3	4.0	2:1	92.6	87.3	5.3 (off site)
Non-native grassland	44.1	38.5	6.3	0.5:1	22.4	5.6	16.8 (off site)
Non-native vegetation	0.1	0.1	0.7	0:1	0	0	0
Pasture	135.4	135.4**	9.2	0.5:1	72.3	0	72.3 (off site)
Disturbed	4.4	3.9	13.8	0:1	0	0.5	0
Developed	2.1	2.1	1.8	0:1	0	0	0
Eucalyptus woodland	0.1	0.1	0.3	0:1	0	0	0
Orchard	0	0	11.4	0:1	0	0	0
TOTAL	416.1	226.7**	49.1	--	204.0	189.4	95.8 off site

* All or a portion of this impact may be conducted by adjacent projects currently under review by the County or approved. If so, then these impacts/mitigation requirements would not be occur as part of this Project.

**Includes 4.6 acres of pasture to be used to mitigate impacts to riparian habitat.

FMZ = fuel modification zone

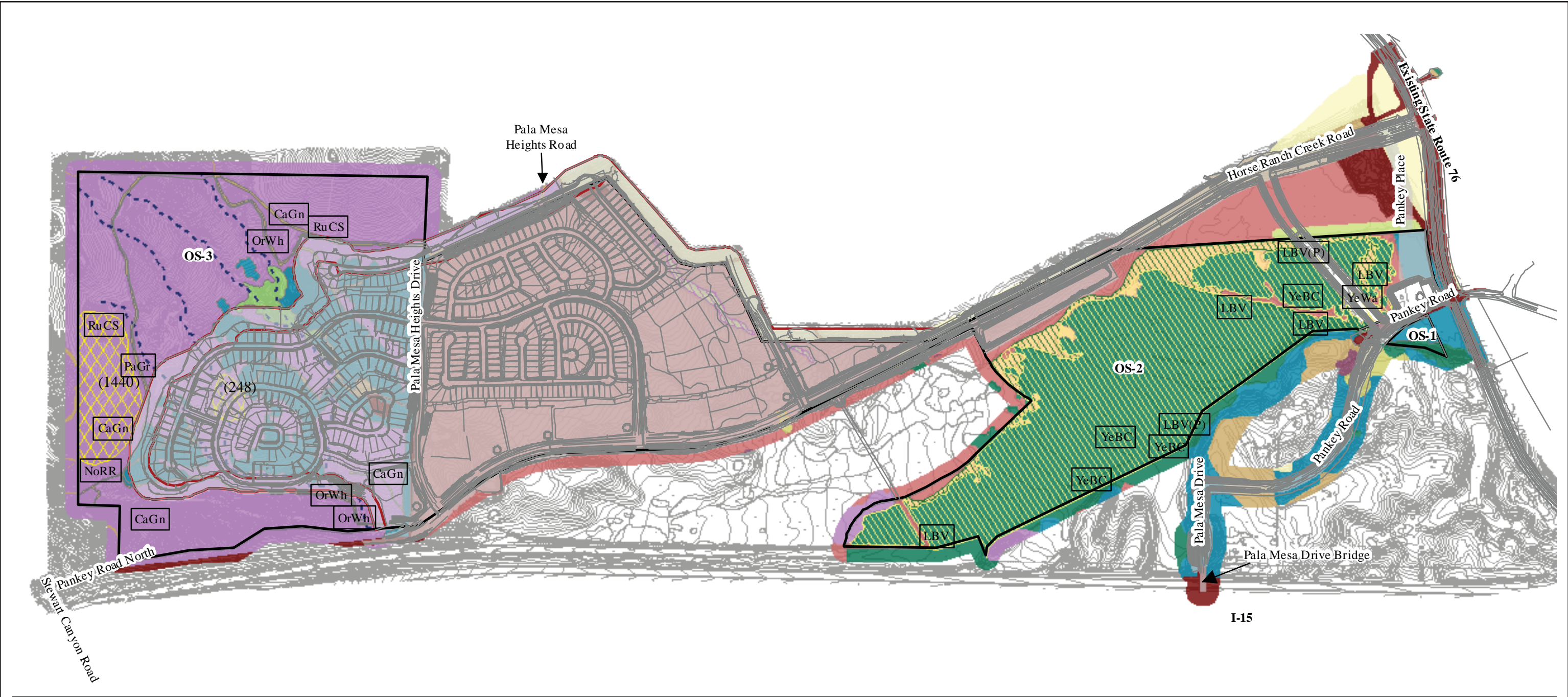


Impact Comparison

CAMPUS PARK

Figure A

HELIX



Legend

Sensitive Species

- CaGn Coastal California Gnatcatcher (pair) (*Ptilocheilichthys californica*)
- LBV(P) Least Bell's Vireo (Juvenile) (*Vireo bellii pusillus*)
- LBV(J) Least Bell's Vireo (Pair) (*Vireo bellii pusillus*)
- LBV Least Bell's Vireo (*Vireo bellii pusillus*)
- NoRR Northern Red Diamond Rattlesnake (*Crotalus ruber*)

- OrWh Orange-throated Whiptail (*Aspidoseps hyperythrus*)
- PaGr Palmer's Gnatcatcher (*Harporhynchus palmeri*)
- RuCS Southern California Rufous Crowned Sparrow (*Amphispiza ruficeps canescens*)
- YeBC Yellow Breasted Chat (*Icteria virens*)
- YeWa Yellow Warbler (*Dendroica petechia*)
- Parry's Tetracoccus (*Tetracoccus dioicus*) (#)

Habitats

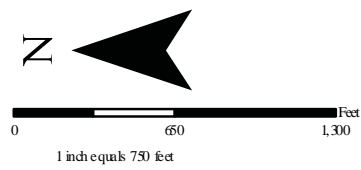
- Diegan Coastal Sage Scrub (32500)
- Coastal Live Oak Woodland (71160)
- Developed (12000)
- Disturbed (11300)
- Eucalyptus (11100)
- Freshwater Marsh (52400)
- Non-Native Grassland (42200)
- Non-native Vegetation (11000)
- Pasture (18310)
- Southern Riparian Forest (61300)
- Southern Willow Scrub (63320)
- Orchard (18100)

Other

- Impact Area
- Fuel Management Zone

Jurisdictions

- ACOE Waters
- ACOE Waters, CDFG
- ACOE Waters, CDFG
- ACOE Wetlands, CDFG
- ACOE Wetlands
- CDFG



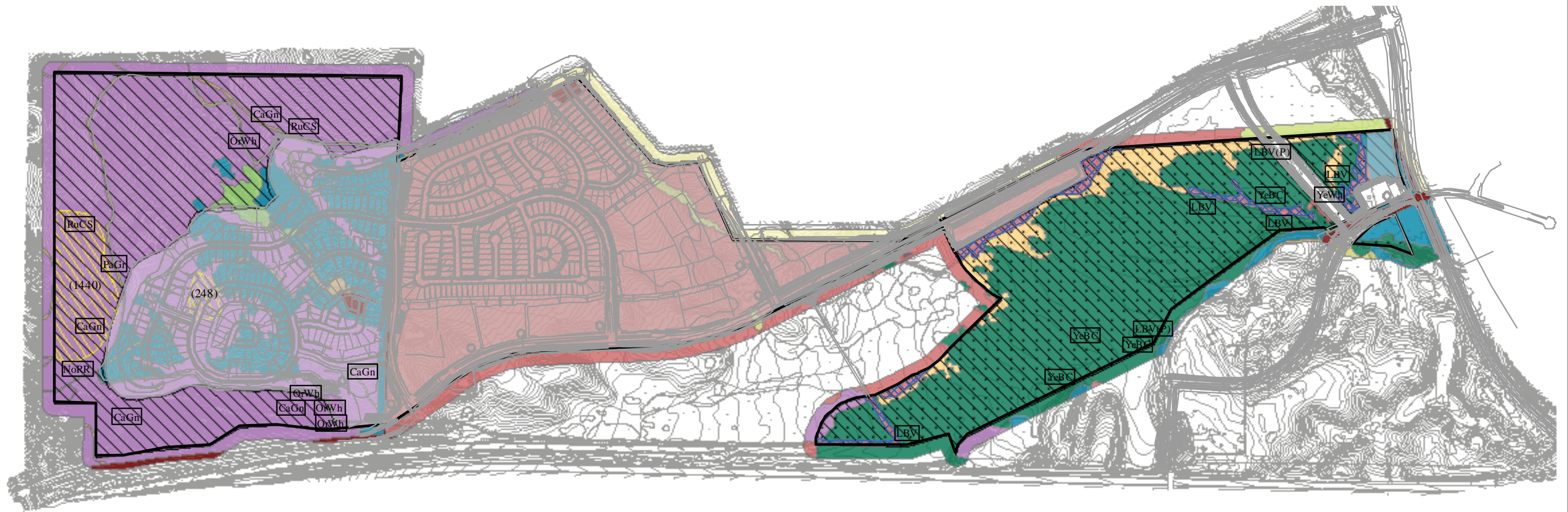
Source: REC (2010)
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Proposed Impacts

CAMPUS PARK

Figure B





Legend

Sensitive Species

CaGn Coastal California Gnatcatcher (pair) (*Poliopitila californica californica*)
 LBV(P) Least Bell's Vireo (Juvenile) (*Vireo bellii pusillus*)
 LBV(J) Least Bell's Vireo (Pair) (*Vireo bellii pusillus*)
 LBV Least Bell's Vireo (*Vireo bellii pusillus*)
 NoRR Northern Red Diamond Rattlesnake (*Crotalus ruber ruber*)

Note: Raptors observed throughout site or overhead include Cooper's Hawk, Turkey Vulture, American Kestrel, White Tailed Kite, Red Shouldered Hawk, and Red Tailed Hawk.

OrWh Orange-throated Whiptail (*Aspidoscelis hyperythrus*)
 PaGr Palmer's Grappling-hook (*Harpagonella palmeri*)
 RuCS Southern California Rufous Crowned Sparrow (*Aimophila ruficeps canescens*)
 YeBC Yellow Breasted Chat (*Icteria virens*)
 YeWa Yellow Warbler (*Dendroica petechia*)
 Parry's Tetracoccus (*Tetracoccus dioicus*) (#)

Habitats

Coast Live Oak Woodland (71160)
 Developed (12000)
 Diegan Coastal Sage Scrub (32500)
 Disturbed (11300)
 Eucalyptus (11100)
 Freshwater Marsh (52400)
 Non-Native Grassland (42200)
 Oak Woodland (71100)
 Non-native Vegetation (11000)
 Pasture (18310)
 Southern Riparian Forest (61300)
 Southern Willow Scrub (63320)

Mulefat Scrub (63310)
 Orchard (18100)
 Tamarisk Scrub (63810)
Other
 Proposed Impact Area
 Proposed Open Space
 Enhancement Area
 Wetland Creation

Source: REC (2010)

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On-site Wetland Mitigation

CAMPUS PARK

Figure C

BIOLOGICAL TECHNICAL REPORT

**CAMPUS PARK PROPERTY
BIOLOGICAL TECHNICAL REPORT
TM 5338**

Prepared for:

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A handwritten signature in black ink, reading "Elyssa K. Robertson". The signature is fluid and cursive, with a horizontal line drawn underneath it.

Elyssa K. Robertson, Principal

May 2009

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SUMMARY OF FINDINGS

REC conducted biological surveys on the approximate 416.1 acre proposed Campus Park project located on the north and south sides of Pala Mesa Heights Drive and Interstate 15, in the County of San Diego. This report describes the site's existing conditions and analyzes the proposed project's impacts and mitigation measures. The site is not located within the County of San Diego's Multiple Species Conservation Program (MSCP) Subarea Plan, however it is a part of the proposed North County MSCP.

The biological resources onsite include eleven habitat types: southern riparian forest, southern willow scrub, freshwater marsh, coast live oak woodland, Diegan coastal sage scrub, non-native grassland, non-native vegetation, pasture, disturbed, developed, and eucalyptus woodland. Approximately 85.6 acres of southern riparian forest, 1.6 acres of southern willow scrub, 10.3 acres of freshwater marsh, 2.8 acres of oak woodland, 129.6 acres of Diegan coastal sage scrub, 44.1 acres of non-native grassland, 0.1 acre of non-native vegetation, 135.4 acres of pasture, 4.4 acres of disturbed, 2.1 acres of developed, and 0.1 -acre of eucalyptus woodland occur on the project site.

Two sensitive reptile species were observed onsite—including five orange-throated whiptails (*Cnemidophorus hyperythrus*) and one northern red diamond rattlesnake (*Crotalus ruber ruber*). In addition, six sensitive bird species were observed onsite: coastal California gnatcatchers (*Polioptila californica californica*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), Cooper's hawks (*Accipiter cooperii*), least Bell's vireo (*Vireo bellii pusillus*), yellow warbler (*Dendroica petechia brewsteri*), and yellow-breasted chat (*Icteria virens*).

Sensitive habitats onsite include southern riparian forest, southern willow scrub, freshwater marsh, oak woodland, Diegan coastal sage scrub, and non-native grassland. Two sensitive plant species were observed onsite including Parry's tetradlea (*Tetradlea dioicus*) and Palmer's grappling-hook (*Harpagonella palmeri*).

Portions of the habitats onsite are considered wetlands by the state and federal resource agencies including the Army Corp of Engineers (ACOE), U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), and Regional Water Quality Control Board (RWQCB).

The following table summarizes the impacts and mitigation measures for the proposed Campus Park project.

Table S-1 Campus Park Habitat/Vegetation Communities, Impacts, Mitigation							
Habitat / Vegetation Community	Existing (Acres)	Impacts (Acres)	Offsite Impacts (Acres)	Mitigation Ratio	Mitigation required (Acres)	Preserved On-site (acres)	Off-site Mitigation (acres)
Southern Riparian Forest	85.6	9.5	1.0	3:1	31.5 (10.5 ac creation, 21.0 ac. Enhancement)	76.1	10.5 acres creation offsite
Southern Willow Scrub	1.6	1.6	0.06	3:1	4.98 (1.66 ac creation, 3.32 ac. Enhancement)	0	1.6 acres creation offsite
Freshwater Marsh	10.3	7.8	0.1	3:1	23.7 (7.9 ac. Creation, 15.8 ac. Enhancement)	2.5	7.9
Coast Live Oak Woodland	2.8	1.3 (1.0 FMZ) (0.3 grading)	0.01	2:1 3:1	2.93	1.5	1.4
Diegan Coastal Sage Scrub	129.6	42.3	4.4	2:1	93.4	87.3	6.1
Non-native Grassland	44.1	41.2	6.4	0.5:1	23.8	2.9	20.9
Non-native Vegetation	0.1	0.1	0.68	0:1	0	0	0
Pasture	135.4	133.8	7.9	0.5:1	70.8	1.6	65.3
Disturbed	4.4	3.9	14.3	0:1	0	0.5	0
Developed	2.1	2.1	2.1	0:1	0	0	0
Eucalyptus Woodland	0.1	0.1	1.7	0:1	0	0	0
Orchard	0	0	11.9	0:1	0	0	0
Total	416.1	243.7	50.55		251.11	172.4	113.7

1.0 INTRODUCTION

The following report summarizes the results of biological surveys conducted on the 416.1 acre Campus Park property, in the community of Fallbrook in San Diego County. The primary objectives of this report are to assess the existing conditions of the biological resources, identify the potential impacts to these resources from proposed development, and to provide mitigation requirements to offset significant impacts.

1.1 Project Description and Location

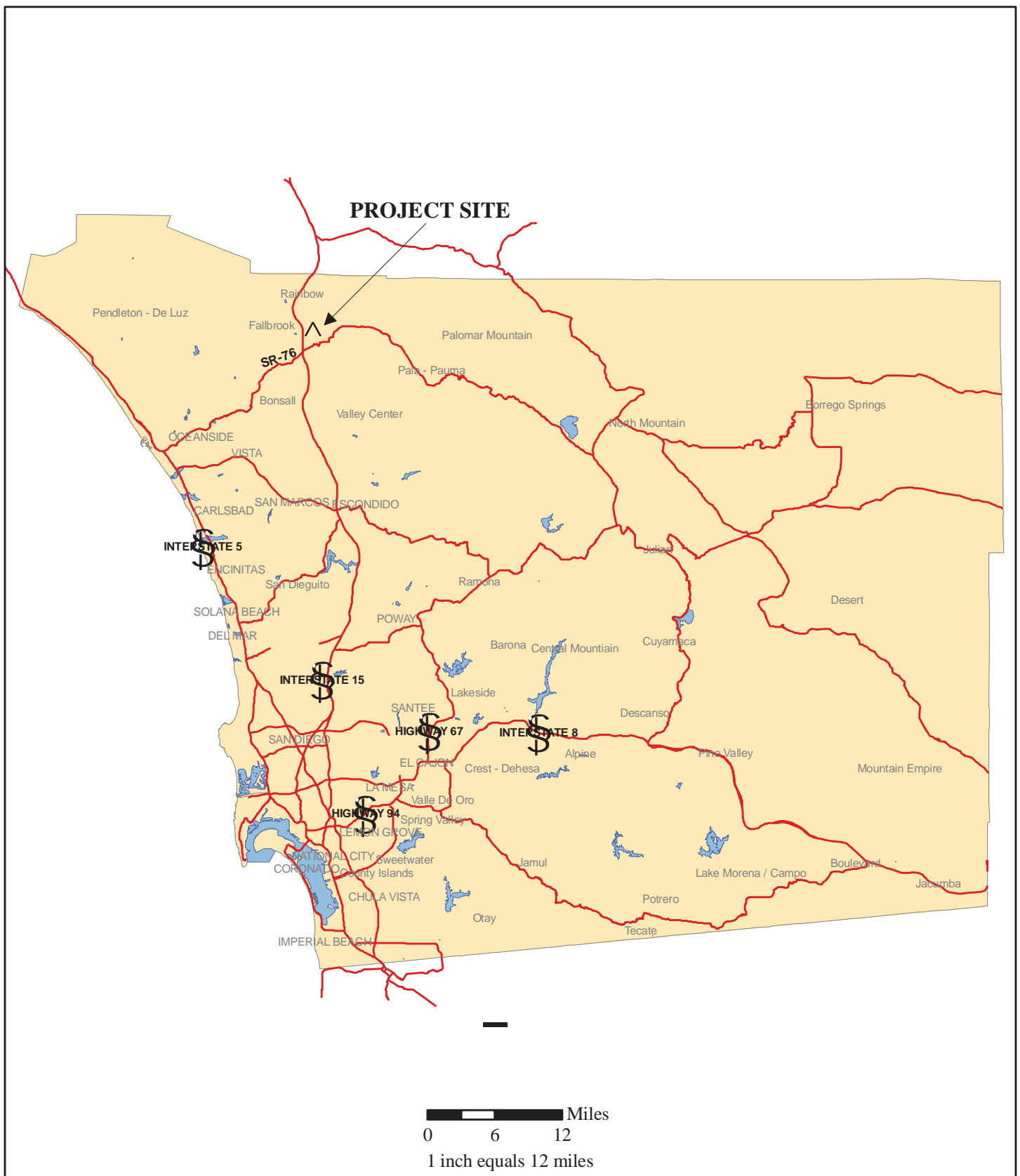
Project Location

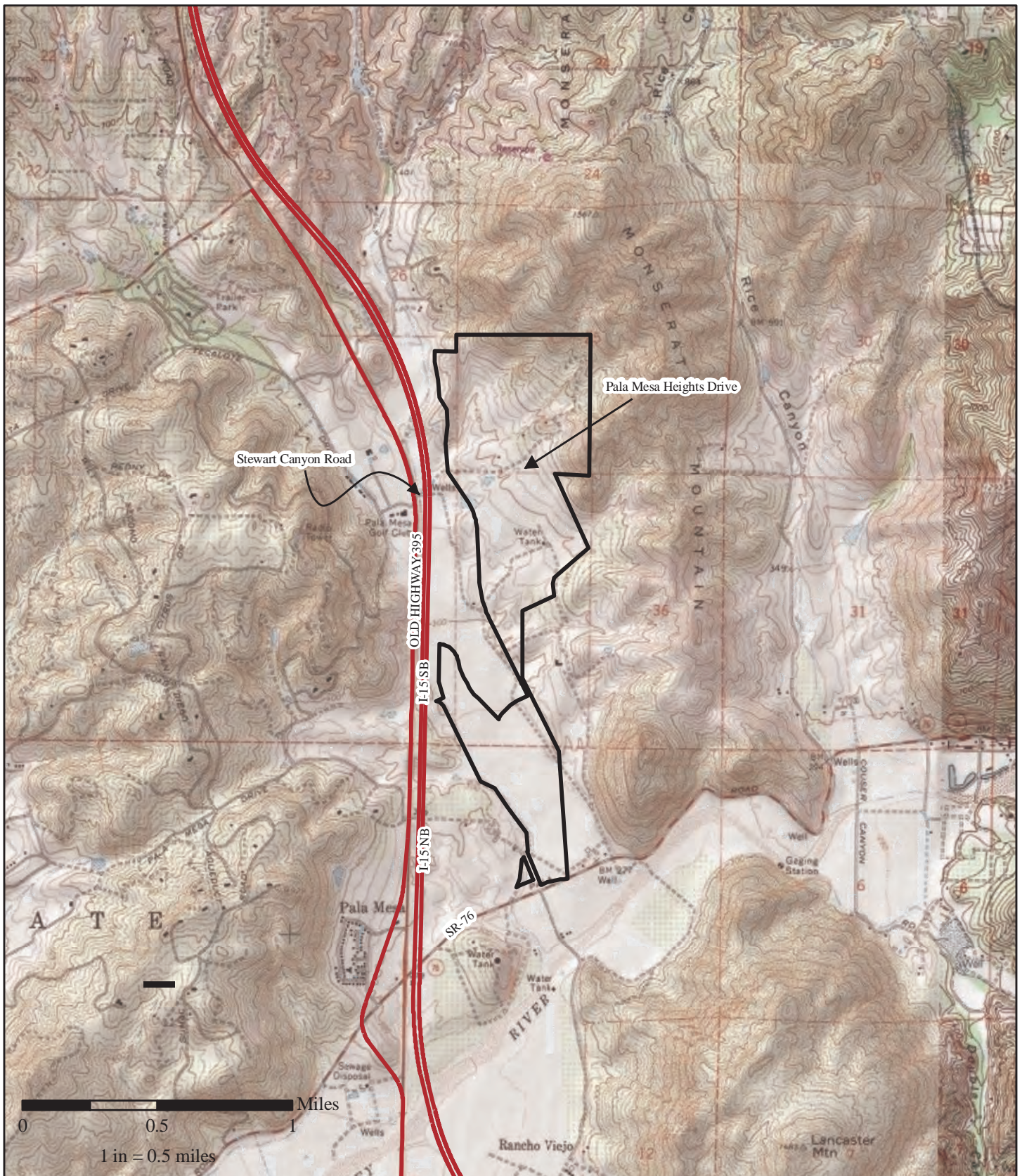
The Campus Park Project site is located in the unincorporated portion of San Diego County (County) in the community of Fallbrook, approximately 6 miles southeast of downtown Fallbrook and 46 miles north of downtown San Diego (Figure 1). State Route (SR) 76 borders the southern Project boundary of the site and Interstate 15 (I-15) borders the property along the northern and central western edge (Figure 2). The I-15/SR 76 interchange, a gas station, a “take-out” restaurant, and a California Department of Transportation Park and Ride facility are located southwest of the Project site. Development to the west of I-15 includes the Pala Mesa Resort, residential developments, and single-family homes. Uses to the north include single-family residences, nursery facilities and open space. The Meadowood Specific Plan Area is located to the east. Other uses to the east include undeveloped land and residences, with scattered avocado groves. A small rocky hill, Rosemary’s Mountain, lies east of the southern portion of the Project site. Lancaster Mountain, an undeveloped lot, the San Luis Rey River, and a housing development are located south of the Project site.

The Project site is about 3,000 feet across (east-west), at its widest point and approximately 11,000 feet (two miles) from the northern to southern boundary. The site is divided by Pala Mesa Heights Drive, an east/west-trending unpaved road. The northern approximately 176-acre portion of the site has a generally square shape and is currently accessed by the north extension of Pankey Road via Stewart Canyon Road, which travels under I-15 and connects to Old Highway 395 on the west side of I-15. The southern 240-acre segment of the site is an irregularly shaped area that is currently accessed by the south extension of Pankey Road via SR 76 (Figure 2).

Project Description

The Project proposes on-site construction of a mixed-use community (Figure 3). The development would include a total of 1,076 single- and multi-family homes, commercial uses, and professional office uses, as well as parks, a Homeowner’s Association (HOA) recreational facility, a Town Center (with retail and support services), and designated open space and biological open space preserves. The infrastructure necessary to support the development would include on- and off-site roadways, sewer and water



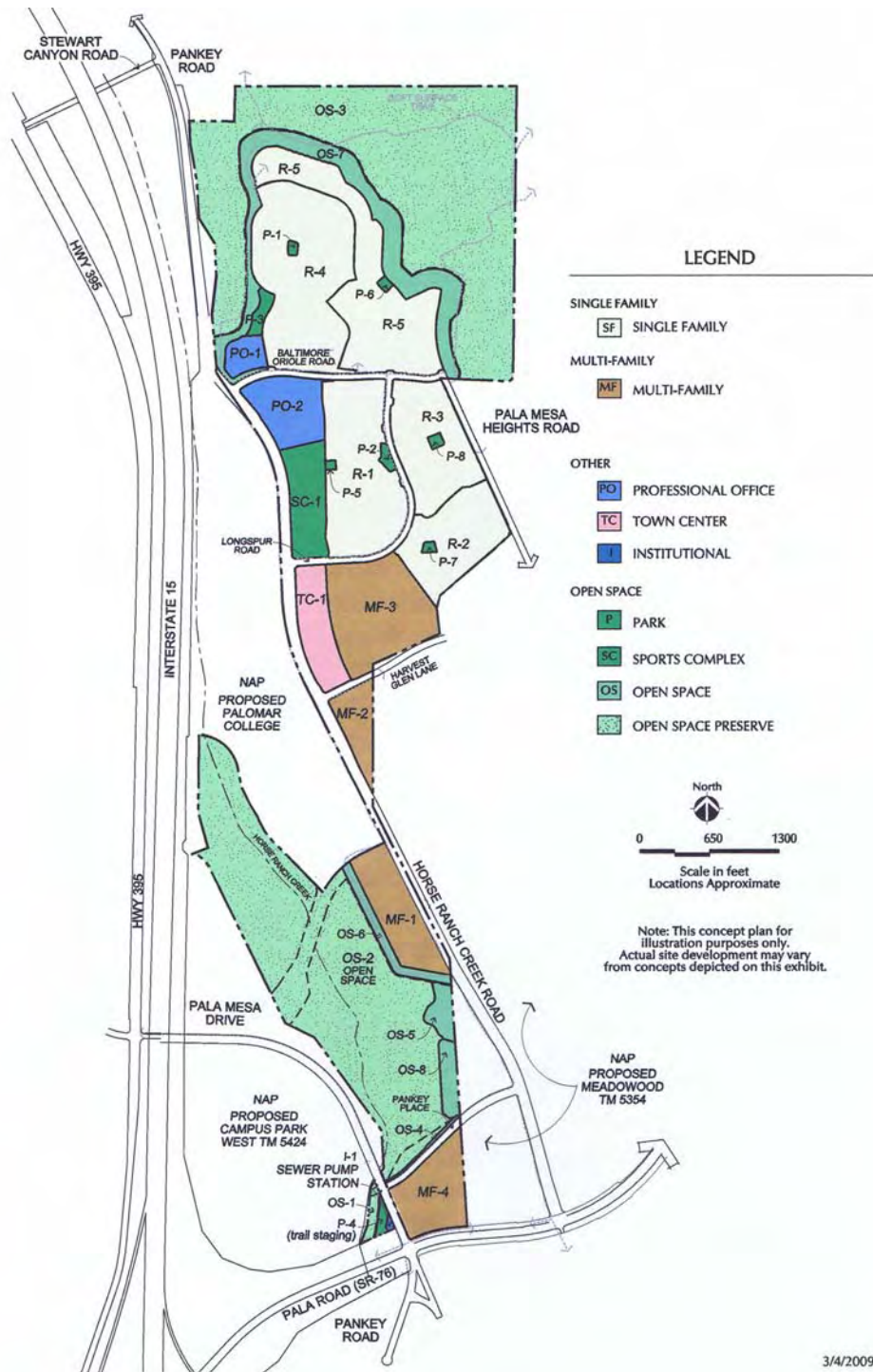


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Site Location Map Campus Park

Figure
2

May 2009



facilities, and storm drains, as well as support for non-vehicular modes of transportation via bikeways and pedestrian paths.

The Proposed Project would include 521 single-family dwelling units and 555 multi-family dwelling units. Single-family residential units would be located in the northern portion of the site, and multi-family housing would be located in the central southeastern areas, on either side of Horse Ranch Creek Road, as well as abutting SR 76. Professional office buildings, an active sports complex, and a Town Center would be aligned (north to south) along the western edge of the northern portion of the Project site, bordered on the west by Horse Ranch Creek Road. Preserved coastal sage scrub habitat would abut most of the northern portion of the Proposed Project to the west, north, and east. The southern portion of the Project would include mostly preserved riparian habitat.

A trail staging area is proposed immediately west of Pala Mesa Drive, north of SR 76. This staging area would provide parking for recreational users intending to utilize the region's existing and/or future trail network. It would include an asphalt parking area and landscaping.

The Proposed Project would include two wastewater management design options, only one of which would be implemented. Under both options, sewage would be collected from the Project site via 10- and 15- inch diameter pipelines beneath roadways. The sewage would flow to the southern portion of the site to a proposed sewer lift station to be located on the west side of Pala Mesa Drive east of the proposed trail staging area. Sewage would then be carried off-site through an existing 12-inch diameter force main.

Under Wastewater Management Option 1, all Project sewage would flow from the force main to infrastructure owned and operated by Rainbow Municipal Water District. Under Wastewater Management Option 2, sewage from 850 Equivalent Dwelling Units (EDUs) would be sent to Rainbow Municipal Water District for Treatment, with the remainder to be treated at a new wastewater treatment plant (WTP) to be located within the service area of Valley Center Municipal Water District. Under Option 2, a storage pond adequate to contain 84 days of wet-weather storage (to store treated effluent during days when irrigation would result in runoff) would be constructed within the southeastern portion of the Project site. Reclaimed water pipelines would be constructed from the off-site WTP, within Horse Ranch Creek Road, and would cross a small portion of the western-most portion abutting Meadowood Project in order to reach the containment basin.

Approximately 172 acres of existing vegetation on site (41 percent of the Project site) would be retained within dedicated biological open space preserves. Coastal sage scrub-covered slopes would be preserved in the north, northwestern and northeastern portions of the site, while riparian areas would be preserved along the southwestern boundary of the property. Fuel management zones and interior landscaped slopes would be designated as open space for HOA maintenance, otherwise known as common open space. In addition, six neighborhood parks and an HOA

recreation/community facility including a pool and a small picnic area would serve local residents. An 8.6-acre active sports park would be located along Horse Ranch Creek Road. The park would include two baseball fields one overlapping with a soccer/multi-purpose field a restroom/maintenance building and parking. In all, approximately 52 percent of the Project site would consist of park facilities or open space, including biological open space preserves. No development or fire clearing would be allowed within the preserved native open spaces, with the exception of trail areas.

A trail system consisting of community trails and nature trails would be provided throughout the Project site. Community trails, to be constructed within the development footprint, would allow pedestrians to connect to the various open space and park areas on the Project site. Nature trails would be provided in the northern area. The trails would be eight feet wide with a soft surface and adjacent rail fence, where needed for safety. The trails would extend around the perimeter of the northern area, connecting to the off-site Monserate Mountain trail to the north and east. The Monserate Mountain hiking trail, located within the Fallbrook Conservancy Preserve, currently extends from the existing Pankey Road (north extension) through the undeveloped area north of the Project site to the east side of the Project site. This trail would connect on either end to the community trail system. The majority of trails would occur in already existing trails or dirt roads.

Several new roadways would be constructed to provide access to the Project's neighborhoods. Horse Ranch Creek Road would provide the primary entrance to the Project site and access to the majority of the development. This road would extend north from SR 76, ultimately connecting with the existing northern portion of Pankey Road. Secondary street access would be provided from the south via Pala Mesa Drive, which would extend northwest from Pankey Place, and ultimately connect to Old Highway 395 west of I-15 via an existing, currently unused bridge. Other roads would serve the residential areas. All roads would have sidewalks (composed of either concrete or decomposed granite), landscape easements and lighting. Some roads would include on-street parking; additional off-street parking lots would be provided within the professional office, Town Center, multi-family residential and park areas.

The Project would maintain a 200-foot vegetation management zone north and east of single-family residences in the northern and central portions of the site for fuel management and fire protection. A 125-foot-wide vegetation management zone would be maintained on the west side of single-family residences in the northern area and southeastern side of the single-family residences in the southern area. Excluding portions abutting Meadowood (if approved), a 125-foot-wide vegetation management zone also would be maintained along the southeastern side of PA MF-3, and along the eastern edge of PAs MF-2 and MF-4. A 100- to 125-foot-wide vegetation management zone would be required for the balance of the Project site, including any lots bordering natural open space areas, flammable vegetation, and parks without an internal defensible zone. Required 30-foot clearing along roadways would fall within proposed fuel modification zones. A 10-foot clearance would occur along either side of on-site trails within open space.

Fences and walls would be designed using traditional materials such as stone (real or simulated) and wood that would complement the natural landscape while reflecting the Mediterranean-themed landscape. Walls and fencing would be located at the limits of the graded pad but would not extend into open space areas. To discourage trespassing into the open space adjacent to trails, signage will be placed where appropriate.

Phasing

Campus Park would be developed over an approximate five- to six-year period to ensure a logical and orderly expansion of roadways, public utilities, and infrastructure. Market conditions, funding for public facilities, and similar conditions beyond the control of the developer may extend implementation of the entire plan beyond that period.

Grading Phasing. The project site would be graded in two phases. The first phase would involve grading the southern and central portions of the project site up to and including the current Pala Mesa Heights Drive. Included in this grading phase would be the off-site portions of Horse Ranch Creek Road (the southern extension from the project site to SR 76). Pankey Place would connect from the new Horse Ranch Creek Road to the existing Pankey Road and Pala Mesa Drive, from Pankey Place to 395. The remainder of the site would constitute the second phase.

Off-site Improvements

Proposed off-site improvements include access roads, water lines and sewer lines that would be connected to existing and proposed facilities. The off-site road upgrades would include:

- SR 76/Horse Ranch Creek Road (Horse Ranch Creek Road would be constructed with a southbound and northbound right- and left-turn lanes, and a combination right-turn/left-turn/through lane; SR 76 be improved with east- and westbound right- and left-turn lanes; and a traffic signal would be installed)
- SR 76/Pala Mesa Drive (traffic signal; westbound left-turn lane to SR 76; southbound left-turn lane to Pankey Road; northbound right-turn lane to Pala Mesa Drive; eastbound left-turn lane to SR 76; and northbound right-turn lane to Pala Mesa Drive)
- Old Highway 395/Stewart Canyon Road/Canonita Drive (traffic signal; southbound left-turn lane to Old Highway 395)
- Horse Ranch Creek Road from Pankey Place to SR 76 (construct a four-lane roadway per GP Update "Boulevard" standards)
- Pala Mesa Drive from east of the bridge over I-15 to Pankey Place (construct as a two-lane rural light collector)
- Street R/Pankey Place from Pala Mesa Drive to Horse Ranch Creek Road (construct as a two-lane rural light collector)

Proposed off-site sewer improvements would include a gravity sewer main within a segment of Horse Ranch Creek Road from the property boundary to a point about midway to SR 76. At that point the main would extend southwesterly through a portion of the Meadowood property and the PA MF-4 area of Campus Park. The main would then be sited within Pala Mesa Drive to the tie-in in SR 76 immediately south of the trail staging area. South of Pankey Place, the main would connect to a proposed sewer lift station. Under both Wastewater Management Options 1 and 2, a force main would extend to SR 76, a main also would extend to the west to connect to an existing force main. Under Wastewater Management Option 2, after extending to SR 76, a force main would also extend to the east and connect to the proposed Meadowood WTP. The existing 15-inch sewer line also would be directed into the sewer lift station, and the remainder of the existing sewer line and Plant B would be abandoned.

An off-site water line would be located within Pala Mesa Drive, Horse Ranch Creek Road, and Pankey Place between Horse Ranch Creek Road and Pala Mesa Drive. Two pressure-reducing stations would be constructed at the connections to the existing water mains that would serve the Project; one within Horse Ranch Creek Road, north of Baltimore Oriole Road at Stewart Canyon Road and the other within Pala Mesa Drive, just east of I-15. The stations would be installed in a vault above grade.

Additional off-site areas would be disturbed by creation of manufactured slopes to accommodate the construction of Pala Mesa Heights Drive along the eastern property boundary, single-family residential lots to the south of Pala Mesa Heights Drive, a multi-family residential lot adjacent to Harvest Glen, and Horse Ranch Creek Road adjacent to the Palomar College site.

Mitigation-related Improvements

Several intersections would be improved to mitigate for projected traffic impacts by adding turn lanes and/or installing traffic signals. These intersections include: SR 76 and Via Monserate, Gird Road, Sage Road, Old Highway 395 and I-15 ramps, as well as Old Highway 395 and Pala Mesa Drive, and Reche Road.

This environmental analysis has been prepared to support the discretionary actions and approvals necessary for implementation of the project. Such approvals and permits are listed in Table 1, Project Approvals and Permits.

Table 1 Project Approvals and Permits	
Discretionary Approval/Permit	Approving Agency
General Plan Amendment Specific Plan Amendment Fallbrook Community Plan Amendment I-15 Corridor Subregional Plan Conformance I-15/Highway 76 Interchange Master Specific Plan Conformance Zone Reclassification Tentative Map "B" Special Area Designator Site Plan	County of San Diego Department of Planning and Land Use
Grading Permit(s) Right of Way Permit Final Mapping Improvement Plans Modification to Road Standards (driving space and corner sight distance)	County of San Diego Department of Public Works
4(d) Habitat Loss Permit	County of San Diego U.S. Fish and Wildlife Service California Department of Fish and Game
State Highway Encroachment Permit	Caltrans
National Pollution Discharge Elimination System Permit General Construction Stormwater Permit Waste Discharge Requirements Permit Section 401 Water Quality Certification	San Diego Regional Water Quality Control Board.
Section 1602 Streambed Alteration Agreement	California Department of Fish and Game
Section 404 Permit – Dredge and Fill	U.S. Army Corps of Engineers
Section 7 Consultation or Section 10a Permit – Incidental Take	U.S. Fish and Wildlife Service
Water District Authorization Sewer District Authorization	Rainbow Municipal Water District Rainbow and Valley Center Water District (option 2)
School District Authorization	Fallbrook Union Elementary School District Fallbrook Union High School District Bonsall Unified School District

1.2 Physical Characteristics

Elevations onsite range from approximately 260 feet above mean sea level (AMSL) at the southern edge to 850 feet AMSL at the northeastern edge. Horse Ranch Creek traverses the southwestern edge of the property draining toward the San Luis Rey

River. Several dikes cross perpendicular to this drainage onsite. Several utility lines are onsite as well as an existing residence and associated dirt roads.

There are nine soil types onsite. These include the following:

- Grangeville fine sandy loam 0 to 2 % slopes (GoA)
 - Ramona sandy loam 5 to 9 % slopes (RaC)
 - Ramona sandy loam 9 to 15% slopes eroded (RaD2)
 - Steep gullied land (StG)
 - Visalia sandy loam 0 to 2% slopes (VaA)
 - Las Posas fine sandy loam 9 to 15% and 15 to 30 % slopes eroded (LpD2) (LpE2)
 - Las Posas stony fine sandy loam 30 to 65% slopes (LrG)
 - Wyman loam 2 to 5 %, 5 to 9%, and 9 to 15% slopes (WmB) (WmC) (WmD)
 - Arlington coarse sand loam 2 to 9% slopes (AvC)
- (Bowman 1973)

1.3 Onsite and Surrounding Land Uses

The majority of the site is currently being used for non-commercial grazing. Animals observed onsite include goats, horses, cattle, and ostrich. The site has been used historically for farming. For that use, containment and drainage channels were constructed to allow for irrigation and cultivation of crops. Drainage from the property into San Luis Rey River was restricted following the construction of Pala Road (Highway 76) and Interstate 15. Exacerbating the onsite conditions was the development of projects to the northwest such as Pala Mesa Resort golf course, resulting in increased dry-season flows in the drainage due to landscape irrigation. A second factor affecting the ecology of the site was alteration of Horse Ranch Creek-during the construction of old Highway 395 and Pala Road (Highway 76). More recently, California Department of Transportation (Caltrans) realigned the creek during the construction of Interstate 15. Upstream irrigation has resulted in a year round flow of the creek.

2.0 METHODS AND SURVEY LIMITATIONS

The project site was surveyed for plants and animals by REC biologists on the dates shown in Table 2. Species were identified directly by sight with the aid of binoculars or by vocalizations, and indirectly by scat, tracks, or burrows. No territory mapping, handling, or banding was conducted. The existing habitat and site conditions were assessed to determine whether or not a sensitive species has the potential to occur onsite. Field notes were maintained throughout the surveys and all onsite habitats were mapped.

Scientific nomenclature and common names for animal species in this report follow American Ornithological Union (AOU 2000) for birds, Jennings (1983) and Stebbins (2003) for reptiles and amphibians, Jones et al (1992) for mammals, and Powell and Hogue(1979) for insects. Scientific nomenclature for plants follows Hickman et al. (1996), as updated by Simpson & Rebman (2001). Habitats were mapped based on current County of San Diego mapping requirements (July 2008).

Date	Survey Type	Time (start – end)	Temp (°F)(start-end)	Wind (mph)	Sky	Biologists
1/13/99	General	0900-1530	50 - 70	0	clear	DD, DF, RC
1/29/99	General	1000-1200	70-74	0 -5	Partly cloudy	DD, DF, RC
2/9/99	General	0930 - 1400	52 - 60	0 - 10	Overcast/foggy	DD, DF, ER
3/12/99	Plantago	1000 - 1400	Not provided	Not Provided	Not Provided	DF, RC
3/22/99	Quino checkerspot Butterfly	1345 - 1545	72 – 72.5	1.5 – 8.2	Clear	RR
4/14/99	Least Bell's Vireo	0840 - 1130	65 - 74	0 - 5	Clear	DD, DF, RC
4/16/99	Coastal California gnatcatcher	0840 - 1200	68 -92	0 - 5	Clear	DD, DF, RC
4/18/99	Quino Checkerspot Butterfly	1615 - 1745	80 - 88	4.3 – 11.2	Clear	RR
4/25/99	Quino Checkerspot Butterfly	1130 - 1300	73.2 – 77.0	2.6 – 8.3	Clear	RR
4/27/99	Least Bell's Vireo	0755 - 1030	57 - 64	0 - 1	Cloudy - clear	DD, RC
5/3/99	Arroyo Toad	2000 - 2200	65	0 -1	Clear	DD, ER
5/5/99	Coastal California gnatcatcher	0850 - 1200	60 - 76	0 - 5	Clear	DD, DF, RC
5/12/99	Least Bell's Vireo	0800 - 1030	58 - 67	0 - 5	Overcast/clear	DD, DF, RC
5/18/99	Arroyo Toad	2000 - 2200	65	0 - 1	Clear	DD, ER

Table 2 Biological Surveys Conducted on the Campus Park Property						
Date	Survey Type	Time (start – end)	Temp (°F)(start-end)	Wind (mph)	Sky	Biologists
5/19/99	Coastal California gnatcatcher	0920 - 1145	59 - 73	0 - 5	Clear	DD, DF, RC
5/25/99	Arroyo Toad	2000 - 2200	65	0 - 1	Clear to cloudy	DD, ER
5/26/99	Least Bell's Vireo	0820 - 1100	62 - 72	0 - 1	Overcast/clear	DD, DF, ER, RC
6/9/99	Least Bell's Vireo	0930 - 1245	63 - 73	0 - 5	Overcast/cloudy	RC
6/22/99	Least Bell's Vireo	0930 - 1025	63 - 71	0 - 1	Clear	DD, DF, RC
7/7/99	Least Bell's Vireo	0850 - 1030	70 - 75	0 - 1	Partly cloudy/clear	DD
12/23/02	Wetland Delineation	1100 - 1411	---	----	----	CM
1/26/03	Wetland Delineation	0900 - 1200	----	----	----	CM
7/21/03	General	1140 -1400	70 - 75	0 - 1	cloudy	CD, VW
7/22/03	General	1030 - 1400	70 - 75	0 - 2	cloudy	CD, VN
9/2/03	Wetland Delineation	0815 -1130	Warm -hot	0 - 5	clear	CM
3/16/04	Arroyo Toad	1650 – 1735/ 1930 -2015	68 - 58	0-3/0-1	Clear/foggy	CD, VN
3/30/04	Sensitive Plant Survey	0930-	warm	breezy	clear	CM, VW
4/13/04	Least Bell's Vireo	0705 - 1045	Warm	----	clear	CM, VW
4/15/04	Sensitive Plant	1010-1515	Warm	0 - 5	sunny	CM, VW
4/15/04	Arroyo Toad	1600 – 1745/2020 - 2120	70 - 59	0 - 3	Clear - hazy	CD, VN
4/23/04	Least Bell's Vireo	0820 -1050	warm	-----	clear	CM, VW
5/5/04	Least Bells Vireo	0920-1100	79-87	0-4	clear	CD, CM, VW
5/11/04	Arroyo Toad	1700-2130	70-59	0-4	clear	CD, VN
5/14/04	Coastal California gnatcatcher	0800-1045	63-90	0-2	clear	CD, CM, ER
5/17/04	Least Bell's vireo	0745-10000	68-81	0-2.7	Clear/overcast	CM, VW
5/18/04	Arroyo Toad	1636-2100	78-46	----	clear	VN, VW
5/25/04	Arroyo Toad	1702-2050	69	-----	overcast	VN, VW
6/2/04	Least Bell's Vireo	0705-0900	67-74	0-2	Overcast to sunny	CM, VW
6/10/04	Arroyo Toad	1700-2100	73-64	0-4	clear	CD, VN
6/15/04	Least Bell's Vireo	0815-1113	68-76	0-4	Overcast/sunny	CM, VW
6/29/04	Least Bell's vireo	0815-1000	71-75	0-2	Overcast/sunny	CM, VW

<p align="center">Table 2 Biological Surveys Conducted on the Campus Park Property</p>						
Date	Survey Type	Time (start – end)	Temp (°F)(start-end)	Wind (mph)	Sky	Biologists
7/8/04	Least Bell's Vireo	0830-1000	73-76	0-2	Overcast	CM, VW
8/5/04	Wetland Delineation	0800-1150	----	----	-----	CM
8/30/04	Offsite Water and Sewer	1135-1430	75-80	0-1.5	clear	CD, VW
10/12/07	General	1000-1500	70-75	0-3	Clear	VN, MM
5/08	Offsite intersections	0800-1200	70-75	0-3	Clear	MM
6/08	Offsite intersection	0800-1200	70-75	0-3	Clear	ER

CD: Cheryl Deleko, CM: Catherine MacGregor, DD: Denise Dixon, DF: Danielle Flynn, ER: Elyssa Robertson, MM: Mandy Meng, RC: Robin Church, RR: Royce Riggan, VN: Victor Novik, VW: Valerie Walsh

All focused survey reports are included as Attachments 1 through 5 in Appendix J of this report.

2.1 Focused Coastal California Gnatcatcher Surveys

Coastal California gnatcatcher (*Poliophtila californica californica*) surveys were completed by U.S. Fish and Wildlife Services (USFWS) permitted biologist Robin Church (Permit # 812206 - 1) and Denise Dixon (Permit # TE009390-2). USFWS protocol requires a minimum of three surveys, at least one week apart, to determine presence/absence of this species (Table 2). Surveys were conducted within the coastal sage scrub and adjacent habitats within the property boundaries. Taped vocalizations of the gnatcatcher were played infrequently to illicit an initial response from any potential gnatcatchers occurring onsite. The final report is attached (Appendix J, Attachment 1). Since the time of the surveys for California gnatcatchers the site has burned eliminating much of this species habitat. It is expected that the habitat will regenerate however and therefore data from the original survey is utilized in this report. It is recommended that an updated survey be conducted prior to brushing and clearing to ensure that data for this species is accurate.

2.2 Focused Quino Checkerspot Butterfly Surveys

A focused survey for the federally endangered Quino Checkerspot butterfly (*Euphydryas editha quino*) was conducted by USFWS permitted biologist Royce Riggan (Permit # PRT-780195) in 1999. The site was surveyed for the presence of suitable habitat to support the Quino checkerspot including larval host plants, nectar sources, and hilltops. Biologists mapped and flagged dot-seeded Plantain (*Plantago erecta*), one of the larval host plants. No Quino checkerspot butterflies were observed onsite. Results of those studies are summarized in this report. Mr. Riggan's report is included in Appendix J (Attachment 2).

2.3 Focused Least Bell's Vireo Surveys

REC biologists Denise Dixon, Robin Church, and Danielle Flynn conducted Least Bell's Vireo (*Vireo bellii pusillus*) surveys in 1999 and Catherine MacGregor, Valerie Walsh, and Cheryl Delekto conducted surveys in 2004. USFWS protocol requires a minimum of eight surveys, at least ten days apart, between dawn and 11:00am to determine presence/absence of this species. Surveys were conducted within riparian and adjacent habitats within the property boundaries. The reports for 1999 and 2004 surveys may be viewed in Appendix J (Attachment 3).

2.4 Focused Arroyo Toad Surveys

REC biologists Denise Dixon and Elyssa Robertson conducted arroyo toad (*Bufo microscaphus californicus*) surveys in 1999 and Cheryl Delekto, Valerie Walsh, and Victor Novik conducted surveys in 2004. Three surveys were conducted within riparian and adjacent habitats within the property boundaries in conformance with USFWS protocol. The reports for 1999 and 2004 may be viewed in Appendix J (Attachment 4). Arroyo toad surveys were conducted between 2003 and 2006 for the adjacent Meadowood project. Results of those studies are summarized in this report.

2.5 Focused Sensitive Plant Surveys

REC biologists Catherine MacGregor and Valerie Walsh conducted focused sensitive plant surveys onsite in March and April 2004. The purpose of these surveys was to intensively search for sensitive plants, particularly herbs that could occur onsite. Survey methodology consisted of walking irregular transects through the areas judged most likely to contain sensitive plants, with an emphasis on the less disturbed northern section of the site. The effectiveness of these sensitive plant surveys was impaired by low rainfall in early 2004, which reduced the quantity and diversity of herbs onsite.

2.6 Wetland Jurisdictional Determination

REC biologist Catherine MacGregor conducted a wetland jurisdictional survey to determine the status of onsite wetlands in 2003 and 2004. This report is attached in Appendix J (Attachment 5).

3.0 EXISTING CONDITIONS

3.1 Habitats

Habitat descriptions are provided below and are based on Holland's Preliminary Descriptions of the Terrestrial Natural Communities of California (1986) and as updated by the County of San Diego (September 2006). It has been shown, however, that habitats on the project sites in San Diego County are often not pristine and rarely fit into one description. Therefore the best-fit description is provided.

The project site currently supports eleven habitat types: southern riparian forest, southern willow scrub, freshwater marsh, oak woodland, Diegan coastal sage scrub, non-native grassland, ornamental trees, pasture, disturbed, developed, and eucalyptus woodland (Figure 4 and map pocket). Figures 4 and 5a through 5f depict offsite habitat resources and impacts. Appendix A lists all plants observed onsite in 1999, 2003, 2004, and 2007.

It should be noted that the majority of the project site burned in October of 2007. While much of the riparian area still remains, the northern section of the site was completely burned. The following information is based on site surveys conducted prior to the fire and include the condition of the site at that time.

3.1.1 Southern Riparian Forest (County Habitat Code 61300) – 85.6 acres onsite and 1.0 acres offsite

Southern riparian forest is a riparian habitat characterized by a dense thicket of willow trees (*Salix spp.*) with scattered cottonwoods (*Populus fremontii*) and/or western sycamores (*Platanus racemosa*). This habitat occupies approximately 85.6 acres in the southern and southeastern areas onsite and is dominated by black (*Salix gooddingii*) and arroyo (*Salix lasiolepis*) willows with western sycamore. An additional 1.0 acres of this habitat occurs within the limits of offsite improvements for Horse Ranch Creek Road and Pala Mesa Drive.

3.1.2 Southern Willow Scrub (County Habitat Code 63320) – 1.6 acres onsite and 0.06 acre offsite

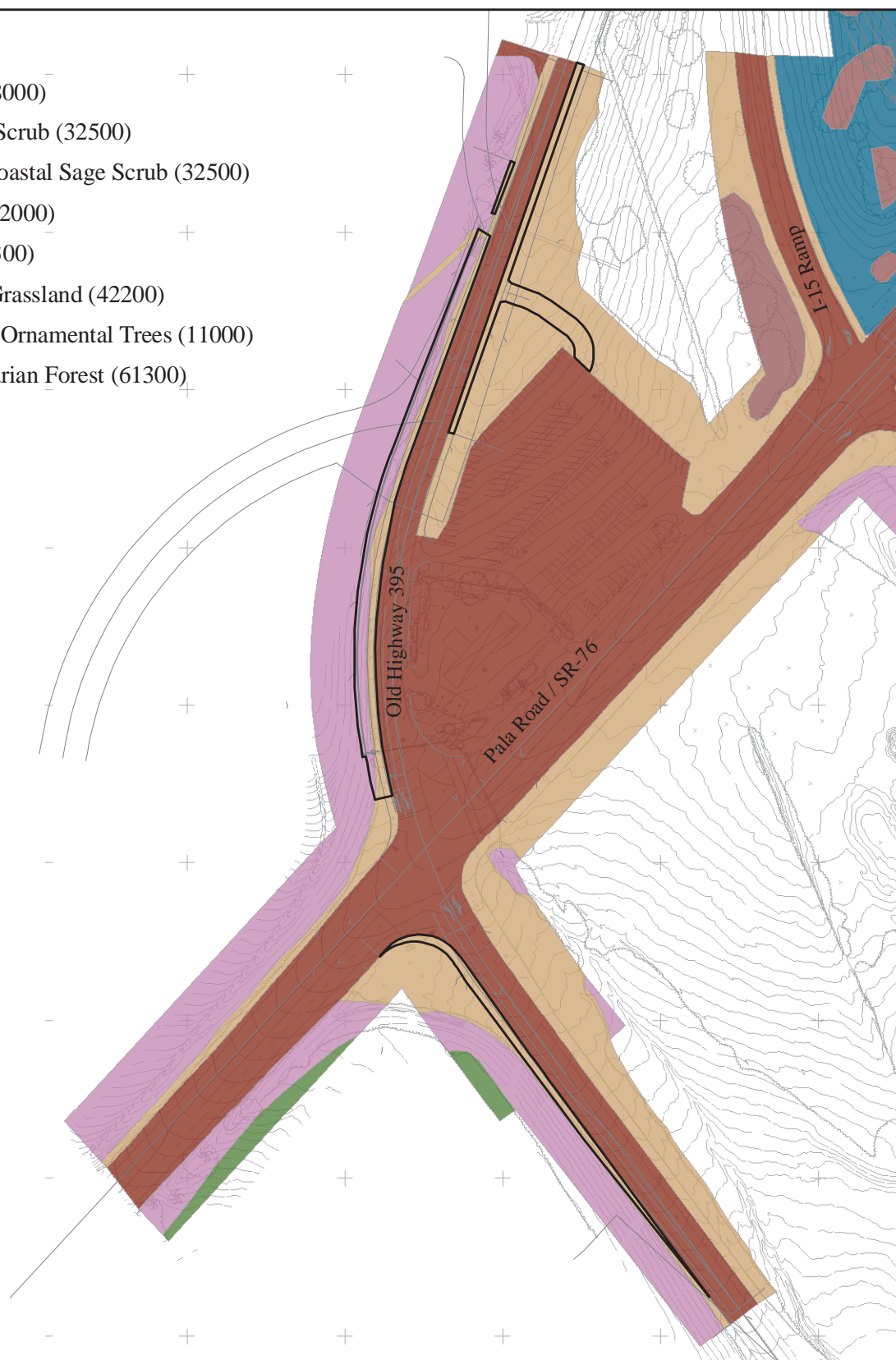
This habitat type is characterized by dense, broadleaf, winter-deciduous riparian thickets dominated by several willow species. Most stands are too dense to allow much understory development. Southern willow scrub habitat occupies 1.6 acres of land onsite along the northern drainage in the central portion of the site that is dominated by arroyo willows and black willows, with mulefat (*Baccharis salicifolia*), and coyote bush (*Baccharis pilularis*). An additional 0.06 acre of this habitat occurs within the limits of the proposed offsite improvements (grading for Horse Ranch Creek Road).

Legend

- AG Agriculture (18000)
- CSS Coastal Sage Scrub (32500)
- DCSS Disturbed Coastal Sage Scrub (32500)
- DEV Developed (12000)
- DIS Disturbed (11300)
- NNG Non-native Grassland (42200)
- NNOT Non-native Ornamental Trees (11000)
- SRF Southern Riparian Forest (61300)

- Site Plan
- Impact Area

Feet
 0 100 200
 1 inch equals 200 feet



Consultants, Inc.

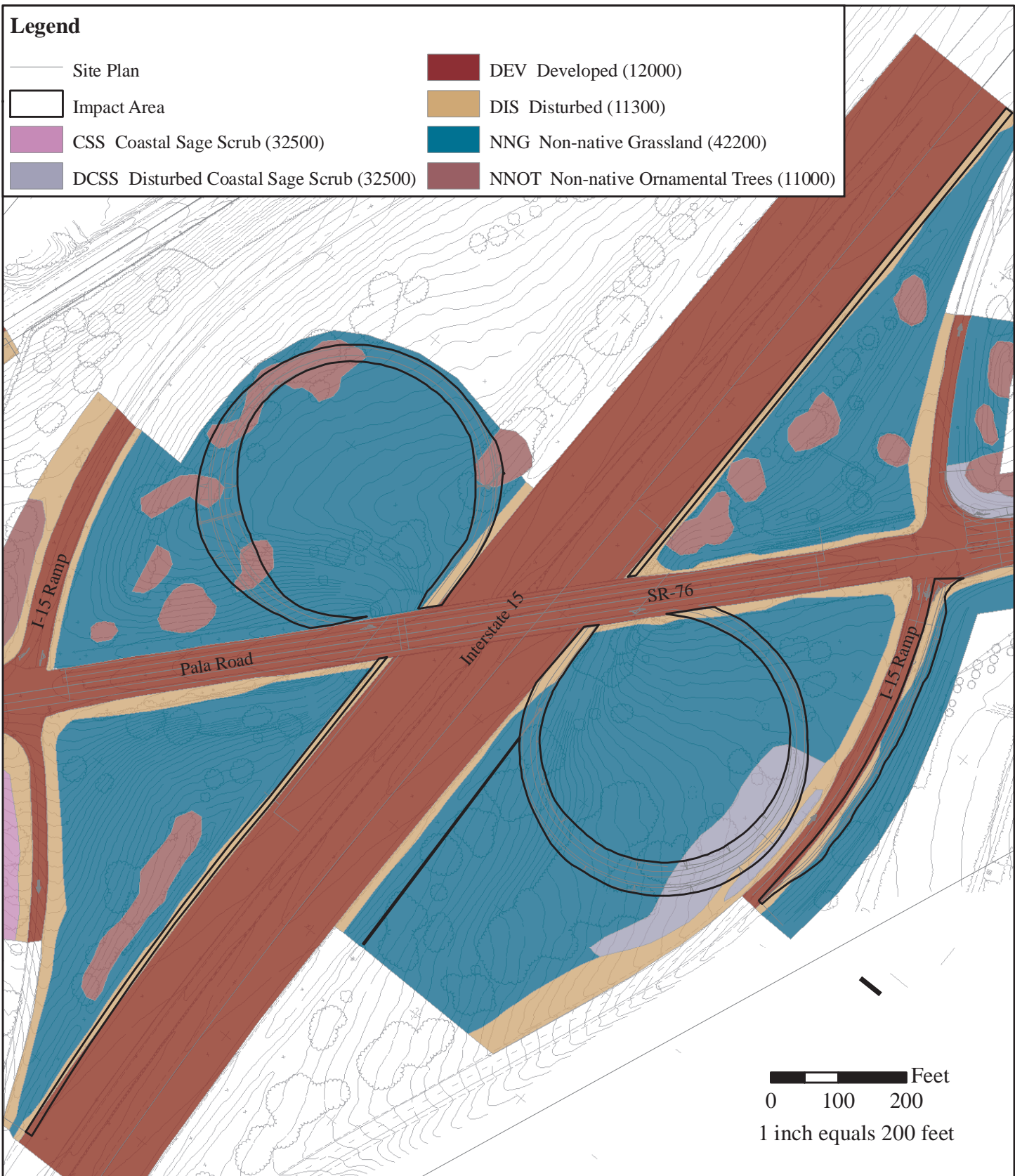
Offsite Intersection Resources and Impacts

Campus Park

Offsite Intersection Old Highway 395 / Pala Road

May 2009

Figure
5A



Consultants, Inc.

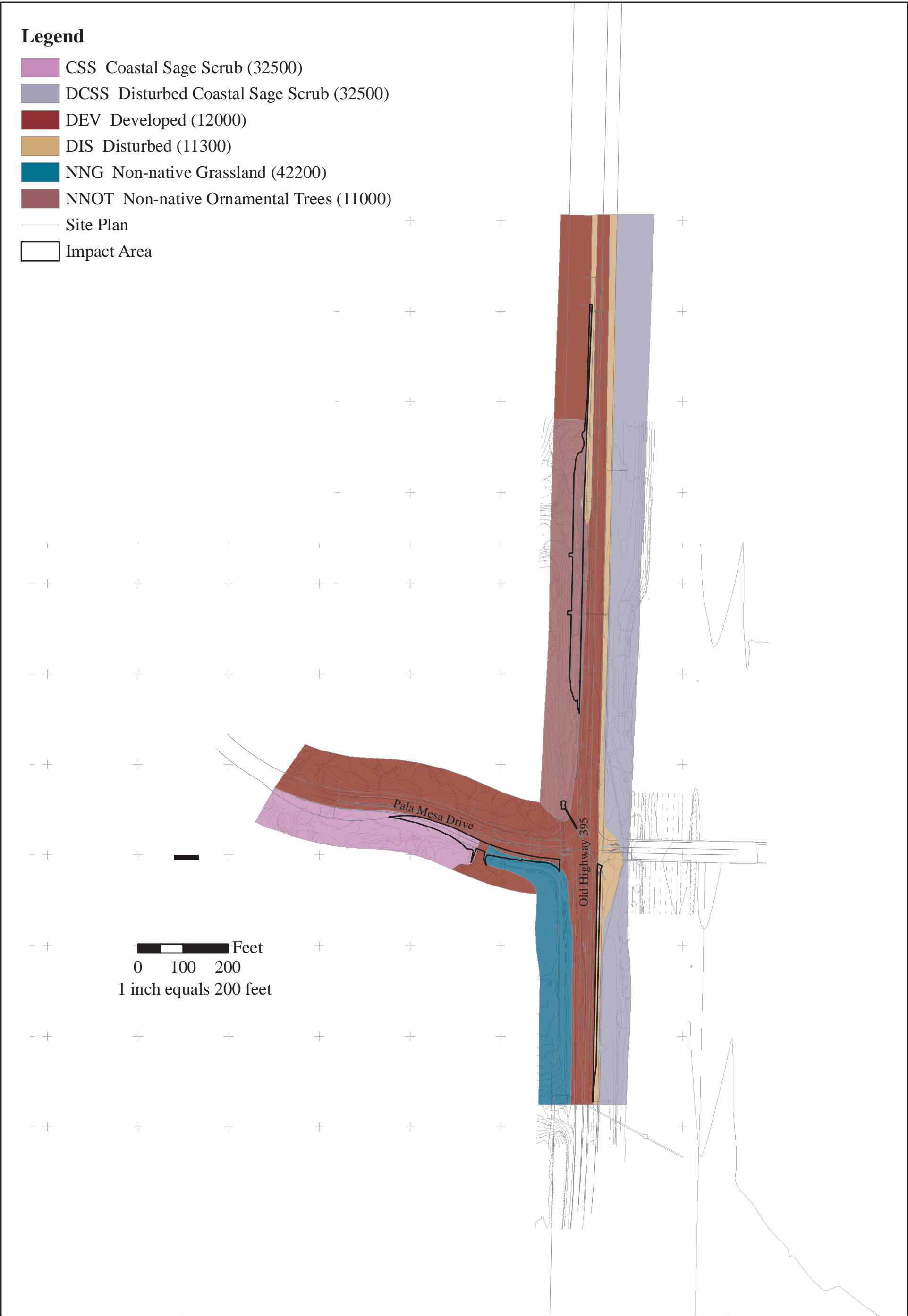
Offsite Intersection Resources and Impacts
Campus Park
Offsite Intersection I-15 on and off ramps

May 2009

Figure
5B

Legend

- CSS Coastal Sage Scrub (32500)
- DCSS Disturbed Coastal Sage Scrub (32500)
- DEV Developed (12000)
- DIS Disturbed (11300)
- NNG Non-native Grassland (42200)
- NNOT Non-native Ornamental Trees (11000)
- Site Plan
- Impact Area



Legend

- AG Agriculture (18000)
- CSS Coastal Sage Scrub (32500)
- CSS/CHA Coastal Sage Scrub / Chaparral (32500/37000)
- DEV Developed (12000)
- DIS Disturbed (11300)
- NNOT Non-native Ornamental Trees (11000)
- OW Oak Woodland (71100)
- SRF Southern Riparian Forest (61300)
- Site Plan
- Impact Area



Offsite Intersection Resources and Impacts
Campus Park

Offsite Intersection Old Highway 395 / Stewart Canyon Rd

Figure
5D

3.1.3 Freshwater Marsh (County Habitat Code 52410) – 10.3 acre onsite and 0.1 acre offsite

Onsite freshwater marsh occupies 10.3 acre along the edges of southern riparian forest on the southern portion of the site. Livestock grazing has resulted in substantial disturbance to this habitat with usually taller species having been grazed to the ground. The disturbed wetland contains species such as cattail (*Typha sp.*), mulefat, giant reed (*Arundo donax*), oats (*Avena sp.*), saltgrass (*Distichlis spicata*), fennel (*Foeniculum vulgare*), tree tobacco (*Nicotiana glauca*), bristly ox-tongue (*Picris echioides*), and tamarisk (*Tamarix sp.*). An additional 0.1 acres of this habitat occurs within the limits of proposed offsite improvements (offsite grading).

3.1.4 Coast Live Oak Woodland (County Habitat Code 71160) – 2.8 acres and 0.01 offsite

This woodland habitat is characterized in Southern California by coast live oak (*Quercus agrifolia*) as its dominant species. The shrub layer is typically poorly developed, but may include toyon (*Heteromeles arbutifolia*), currant (*Ribes sp.*), laurel sumac (*Malosma laurina*) and blue elderberry (*Sambucus mexicana*). The herb component is continuous and dominated by ripgut grass (*Bromus diandrus*) and several other introduced taxa.

Onsite, Coast live oak woodland habitat occurs with ornamental plantings onsite. This habitat occupies approximately 2.8 acres in the northern portion of the site and is dominated by coast live oak, scrub oak (*Quercus berberidifolia*) with California fan palm (*Washingtonia filifera*), eucalyptus (*Eucalyptus sp.*), olive (*Olea europaea*), mission manzanita (*Xylococcus bicolor*), and pine (*Pinus sp.*) (Old Highway 395 at Canonita).

3.1.5 Diegan Coastal Sage Scrub (County Habitat Code 32510) – 129.6 acres onsite, 4.4 acres offsite

Diegan coastal sage scrub is characterized by low-density, drought-deciduous, flexible shrubs such as California sagebrush (*Artemisia californica*) and true sages (*Salvia sp.*) on low-moisture sites (Schoenherr 1992). Approximately 129.6 acres of coastal sage scrub occurs onsite in three distinct sub-phases as described below.

Onsite, higher quality coastal sage scrub habitat (89.8 acres of the 129.6 acres onsite) occurs primarily on the hillsides in the northern portion of the project site, north of Pala Mesa Heights Drive. The coastal sage scrub habitat onsite is not uniform; California sagebrush dominates the base and lower portions of the hillsides. As the elevation of the hillsides increases, the coastal sage scrub habitat transitions to black sage (*Salvia mellifera*) dominant habitat. Laurel sumac is interspersed evenly throughout this area.

Evidence of a previous fire (prior to the 2007 fire) exists within the northwestern corner of the property where California sagebrush and black sage are co-dominant. There is

approximately 30% shrub cover within this area consisting primarily of laurel sumac with stump sprouts approximately one meter in height.

At the base of the southwest facing hills, the shrubbier species, including laurel sumac, sugar bush (*Rhus ovata*), and Ceanothus (*Ceanothus spp.*) have established, although not to the degree that this should be classified as chaparral. At the top of these hills in the northeastern corner of the property, the habitat type contains a large, though not dominant, chamise (*Adenostoma fasciculatum*) element.

Located onsite within the Diegan coastal sage scrub habitat are rock outcrops. Rock outcrops occur in the northern section of the property and consist of approximately 1.5 acres.

A form of coastal sage scrub composed pre-dominantly of coyote bush, coyote bush scrub, occurs onsite as well. This area has been heavily impacted by grazing and consists of scattered mature coyote bush. Onsite coyote bush scrub occupies approximately 0.7 acre of the 129.6 acres of coastal sage scrub onsite. This sub-habitat type is distinguished onsite since it occurs in a separate location from the more typical coastal sage scrub and is of a different vegetative structure.

Disturbed Diegan coastal sage scrub onsite is dominated by California sagebrush however, shrub cover is approximately 30 to 40%, consisting primarily of laurel sumac and California sagebrush. Species indicative of disturbance include California pepper (*Schinus molle*), star thistle (*Centaurea sp.*), mustard (*Brassica nigra*), and oats. Many patches of coast prickly pear (*Opuntia littoralis*) were found within this habitat. Approximately 37.6 acres of disturbed Diegan coastal sage scrub of the total 129.6 acres of coastal sage scrub occurs onsite.

An additional 4.4 acres of coastal sage scrub habitat occurs within the limits of offsite improvements (at each of offsite intersections as well as for grading and fuel modification).

3.1.6 Non-Native Grassland (County Habitat Code: 42200) – 44.1 acres onsite and 6.4 acres offsite

Non-native grasses and weeds can become the dominant vegetation type when grazing, agriculture, or other disturbances degrade the native vegetation. Onsite, an area north of Pala Mesa Heights Drive, as well as a portion of the southern area would be characterized as non-native grassland. These areas include species such as wild oats, century plant (*Agave americana*), brome grasses (*Bromus sp.*), California pepper, fennel, coyote bush, and star thistle. Approximately 44.1 acres of non-native grassland occur onsite. An additional 6.4 acres of non-native grassland occurs within the limits of the proposed offsite improvements at Pala Mesa Drive and Old Highway 395.

3.1.7 Non-native Vegetation (County Habitat Code: 11000) – 0.1 acre onsite and 0.68-acre offsite

Scattered throughout the site are stands of California pepper trees. These stands do not comprise a habitat type nor demonstrate function as a naturalized habitat for native wildlife species. Approximately 0.1 acre of non-native vegetation occurs onsite. An additional 0.4 acre of this habitat occurs within the limits of the proposed off-site improvements at Pala Mesa Drive and Old Highway 395.

3.1.8 Pasture (County Habitat Code 18310) – 135.4 acres onsite and 7.9 acres offsite

The central and southern portion of the project site south of Pala Mesa Heights Drive has been and is currently being grazed. Bare ground and non-native vegetation such as tree tobacco and fennel dominate these 144.8 acres of habitat onsite. Approximately 7.9 acres of this habitat type occurs within the limits of the proposed offsite improvements (offsite grading for Horse Ranch Creek Road).

3.1.9 Disturbed (County Habitat Code 11300) – 4.4 acres onsite and 14.3 acres offsite

The disturbed land onsite includes habitats that have been altered to such an extent that native vegetation no longer persists nor would be expected to regenerate to native habitat. The vegetation that thrives within this habitat is often weedy, non-native species that have adapted to rapidly colonize exposed substrates. Included in this habitat type onsite is a dirt parking lot. The disturbed habitat onsite is pre-dominantly bare dirt (i.e. dirt roads) with sporadic non-natives such as oats, tecolote (*Centaurea melitensis*), black mustard, and foxtail chess (*Bromus madritensis*). There is approximately 4.4 acres of disturbed habitat onsite. An additional 14.3 acres of this habitat type occurs within the limits of each of the proposed offsite improvements.

3.1.10 Developed (County Habitat Code 12000) – 2.1 acres onsite and 2.1 acres offsite

Developed areas onsite consist of paved roads, an existing house and associated facilities, and an agriculture staging area. Approximately 2.1 acres of the site is considered developed comprised of existing houses, roads, and abandoned house pads. Offsite, these areas include predominantly paved roadways.

3.1.11 Eucalyptus Woodland (County Habitat Code 11100) – 0.1acre onsite and 1.7 acres offsite

The eucalyptus woodland habitat is mostly comprised of eucalyptus (*Eucalyptus* sp.) stands. This habitat is characteristically created (planted) by urban expansion and used for shade, wind barriers, privacy “walls”, or “fence” lines. This habitat is located near the southeastern boundary of the site along the property line and along the alignment of the extension of Pala Mesa Drive offsite.

3.1.12 Orchard (County Habitat Code 18100) 11.90 acres offsite

Approximately 11.90 acres of orchard occur within the limits of the proposed offsite improvements including offsite grading, fuel modification, and intersection improvement. These orchards are part of the Pankey Ranch land to the east of the project site. Orchards include both citrus and avocado and associated dirt roads.

3.2 Wildlife

Common species associated with the habitats onsite were observed either through direct observations, tracks, scat or burrows. Wildlife was concentrated primarily within the Diegan coastal sage scrub habitat in the northern portion of the site and within the riparian habitats on the southern portion of the project site. Observations included thirty-three insects, seventy birds, eleven reptiles, four amphibians, and sixteen mammal species. A complete list of animal species observed onsite is included in Appendix B.

3.2.1 Invertebrates

Thirty-three insect species were observed onsite. The most common of these species include Sara orangetip (*Anthocharis sara*), southern blue (*Glaucopsyche lygdamus australis*), ladybug (Family *Coccinellidae*), and honeybee (*Apis mellifera*).

3.2.2 Reptiles and Amphibians

Four amphibian and eleven reptile species were observed onsite during the survey including, but not limited to: western fence lizard (*Sceloporus occidentalis*), bullfrog (*Rana catesbeiana*), California treefrog (*Hyla cadaverina*), common kingsnake (*Lampropeltis getulus*), western rattlesnake (*Crotalus viridis*). Tree frogs were prevalent within the riparian habitats onsite while reptile species were more predictably elusive. Two sensitive reptile species observed onsite including orange-throated whiptails (*Aspidoscelis hyperthyrus*) and a northern red-diamond rattlesnake (*Crotalus ruber*).

3.2.3 Birds

Seventy bird species were observed during the field surveys. Some of the more abundant species onsite included American goldfinch (*Carduelis tristis*), yellow-rumped warbler (*Dendroica coronata*), bushtit (*Psaltiriparus minimus*), California towhee (*Pipilo crissalis*), house finch (*Carpodacus mexicanus*), lesser goldfinch (*Carduelis psaltria*), spotted towhee (*Pipilo erythrophthalmus*), and wrentit (*Chamaea fasciata*). Species found in the riparian areas included black phoebe (*Sayornis nigricans*), common yellowthroat (*Geothlypis trichas*), and song sparrow (*Melospiza melodia*). Upland species include Bewick's wren (*Thryomanes bewickii*), southern-California rufous-crowned sparrow (*Aimophila ruficeps canescens*), and western meadowlark (*Sturnella neglecta*).

3.2.4 Mammals

Evidence of sixteen mammal species was identified onsite including raccoon (*Procyon lotor*), ground squirrel (*Spermophilus beecheyi*), gopher (*Thomomys bottae*), coyote (*Canis latrans*), and cottontail rabbit (*Sylvilagus auduboni*). Domestic species onsite included cow (*Bos taurus*), donkey (*Equus asinus asinus*), goat (*Capra capra*), and horse (*Equus caballus*).

3.3 Sensitive Resources

Sensitive or special interest plant and wildlife species and habitats are those that are considered rare, threatened, or endangered within the state or region by local, state, or federal resource conservation agencies. Sensitive habitats, as identified by these same agencies, are those that generally support plant or wildlife species considered sensitive by these resource protection agencies. 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 the County of San Diego Resource Protection Ordinance (RPO) and Guidelines for Significance of Biological Resources, U.S. Fish and Wildlife Service (USFWS 2006), California Department of Fish and Game (CDFG 2006), and the California Native Plant Society (CNPS 2006).

3.3.1 Sensitive Habitats

Sensitive habitats onsite include southern riparian forest, southern willow scrub, freshwater marsh, oak woodland, coastal sage scrub, southern willow scrub, and non-native grassland.

Southern Riparian Forest, Southern Willow Scrub, and Fresh-water Marsh

The County of San Diego considers wetland habitats as sensitive because of their limited distribution, high wildlife diversity, and valuable water source in the arid climate of Southern California. Other agencies that consider wetland habitats sensitive include the Army Corps of Engineers (ACOE), USFWS, CDFG, and the U.S. Environmental Protection Agency (EPA). The County Resource Protection Code specifically addresses wetland habitat protection as do: CDFG Code, Sections 1600-1606 (Streambed Alteration Agreement); and the ACOE Section 404 permit process (Clean Water Act). Figure 4 delineates the limits of the wetland jurisdictional boundaries onsite.

Coast Live Oak Woodland

Coast live oak woodland is considered sensitive throughout the County. Oak woodland supports a large number of wildlife species, avian species in particular, and is very

limited in its distribution. Oak woodlands are valuable for their ecological function and their aesthetic value. This habitat type has declined dramatically throughout the region.

Diegan Coastal Sage Scrub

The County of San Diego, CDFG, USFWS, and EPA consider Diegan coastal sage scrub habitat sensitive. This habitat regionally supports a number of state and federally endangered, threatened, and rare plants and animals that are currently listed or are being considered as possible candidates for listing. It is estimated that 70 to 90 percent of this habitat in the state has been lost as a result of urban expansion in coastal areas (Atwood 1998). Additionally, coastal sage scrub is considered a sensitive habitat because it harbors a disproportionately large number of listed plant and animal species. Animal species include the coastal California gnatcatcher, coastal cactus wren (*Campylorynchus brunneicapillus*), orange-throated whiptail lizard, and the coast horned lizard (*Phrynosoma coronatum*). Even if in a disturbed condition, coastal sage scrub habitat may be considered sensitive by the resources agencies since it may still serve as habitat for wildlife and may be regenerating to higher quality coastal sage scrub habitat.

Non-native Grassland and Pasture

Non-native grasslands (and pastures), while common throughout the county are afforded some level of protection because this habitat provides a critical foraging area for resident and migratory raptors.

3.3.2 Sensitive Plants

A list of sensitive plants species with the potential to occur onsite was generated using the CNPS Electronic Inventory (2006). The resulting list of potential sensitive plants includes any sensitive species documented within the project USGS quad (Bonsall) or eight surrounding quads (or any CNPS List 4 species with habitat and elevation requirements matching site conditions). Each potential species was addressed in field surveys, and an evaluation of the likelihood of occurrence of each species, based on the CNPS Inventory (2006), Reiser (2001), and onsite observations, is provided in Appendix C. The County categorizes sensitive plants into Groups A, B, C, and D, which generally correspond with the CNPS list 1, 2, 3, and 4.

Two sensitive species were detected onsite: Parry's Tetracoccus (*Tetracoccus dioicus*) and Palmer's grappling-hook (*Harpagonella palmeri*). Locations of these plants are shown in Figure 4, and more detailed information is provided below. No sensitive plant species were observed at the offsite improvement areas.

Parry's Tetracoccus (*Tetracoccus dioicus*, Euphorbiaceae)

Listing: CNPS List 1B , State: none, Federal: none, County: Group A

Distribution: Orange, Riverside, and San Diego Counties; Baja California.

Habitat: Chaparral, coastal scrub; elevation 541-3,280 feet.

This shrub, which is in decline due to loss of habitat, typically grows in chaparral or coastal sage scrub on Las Posas soils. Onsite, this species occurs in coastal sage scrub at the northern end of the site. Approximately 1,688 individuals were observed, at the locations shown in Figure 4.

Palmer's grappling-hook (*Harpagonella palmeri*, Boraginaceae)

Listing: CNPS List 4, State: none, Federal: none, County: Group D

Distribution: Los Angeles, Orange, Santa Catalina Island, San Diego Counties; Arizona; Baja California, Sonora (Mexico)

Habitat: Chaparral, coastal scrub, valley and foothill grassland/clay; elevation 65-1,246 feet.

Palmer's grappling hook is an annual plant associated with clay soils, and is decreasing in numbers throughout Southern California. Urban development and agricultural discing have destroyed much of the habitat for this species. One individual Palmer's grappling hook was observed on a dirt trail in the northern section of the site, as shown in Figure 4. It is likely that more would have been observed under less dry conditions.

3.3.3 Sensitive Wildlife

A list of sensitive animal species with the potential to occur onsite was generated and is provided in Appendix D. This list includes an evaluation of the potential for each species to occur onsite, based on species requirements, California Natural Diversity Data Base (CNDDB) reports, previous biological reports, and field observations.

Eight sensitive animal species were observed onsite: orange-throated whiptail, northern red-diamond rattlesnake, Cooper's hawk, southern California rufous-crowned sparrow, yellow warbler, yellow-breasted chat, California gnatcatcher, and least Bell's vireo. One additional species of special County interest, turkey vulture, was also observed onsite. More detailed information on these species is provided below. No sensitive species were observed at the offsite intersection (other than the least Bell's vireo at Pala Mesa Drive), however both the least Bell's vireo and the arroyo toad are known to inhabit the riparian habitat of the San Luis Rey River located south of SR-76.

Orange-throated whiptail (*Aspidoscelis hyperythrus beldingi*) (County Group 2 Species)

The orange-throated whiptail, a California Species of Special Concern, is a slender, quick lizard that lives in coastal sage scrub, chaparral, grasslands, and riparian areas and eats insects and spiders. Five orange-throated whiptail observations were made onsite, at the locations shown in Figure 4.

Northern red-diamond rattlesnake (*Crotalus ruber ruber*) County Group 2 Species)

This reddish to pinkish-tan rattlesnake, a California Species of Special Concern, occupies coastal sage scrub, chaparral, and woodlands, as well as desert scrub, pinon-juniper woodlands, and fields. It is a secretive species, relatively docile compared to the southern Pacific rattlesnake (*Crotalus viridis*), eats ground squirrels, lizards, rabbits, and

carrion. One northern red-diamond rattlesnake was observed in the Diegan coastal sage scrub habitat in the northern portion of the site, as shown in Figure 4.

Cooper's hawk (*Accipiter cooperii*) (County Group 1 Species)

The Cooper's hawk, a California Species of Special Concern, uses riparian and oak woodlands, eucalyptus groves, and other wooded habitats. This bird was once a common nester in the County but numbers of breeding pairs have declined over the last decades, probably due to loss of riparian habitat and human disturbance. Two Cooper's hawks were observed in or over the coastal sage scrub and riparian habitats onsite.

Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) (County Group 1 Species)

This sparrow, a California Species of Special Concern, is usually found in coastal sage scrub, grassland, and open pine-oak woodlands, where it nests on the ground. Two southern California rufous-crowned sparrows were observed within the coastal sage scrub habitat in the northern section of the site (see Figure 4).

Yellow warbler (*Dendroica petechia*) (County Group 2 Species)

The yellow warbler, a California Species of Special Concern, is small yellow songbird that inhabits bushes, swamp edges, streams and gardens. One yellow warbler was observed in the southern riparian forest, as shown in Figure 4.

Yellow-breasted chat (*Icteria virens*) (County Group 1 Species)

The yellow-breasted chat, a California Species of Special Concern, is a large warbler with a bright yellow throat and breast and a distinctive call. This species inhabits brushy tangles, briars, and stream thickets. Four individuals were observed in the riparian habitat onsite (see Figure 4).

Coastal California Gnatcatcher (*Poliioptila californica californica*) (County Group 1 Species)

The coastal California gnatcatcher, a threatened federal species and California Species of Special Concern, is a small gray songbird resident in scrub-dominated communities in southwestern California from the Los Angeles Basin through Baja California, Mexico. California gnatcatcher populations have declined due to extensive loss of Diegan coastal sage scrub habitat to urban and agricultural uses. Five pairs of California gnatcatchers were documented onsite in the coastal sage scrub habitat during protocol surveys conducted in 1999, as shown in Figure 4. Also note that this sensitive species borders the northwest property line and was observed offsite. Two additional locations of gnatcatchers were noted in the field from faint, distant calls, but were never confirmed or visually identified. These were located at the eastern edge of the northern part of the project site. For this analysis, only those pairs confirmed in the field are analyzed.

Least Bell's Vireo (*Vireo bellii pusillus*) (County Group 1 Species)

The least Bell's vireo is a small gray bird that inhabits cottonwood-willow forest, oak woodland, shrubby thickets and dry washes with thickets at the edges. This bird is

listed as a Federal and California Endangered Species. Nine least Bell's Vireos, including two pairs and a juvenile, were observed onsite at the locations shown in Figure 4.

Turkey vulture (*Cathartes aura*) (County Group 1 Species)

The turkey vulture is a large scavenger that is usually seen soaring in the sky or perched on dead trees, posts, carrion, or on the ground. Although this species is not State or Federal listed, it is of special interest to the County. Turkey vultures were observed flying over site.

Raptors

Raptors are large predatory or scavenger birds that typically require tall trees for perching and nesting, with adjacent open grasslands necessary for foraging. These species are protected, especially during their critical nesting and wintering stages. Due to declining habitat and the associated declining numbers, raptors as a group are protected under CDFG Code Section 3500. Non-listed raptors observed on or over the site included four American kestrels (*Falco sparverius*), several white-tailed kites (*Elanus leucurus*), one red-shouldered hawk (*Buteo lineatus*), and several red-tailed hawks (*Buteo jamaicensis*).

Other Sensitive Species Known from the Area

Three federally endangered sensitive species are known in the project vicinity: southwestern willow flycatcher (*Empidonax traillii extimus*), arroyo toad and Stephens' kangaroo rat (*Dipodomys stephensi*). These three species are discussed below. The nearest locations to the project site of these three species are depicted on Figure 6.

Southwestern willow flycatcher is a Federally endangered bird that breeds only in dense riparian vegetation near surface water or saturated soil. This species is threatened by loss of habitat and nest parasitism. Southwestern willow flycatchers are documented to occur in the San Luis Rey River in the vicinity of the project site. Although no focused surveys for this species were conducted, the survey protocol for least Bell's vireo requires that willow flycatchers be documented and reported. No willow flycatchers were detected during the least Bell's vireo surveys.

Arroyo toad, another federally endangered species, is also documented to occur in the San Luis Rey River in the vicinity of the project site. This species, which breeds in slow moving streams with sand substrates is also threatened by habitat loss. The nearest documented location of this species is southeast of the project site in the San Luis Rey River. Two protocol surveys for this species were conducted onsite, in 1999 and 2004, and no arroyo toads were detected onsite. In addition, pit traps were placed on the Meadowood property to the east to determine if aestivation of this species occurs in upland habitats. These results detected no arroyo toads (Ramirez 2005). However this species was documented in the San Luis Rey River southeast of the site and SR-76.

Legend

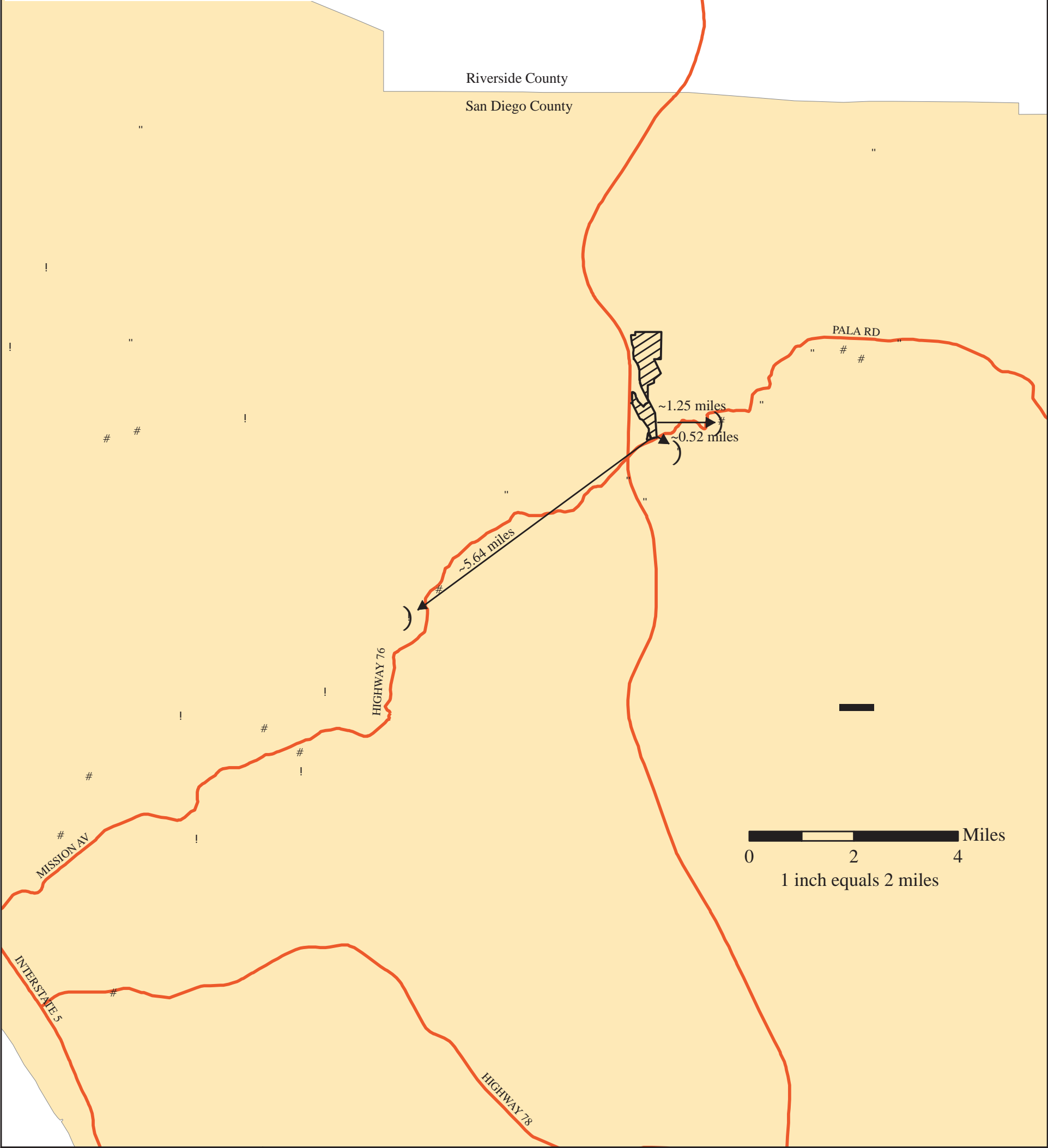
- San Diego County
- Roadways
- Project Site
- !

Stephens' kangaroo rat (*Dipodomys stephensi*)
- "

Arroyo toad (*Bufo californicus*)
- #

Southwestern willow flycatcher (*Empidonax traillii extimus*)
-)

Nearest Location of each Species



Species Source: CNDDDB 2008



Distance to Species
Campus Park

Figure
6

Stephens' kangaroo rat, a Federally endangered species, is known to occur in the Fallbrook area but is more prevalent in Riverside County. The nearest documented occurrence of this species is at the Fallbrook Weapons Station west of I-15. Royce Riggan conducted a habitat assessment for this species with negative results. It was determined that the substrate and habitat were not suitable for this species onsite.

3.3.4 Wildlife Corridors/Linkages

Wildlife corridors and linkages are critical to the regional conservation of sensitive species by allowing for populations to expand. A wildlife corridor generally consists of local pathways connecting short distances usually covering one or two main types of vegetation communities. Wildlife linkages are landscape level connections between very large core areas and generally span several thousand feet and cover multiple habitat types (County of San Diego 2008).

Regional

The project site is immediately surrounded by development to the west by Interstate 15, the San Luis Rey River and agricultural groves to the south, agricultural groves and future development (Meadowood – TM 5354) to the southeast, future development to the southwest (Campus Park West – TM 5424), a future college site to the west, and undeveloped land to the northeast and north (Monserate Preserve). Currently there is little to no direct habitat connection between the San Luis Rey River to the south of the project site and the coastal sage scrub to the north of the site. Even though the pasture area currently provides an unobstructed, undeveloped area between the San Luis Rey River to the south and the coastal sage scrub habitat to the north it does not provide topographic protection (i.e. drainages) or vegetation cover or perches for many wildlife species looking for protection from predators. In addition the pasture area between the Monserate Mountain to the north and the San Luis Rey River to the south historically and currently does not support regional wildlife movement because this area has been used for cattle grazing since the 1950's which is the existing baseline condition. The majority of wildlife species observed on-site are within the areas intended for open space, as these areas are higher in quality, function and value.

Significant stands of coastal sage scrub occur northeast of the project site near Rice Canyon. Rice Canyon is less than one mile east of the project site and currently is comprised of sparse rural development. This area would provide vegetation cover ideal for movement of wildlife species to hide from predators, forage for food, and nurture and breed their young. In addition, the area along Interstate 15 west of the project site are small to medium sized patches of coastal sage scrub that form a series of habitat "stepping stones" ideal for foraging birds. In addition, California gnatcatchers are known to occur within these patches of coastal sage scrub habitat east of Interstate 15 (County of San Diego 2004, USFWS 2004). Both of these alternative routes or linkages are higher in habitat quality and feasible wildlife corridors unobstructed development,

provide good foraging capabilities, and provide good vegetation cover ideal for protection from predators.

Local Corridors

Local corridors represent wildlife movement patterns in a localized area but large enough to provide adequate foraging and breeding acreage. Two local corridors exist onsite. The first is the southern riparian forest habitat and the second on the slopes and ridgeline of the Monserate Preserve. Although not directly connected to the San Luis Rey River to the south, the onsite southern riparian forest is a large stand of diverse vegetation that provides substantial cover and foraging opportunities for riparian wildlife species. The coastal sage scrub and non-native grassland of the northern portion of the site connects to Monserate Preserve to the north. This local corridor allows for localized movement of upland wildlife species from the onsite habitat to the Monserate Preserve as well as to the larger regional corridor identified above in Rice Canyon.

4.0 REGULATORY REQUIREMENTS

4.1 Wetland Regulations

The Campus Park project site supports a variety of wetlands/drainage areas. The County of San Diego RPO, CDFG Code 1602 Streambed Alteration Agreement, and ACOE Clean Water Act Section 404 regulate these areas. The various intermittent drainages and wetland areas were reviewed for jurisdictional determination and these areas are described in Appendix J (Attachment 5) and depicted on Figure 4.

ACOE

Through implementation of the Clean Water Act, the ACOE claims jurisdiction over waterways that are, or drain to, Waters of the United States. The definition of “Waters of the United States”, or “waters”, includes (but is not limited to) territorial seas; coastal and inland waters; lakes, rivers and streams that are navigable; tributaries to these waters; and wetlands adjacent to these waters or their tributaries. The jurisdictional limit of non-wetland waters (i.e. creeks and drainages) is the ordinary high water mark. The jurisdictional limit of wetland waters is the upper limit of the wetland. Delineations of wetland limits were conducted according to the procedures found in the Corps of Engineers Wetland Delineation Manual (ACOE 1987).

The ACOE wetland delineation procedure requires that a site must have wetland indicators within three parameters: vegetation, soils, and hydrology. If any one parameter does not contain a positive wetland indicator, the site is not a jurisdictional ACOE wetland. On the Campus Park site, there are 3.6 acres of waters and 94.1 acres of wetlands. The waters are comprised predominantly in the northern portion of the property whereas the wetlands occur in the large riparian forest in the southern portion of the property. A drainage near the center of the site that drains the irrigation water off the adjacent groves (Meadowood) is considered a “Waters of the U.S” and is mapped as such on Figure 4. It should be noted that approximately 10 acres of the ACOE jurisdictional wetlands are highly disturbed due to grazing.

CDFG

The CDFG claims jurisdiction over rivers, streams and lakes through the California Fish and Game Code Sections 1600-1616. CDFG jurisdiction covers rivers or streams that flow at least periodically or permanently through a bed or channel with banks, that support fish or other aquatic life; and watercourses having a surface or subsurface flow that supports or has supported riparian vegetation. A field determination of CDFG jurisdiction is based on the presence of a channel with a bed and banks and potential riparian vegetation, at a minimum. Jurisdiction usually extends to the top of bank or the outer edge of riparian vegetation, whichever is wider. On the Campus Park site, there are 1.4 acres of CDFG defined waters and 85.4 acres of wetlands.

RPO

The County claims jurisdiction over lands that meet the RPO's definition of wetlands, which is "lands having one or more of the following attributes are wetlands. To qualify as a wetland, an area need only have one of the three RPO criteria: (a) at least periodically, the land supports predominantly hydrophytes (plants whose habitat is water or very wet places), (b) the substratum is predominantly undrained hydric soil, or (c) an ephemeral or perennial stream is present whose substratum is predominately non-soil and such lands contribute substantially to the biological functions or values of wetlands in the drainage system".

On July 23, 2004, the County of San Diego Planning Commission determined that the entire project site is exempt from the RPO (see Appendix E). The exemption findings are listed below. Note that the following passage is taken directly from the Planning Commission's findings and does not account for the project name change to Campus Park (i.e. the Planning Commission Findings refer to the project site as Passerelle), nor the reduction in the project acreage to 416.1 acres.

"Article V.2.

2. All or any portion of a specific plan which has at least one tentative map or tentative parcel map approved prior to August 10, 1998, provided that the Planning Commission, or on appeal, the Board of Supervisors, makes the following findings at a notice of public hearing:

The proposed Tentative Maps (Passerelle and Pappas) are within the Campus Park/Hewlett Packard Specific Plan, except the northernmost portion of Passerelle, which equals 180 acres. The Campus Park/Hewlett Packard Specific Plan is 441.84 acres. The Passerelle project is 501.76 acres. The Pappas project is 116.46 acres. Tentative Parcel Map TPM 13703 was recorded on February 28, 1985.

- a. The applicant has with regard to the portion sought to be exempted, prior to August 10, 1998, incurred substantial public facilities or infrastructure expenditures and performed substantial grading or construction of physical improvements to serve the portion outside the approved map in good faith.

The previous owner, the Hewlett-Packard Company, paid approximately \$3,761,498 to construct the water and sewer lines in this area in 1985. The Hewlett-Packard Company constructed an on-site and off-site water transmission line, a force main sewer line, and a gravity sewer line to serve both the project site and adjacent properties. Half of the sewer line and all of the water lines are outside the approved map. A bridge over Interstate 15 was also constructed to access this project.

- b. If there are located wetlands or floodplains or riparian habitat on the portion sought to be exempted, that (i.) none of said lands is affected directly or substantially by the project, or (ii) that measures have been taken which avoid development on said lands.

A previously approved road (Pankey Road) could be improved to cross directly through the middle of the wetland. This road was approved as part of the original Campus Park Specific Plan and is shown on the Department of Public Works' Circulation Element as a Small Collector. This proposal will move the roads to the outer boundaries of the wetland, disturb far less than the amount of the originally approved project, yet still provide adequate access. If the Campus Park/Hewlett Packard Project were developed today approximately 99.2 acres of wetlands would be disturbed. If the Passerelle and Pappas projects were developed, then approximately 29.7 acres of wetland would be disturbed."

It should be noted that although the project is exempt from the RPO the proposed project is in conformance with other issues related to the RPO. No significant impact is proposed to archaeological resources as defined by the RPO. In addition, mitigation of sensitive resources are proposed in accordance with the RPO.

Therefore, the proposed project is in conformance with the Planning Commission's exemption and therefore no further RPO analysis or mitigation is required.

In addition to wetland permits, consultation with the USFWS will be required for impacts to habitats supporting coastal California gnatcatcher and least Bell's vireo.

4.2 Upland Regulations

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 coastal California gnatcatcher, a federally threatened species, and approximately 100 other potentially threatened or endangered species. The habitat is fragmented and distributed over more than 6000 square miles encompassing San Diego, Orange, Riverside, Los Angeles, and San Bernardino Counties.

For planning purposes, some of these regions are organized into "Subareas" that correspond to geographic boundaries of participating jurisdictions and/or landowners. In each subregion and subarea, a local lead agency coordinated the collaborative planning process. Working with landowners, environmental organizations, and other interested parties, the local agency oversees the numerous activities that compose the development of a conservation plan. The CDFG and the USFWS provide the necessary support, direction, and guidance to NCCP participants in these functions. The County of San Diego is participating in the NCCP and already has a Subarea Plan in accordance with the MSCP in place for southern portions of the County.

The Campus Park project however, does not fall within the limits of the current county Subarea Plan for the MSCP. The County of San Diego is currently processing a North County Subarea Plan for the MSCP. The Campus Park project site is within the planning area of the proposed North County segment of the MSCP, and the project site has negotiated a hardline preserve and take authorization. Since this regional planning document is not yet approved, NCCP compliance will be required for upland impacts. If the NCMSCP is not adopted prior to project initiation, the Campus Park project will be subject to the 4d rule of the Federal Endangered Species Act, allowing impacts to coastal sage scrub but limited to 5 percent of the total acreage occurring within the County. This project will require a Habitat Loss Permit pursuant to Habitat Loss Ordinance 8365 under the NCCP Guidelines. In addition, project impacts will need to be assessed based on the NCCP flowchart (Appendix F).

If the NCMSCP is approved prior to project approval the project is anticipated to be included as a hardline development. The hardline impact limit (take area) will cover the project footprint including all fuel management zones and offsite improvements, while the hardline preserve areas will include the open space lots proposed to be conveyed under the Resource Management Plan. The hardline agreement between the applicant, County and the resource agencies would incorporate the mitigation and protection measures for impacted biological resources.

5.0 IMPACT ANALYSIS

5.1 Thresholds of Significance

A significant impact to biological resources would occur if the proposed project would:

Regional Habitat:

1. Eliminate or substantially degrade a block of habitat considered essential to the local or regional biological environment such that it no longer provides the same or similar function or value.
2. Fail to preserve the natural biological diversity and habitat associations in a contiguous, functional block, thereby compromising the health and viability of the ecosystem.

Wildlife Corridors:

3. Result in project-related improvements or activities within or adjacent to local corridors, regional linkages, or other areas utilized for wildlife movement that would:
 - a. Prevent wildlife from accessing areas considered necessary to the species for population persistence in the area (i.e. foraging resource, breeding areas, etc.);

- b. Restrict wildlife from utilizing their natural movement paths (i.e. those paths used when given the choice absent of human interference); or
- c. Further constrain a narrow corridor by reducing width, removing available vegetative cover, creating edge effects, or placing barriers in the movement path;
- d. Create artificial corridors that do not follow natural movement patterns.

Edge Effects:

- 4. Subject on- or off-site habitat to substantial edge effects, including:
 - a. The project would increase noise to a level above ambient proven to adversely affect sensitive species. .
 - b. The project would increase nighttime light levels to a level above ambient proven to be adversely affect sensitive species. .
 - c. Encroachment of any kind, including but not limited to unauthorized clearing within preserved areas, trash dumping or off-road vehicle traffic.
 - d. Predation of native species such that unrestrained domestic pets would deplete the native population.
 - e. Water runoff or underground seepage causing a changing in natural moisture levels and/or increasing the spread of pollution and pesticides.
 - f. Change in vegetation caused by invasive plants from adjacent ornamental landscaping.

Sensitive Habitat Wetlands:

- 5. Result in any of the following to or within County-defined wetlands: removal of associated vegetation; grading; obstruction or diversion of water flow; change in velocity or siltation rate; placement of fill; placement of structures; construction of a road crossing; placement of culverts or other underground piping; any disturbance of the substratum; and/or any activity that may cause a change in species composition, diversity, and abundance.
- 6. The project does not include a wetland buffer adequate to protect the functions and values of existing wetlands.

Sensitive Species:

- 7. Result in grading, clearing, construction or other activities (except for passive recreation) within 1 kilometer (3,280 feet) of occupied breeding or non-breeding suitable upland/wetland habitat for the arroyo toad.

Sensitive Habitat:

8. Remove any significant component of native or naturalized habitat through grading, clearing, and/or other construction activities.
9. Degrade the value of habitat “moderately to significantly” either immediately or in the long-term as indicated by one of the following:
 - a. A change in species composition or diversity;
 - b. A decline in the value or function of the habitat.
10. Remove substantial (sufficient to reduce the population of the raptors in the region) raptor foraging habitat.

Applicable Plans, Policies, and Ordinances:

11. Fail to conform to the goals and requirements of the Habitat Loss Permit (HLP) Ordinance or Natural Community Conservation Plan (NCCP).
12. Fail to conform to the goals and requirements of applicable federal or state regulations, including but not limited to the federal Endangered Species Act, Migratory Bird Treaty Act, Bald Eagle Protection Act, Porter Cologne Water Quality Act, and the California Fish and Game Code.

Special Status Species:

13. Result in direct, indirect, and/or cumulative impacts that would be detrimental to the regional long-term survival of a County Sensitive species (those recognized as being depleted, potentially depleted, declining, rare, locally endemic, endangered, or threatened), or any species nominated for or on a State or Federal rare, endangered or threatened species list (within the San Diego subregion), or a State or County defined sensitive habitat, including:
 - a. Any impact to a plant or animal listed as federally or state endangered or threatened; or a Species of Special Concern; or a County Group A or B plant species, or a County Group 1 animal species;
 - b. Impacts that would reduce the local population of a plant species listed as a County Group C or D by 20 percent or more;
 - c. Impacts that would reduce the estimated local population of a County sensitive animal species (County Group 1 and 2) by 20 percent or more, or cause impacts that may be considered detrimental to the regional long-term survival of that species.
 - d. Grading, clearing, construction, or other construction-related activities would occur within 4,000 feet of an active Golden Eagle nest during the breeding season (January 1 to July 31), such that it would be likely to interfere with normal nesting activities of the eagle in accordance with County Guidelines for determining

significance, however it does not supersede implementation agreements with the wildlife agencies;

- e. Passive recreation will occur within 4,000 feet of an active Golden Eagle nest during the breeding season (January 1 to July 31).
- f. Long-term or permanent development or active recreational uses that would occur within 4,000 feet of an active Golden Eagle nest such that it would be likely to interfere with normal nesting, resting, or foraging activities of the eagle. (Development and uses closer than 4,000 feet that would not be in the line-of-sight and would not increase indirect impacts may provide impact analysis to justify a less-than-significant level);
- g. Grading, clearing, and/or construction that would occur within the following distances and within the following time periods for one or more of these species:

Species	Distance	Breeding Season
Coastal Cactus Wren	300 feet from occupied habitat	February 15 to August 15
Coastal California Gnatcatcher	300 feet from occupied habitat	February 15 to August 31
Least Bell's Vireo	300 feet from occupied habitat	March 15 to September 15
Southwestern Willow Flycatcher	300 feet from occupied habitat	May 1 to September 1
Tree-nesting Raptors	500 feet from occupied habitat	February 15 to July 15
Ground-nesting Raptors	800 feet from occupied habitat	February 15 to July 15
Southern California Rufous-crowned sparrow	300 feet from occupied habitat	February 15 to August 31
Yellow warbler	300 feet from occupied habitat	March 15 to September 15
Yellow-breasted chat	300 feet from occupied habitat	March 15 to September 15

The identified thresholds are based on Appendix G: Environmental Checklist Form of the CEQA guidelines, state and federal laws and regulations, and SANDAG's Regional Comprehensive Plan.

Thresholds No. 1 and 2 are associated with the identification of local or regionally important habitat blocks in sources such as the NCCP and the Fallbrook Community Plan (e.g. Resource Conservation Areas (RCA's)). The thresholds are intended to protect both the function and value of such individual habitat areas from project related development and to maintain the contribution of such areas to the regional biological environment.

The criteria related to wildlife movement corridors identified in Threshold No. 3 are intended to protect such areas due to their critical role in species survival. Appendix G of the CEQA Guidelines indicates that a project could have a significant impact if it would "interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors."

Wildlife movement corridors and linkages accommodate a number of essential activities for species viability, including foraging, juvenile dispersal, genetic flow, migration, and colonization. Without adequate movement areas provided for these ecological needs, other efforts to protect wildlife are undermined and the probability of species extirpation and eventual extinction may be substantially increased. Because of the importance of adequate wildlife movement corridors and linkages, they have been subject to substantial analysis in conservation biology literature. Despite this intensive study, however, universally accepted standards for maintaining corridors have not been generated due to the inherent variability in regional and local biological conditions and requirements. Optimal criteria for individual wildlife movement areas are instead based on site-specific factors, such as function (e.g. to accommodate regional linkage and local movement), individual species needs and the type and quality of habitats present. The criteria identified in Threshold No. 3 incorporate the use of site-specific factors, pursuant to the principles established by the conservation biology community.

The criteria identified in Threshold No. 4 are intended to protect open space from edge effects related to development, with such effects potentially extending several hundred feet into open space preserves. Such effects are addressed through the NCCP and can result in significant direct changes to species composition, diversity and abundance, as well as indirect effects that can vary widely depending on the nature of development and adjacent resources. Noise and artificial lighting, for example, can affect foraging and breeding habitats for all types of species, including moths (an important prey source for bats), nesting birds and nocturnal mammals. Edge effects can also adversely impact the availability of resources such as water or prey species, and can change habitat suitability by altering (for example) moisture or vegetation conditions. Due to their potential to affect large areas or preserved open space, edge effects have been subject to substantial analysis in multiple species recovery plans, reports, technical journals and scientific conferences. Universally accepted standards for addressing edge effects have not been generated due to the variability in site-specific conditions. The criteria identified for potential project-related edge effects in Threshold No. 4 were therefore generated on the basis of both local conditions and commonly accepted practices in the biological community.

Impacts to wetlands, as discussed in Thresholds No. 5 and 6, can have widespread ramifications beyond the immediate loss of sensitive habitat. The loss of wetlands, for example, can affect the riparian species located therein, as well as upland species, which use the wetlands as a source of water and as access corridors. Additionally, even minor impacts to wetlands can result in substantial changes in downstream hydrology and/or water quality, with indirect effects therefore not necessarily confined to the area of project-related activities. The California Department of Fish and Game (CDFG) and the U.S. Army Corps of Engineers (Corps) regulate impacts to wetlands. Finally, the project is required to be in conformance with applicable County standards related to maintaining the viability of sensitive habitats. Non-compliance would result in a project that is inconsistent with County standards.

Threshold 7 are associated with the identification of important breeding and aestivation areas within 1 Km of occupied habitat. This Threshold is intended to not only protect the breeding habitat of this species but the summer aestivation and movement areas as well.

The removal of native or naturalized habitat through project-related activities, as identified in Thresholds No. 8, and 10, would directly affect habitat acreage and plant/animal species located therein, and would affect potential associated resources/uses such as species diversity, foraging, breeding, and access. Such habitat impacts are addressed in Appendix G of the CEQA Guidelines.

Threshold No. 9 is intended to address raptor species' regular use of both native and non-native grassland habitats for foraging. These species are protected under the Migratory Bird Treaty Act as well as the California Fish and Game Code.

Threshold No. 11 is intended to address applicable goals and requirements under the County HLP Ordinance 8365 and related NCCP. The NCCP was enacted by the state of California in 1991 and is generally intended to conserve natural communities and accommodate compatible land uses. The Southern California Coastal Sage Scrub NCCP was the first effort of this project (with related guidelines adopted in 1993), and authorized a total interim Diegan coastal sage scrub habitat loss of five percent (based on calculations of then existing habitat acreage by an established Scientific Review Panel). As a participant in the NCCP program, the County is the local jurisdiction in the project area with authority to issue an HLP and correspondingly allow "take" of the federally listed coastal California gnatcatcher, pursuant to Section 4(d) of the federal Endangered Species Act. An HLP is required for parcels located outside the MSCP and must be issued prior to issuance of a Brushing and Clearing Permit, Grading Permits, or Improvement Permits in lieu of Grading Permits. The County has an MSCP Plan in place for portions of the County, although the proposed project site is not within the limits of this plan. While a "North County Subarea Plan" is currently being drafted for areas in northern San Diego County that include the project site, it has not yet been approved and the proposed project must therefore conform with the NCCP and HLP Ordinance Guidelines.

All of the federal and state requirements identified in Threshold No. 12 include goals and objectives intended to protect (among other issues) sensitive species, habitats, and related resource values such as water quality. Compliance with the referenced laws and regulations is required and is related to biological resources. The agencies responsible for enforcing these laws and regulations are responsible agencies with respect to the EIR, including the USFWS, CDFG, California Regional Water Quality Control Board and the Corps. These agencies and/or the laws and regulations they enforce are specifically referenced in Appendix G: Environmental Checklist Form of the CEQA Guidelines, which indicates that impacts to the biological resources protected by these agencies may constitute a significant environmental impact.

Analyses of potential impacts to applicable plant and animal species conducted during creation of the MSCP concluded that individual populations of most MSCP species could remain viable if no more than 20 percent was removed. Accordingly, Thresholds No. 13a and 13c identify this criterion for applicable species including: (1) plant species listed as federal or state endangered or threatened, or listed as County Group A or B; and (2) animal species listed as federal or state endangered, threatened or Species of Special Concern, or listed as County Group I. In addition, impacts to less than 20 percent of individual plant and animal populations can also potentially be detrimental to regional long-term species survival. It should also be noted that determining accurate estimates of given animal populations may be more difficult than generating similar estimates for plant populations. Accordingly, the “detrimental to regional long-term survival” criterion should be used (rather than the “20 percent” criterion) in cases where the estimate of an animal population is questionable.

The Group C and D species identified in Threshold No. 13b are thought to be in decline, although not to the extent that extirpation or extinction is imminent. Because these species are often prolific within suitable habitat, standards based on protection of such habitats are generally adequate to protect Group C and D species. Due to the generally declining nature of these species (and associated habitats), however, some instances may occur where project-related impacts may be detrimental to their regional long-term survival.

The criteria identified in Thresholds No. 13d, 13e, 13f, and 13g, are intended to address the potential loss of offspring for particularly sensitive avian species. Any direct or indirect impacts that might affect the nesting success of these species would be considered significant, with the described buffer distances and breeding season dates derived from various studies completed for birds in San Diego County (and generally accepted by the scientific community). Furthermore, nesting raptors and coastal California gnatcatchers are protected by the U.S. Fish and Wildlife Service (USFWS) through the Migratory Bird Treaty Act (MBTA) and the federal Endangered Species Act, respectively. Appendix G: Environmental Checklist Form of the CEQA Guidelines indicates a potential significant impact if a project would “impede the use of native wildlife nursery sites”.

5.2 Direct Impacts

Direct impacts are immediate impacts resulting from the permanent removal of habitat. Direct impacts were calculated based on the grading footprint as provided by the Project Engineer. In addition a fuel modification zone, variable in width from 30 feet adjacent to roads and up to 200 feet near more flammable habitats, was included in the direct impact calculations. Trails were calculated based on a design width of 8 feet (with 10 feet on either side of the trail for fuel modification) and follow existing dirt roads to the maximum extent practicable. A total of 0.7 miles of trails is proposed. All construction and post- construction activities will be constrained within the grading and fuel modification footprint. No new trails other than those shown are proposed. Measures are included to ensure that grading within or adjacent to sensitive habitats stay within

the grading limits (such as avoidance of breeding seasons, construction monitoring and fencing).

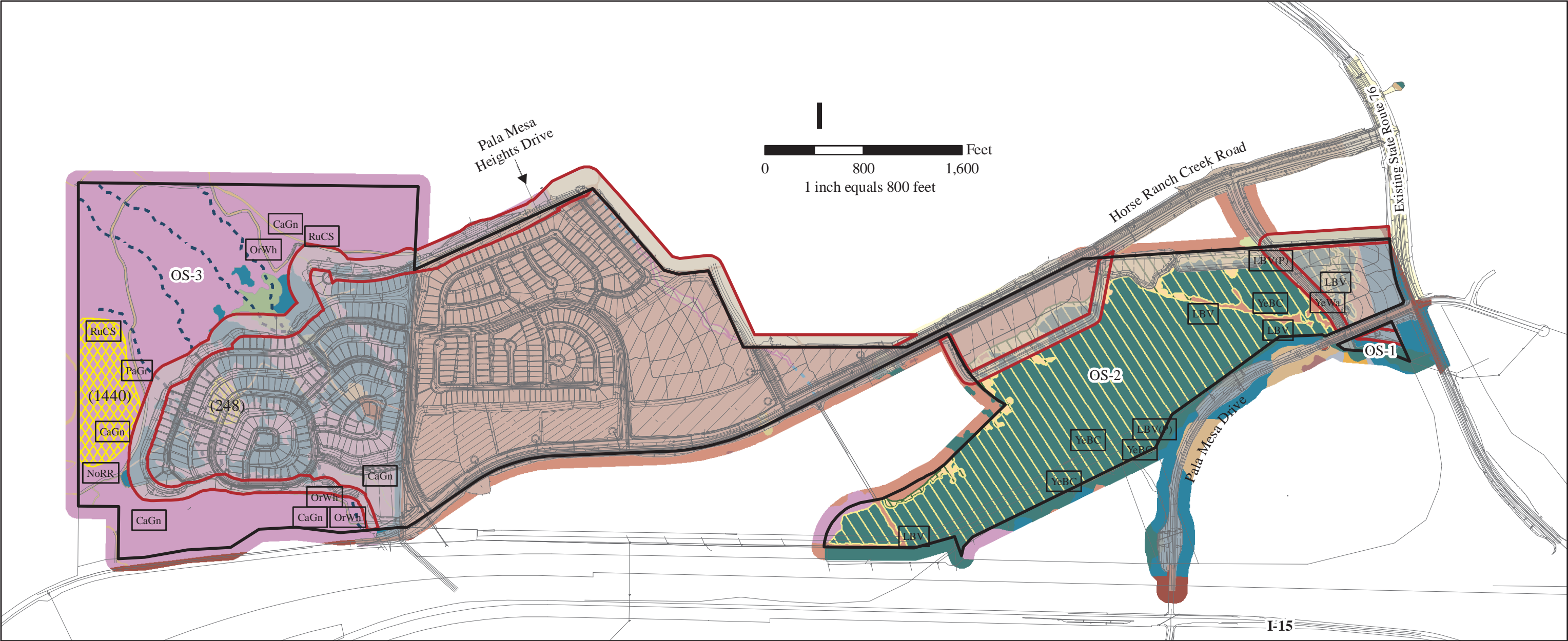
A total of 238.4 acres will be directly impacted by the Campus Park project. Up to an additional 50.55 acres of habitat will be impacted through offsite improvements.

The primary focus of the project design was avoidance of the maximum amount of wetland impact and avoidance of the highest quality coastal sage scrub. The project design avoids the largest contiguous block of wetland habitat supporting the endangered least Bell's vireo. In addition, the highest quality coastal sage scrub, adjacent to offsite open space, has also been preserved. The focus of impact was within the existing pastureland, disturbed and developed, disturbed coastal sage scrub, and the fringe of the wetland habitat.

An important element to the project is the revegetation of a manufactured slope to serve as a revegetated wetland buffer between development and the adjacent southern riparian forest (OS-2 and MF-1). The slopes that will be created between the MF-1 and OS-2 are proposed to be the Fuel Modification Zone, the Limited Building Zone, as well as a revegetated wetland buffer for riparian wildlife. This revegetated wetland buffer area will be planted with native low fuel plants, including hydrophytic plants such as mulefat, coyote brush, and sandbar willow near the bottom of the slope and coast live oaks, and coast live oak woodland understory as the slope ascends. This revegetated buffer is discussed throughout the sections below as well as within section 6.0 Mitigation Measures and was considered a direct impact for this analysis.

Direct impacts to vegetation communities resulting from the Campus Park project are presented on Figure 7 and in Table 3 for onsite areas and Table 4 for offsite areas.

Table 3 Summary of Proposed Onsite Impacts on the Campus Park Project Site				
Habitat	Total onsite acres	Direct impact (acres)	Open Space (Acres)	% Impacted
Southern Riparian Forest	85.6	9.5	76.1	11%
Southern willow scrub	1.6	1.6	0	100%
Freshwater Marsh	10.3	7.8	25.0	75%
Coast Live Oak woodland	2.8	1.3	1.5	46%
Diegan Coastal Sage Scrub	129.6	42.3	87.3	32 %
Non-native grasslands	44.1	41.2	2.9 -	93%
Non-native Vegetation	0.1	0.1	0	100%
Pasture	135.4	133.8	1.6	98%



Legend

Sensitive Species

- CaGn Coastal California Gnatcatcher (pair) (*Polioptila californica californica*)
- LBV(P) Least Bell's Vireo (Juvenile) (*Vireo bellii pusillus*)
- LBV(J) Least Bell's Vireo (Pair) (*Vireo bellii pusillus*)
- LBV Least Bell's Vireo (*Vireo bellii pusillus*)
- NoRR Northern Red Diamond Rattlesnake (*Crotalus ruber ruber*)

- OrWh Orange-throated Whiptail (*Aspidoscelis hyperythrus*)
- PaGr Palmer's Grappling-hook (*Harpagonella palmeri*)
- RuCS Southern California Rufous Crowned Sparrow (*Aimophila ruficeps canescens*)
- YeBC Yellow Breasted Chat (*Icteria virens*)
- YeWa Yellow Warbler (*Dendroica petechia*)
- Parry's Tetracoccus (*Tetracoccus dioicus*) (#)

Note: Raptors observed throughout site or overhead include Cooper's Hawk, Turkey Vulture, American Kestrel, White Tailed Kite, Red Shouldered Hawk, and Red Tailed Hawk.

Habitats

- Coast Live Oak Woodland (71160)
- Diegan Coastal Sage Scrub (32500)
- Developed (12000)
- Disturbed (11300)
- Eucalyptus (11100)
- Freshwater Marsh (52400)
- Non-Native Grassland (42200)
- Non-native Vegetation (11000)
- Pasture (18310)
- Southern Riparian Forest (61300)
- Southern Willow Scrub (63320)

- Mulefat Scrub (63310)
- Tamarisk Scrub (63810)
- Orchard (18100)

Other

- Impact Area
- Fuel Management Zone

Jurisdictions

- ACOE Waters
- ACOE Waters, CDFG
- ACOE Waters, CDFG
- ACOE Wetlands, CDFG
- ACOE Wetlands
- CDFG



Consultants, Inc.

**Proposed Impacts
Campus Park**

**Figure
7**

May 2009

Table 3 Summary of Proposed Onsite Impacts on the Campus Park Project Site				
Habitat	Total onsite acres	Direct impact (acres)	Open Space (Acres)	% Impacted
Disturbed	4.4	3.9	0.5	88%
Developed	2.1	2.1	0	100%
Eucalyptus	0.1	0.1	0	100%
TOTAL	416.1.	243.7	172.4	58%

Offsite roadway improvements will be required as part of the Campus Park project. These improvements include construction of Pala Mesa Drive to the west, extension of the proposed Horse Ranch Creek Road to the east, grading encroachment of Horse Ranch Creek Road onto the proposed adjacent college site, and improvements to the following intersections:

- Old Highway 395/Pala Road
- I-15 on and off Ramps
- Old Highway 395/Pala Mesa Drive
- Old Highway 395/Stewart Canyon Road
- Old Highway 395/Reche Road (striping only)

There are three proposed development projects adjacent to Campus Park: Campus Park West to the west, Palomar Community College west of the central portion of the site and Meadowood to the east. These projects include within their development footprint some of the same proposed “offsite improvements” as part of Campus Park. These improvements may be shared between the four projects but are considered separately should only this project go forward.

Table 4
Campus Park
Summary of Offsite Impacts

	Old Hwy 395/Pala Road	I-15 on/off ramps		Old Hwy 395/Pala Mesa Drive	Old Hwy 395/Stewart Canyon Road		Pankey Place	Pankey Road Pala Mesa Drive	Horse Ranch Creek Road	Other offsite improvements*	TOTAL
Southern Riparian Forest								0.7		0.3	1.0
Southern Willow Scrub										0.06	0.06
Freshwater Marsh										0.1	0.1
Coast Live Oak Woodland					0.01						0.01
Diegan Coastal Sage Scrub	0.2	0.3		0.1	0.2			0.2		3.3	4.4
Non-native Grassland		1.3		0.03				4.6		0.4	6.4
Non-native Vegetation		0.3		0.3	0.02				0.01	0.04	0.68
Pasture							1.3		0.9	5.7	7.9
Disturbed	0.5	0.6		0.1				1.4	9.3	2.4	14.3
Developed		0.1		0.1				1.5		0.3	2.1
Eucalyptus Woodland							0.3			1.4	1.7
Orchard					0.1			0.01	3.6	8.2	11.9
TOTAL	0.7	2.6		0.6	0.33		1.6	8.4	13.8	22.2	50.55

* Offsite grading and fuel management zones. Note: The following intersection will be improved with no additional grading outside the limits of existing paved roadway and therefore do not have any biological impacts: Old Hwy 395/Reche Road

5.2.1 Direct Habitat Impacts

Southern Riparian Forest

Onsite:

Approximately 9.5 acres of southern riparian forest habitat will be impacted by the proposed project while 76.1 acres will be set aside as permanent onsite open space. Impacts to this habitat type are primarily due to proposed multi-family developments adjacent to Horse Ranch Creek Road and adjacent to Pankey Place, the construction of Pankey Place and the intersection of Pankey Place and Pala Mesa Drive.. Loss of approximately 8.2 acres of southern riparian forest is regarded as a significant impact and would require mitigation as well as approval by the ACOE, CDFG, and RWQCB. Impacts to this habitat type are considered significant in accordance with Thresholds 5 and 8 which discuss removal of wetlands and removal of native or naturalized habitat through grading clearing or other construction activities.

Offsite:

Offsite impacts to southern riparian forest may occur to 1.0 acres due to improvements to Pala Mesa Drive. The alignment of Pala Mesa Drive cannot be altered since it is proposed to connect to an existing bridge crossing I-15. This impact would be considered significant under Threshold 5 and 8.

Southern Willow Scrub

Onsite:

Approximately 1.6 acres of southern willow scrub habitat will be impacted by the proposed project. Loss of approximately 1.6 acres of southern willow scrub habitat is regarded as a significant impact in accordance with Thresholds 5 and 8, and would require mitigation as well as approval by the ACOE, CDFG, and RWQCB.

Offsite:

An additional 0.06 acres of southern willow scrub habitat will be impacted due to the grading required for Horse Ranch Creek Road. This grading will encroach into the adjacent proposed college site. This impact is considered an offsite impact within this report but was included within the EIR for the College as a direct impact. This impact would be considered significant in accordance with Threshold 5 and 8.

Fresh-water Marsh

Onsite:

Approximately 7.8 acre of fresh-water marsh habitat will be impacted by the proposed project. Impacts to freshwater marsh would be considered significant since it is a wetland habitat and would require mitigation as well as approval by the ACOE, CDFG, and RWQCB in accordance with Thresholds 5 and 8.

Offsite:

An additional 0.1 acre of this habitat would be impacted due to offsite improvements to Horse Ranch Creek Road on the proposed College site. This impact is considered significant in accordance with Thresholds 5 and 8.

Coast Live Oak Woodland

Onsite:

Approximately 1.3 acres of coast live oak woodland habitat would be impacted and a remaining 1.5 acres left in open space. This impact is considered significant in accordance with Threshold 8 and will require mitigation. Impacts to this habitat type have increased to provide sufficient habitat for the open space design. Typically, when grading or construction occurs within 50 feet of an existing oak tree or woodland, oak roots will be impacted causing a direct loss of trees. The direct impact discussed here includes both development and removal of habitat due to fuel management. Since the soils are not proposed to be disturbed, the water regime not changed, no root zone impact is expected to occur to the remaining oak woodland onsite.

Offsite:

Oak woodlands may be potentially impacted (0.01 acres) near the intersection improvement of Old Highway 395 and Stewart Canyon Road/Canonita. These impacts would be considered significant in accordance with Threshold 8.

Diegan Coastal Sage Scrub

Onsite:

Implementation of the project would result in direct impacts to approximately 42.3 acres of this habitat. Approximately 87.3 acres will be set aside as onsite open space. Because coastal sage scrub is known to support a variety of sensitive species regionally, and because it has been reduced in acreage throughout San Diego County, it is considered a sensitive habitat by local, state, and federal agencies. The majority of this impact is to disturbed coastal sage scrub (30.6 acres). The project was designed to maximize the preservation of the higher quality coastal sage scrub habitat adjacent to

the Monserate open space to the north while concentrating development in the lower more disturbed portions of the site. Although the majority of this impact is to disturbed coastal sage scrub, this impact is still considered significant in accordance with Thresholds 1 and 8.

Offsite:

An additional 4.4 acres of Diegan coastal sage scrub habitat would be impacted due to offsite grading for roadways, intersection improvements and brush management (see Table 4). These impacts are also considered significant in accordance with thresholds 1 and 7.

Non-native Grassland

Onsite:

Implementation of the project would result in direct impacts to approximately 41.2 acres of non-native grassland with 2.9 acres set aside within onsite open space. Non-native grassland onsite provides foraging habitat for raptors and breeding and/or foraging habitat for other sensitive species. Loss of approximately 41.6 acres of non-native grassland habitat therefore is regarded as a significant impact in accordance with Thresholds 1 and 10 .

Offsite:

An additional 6.4 acres of this habitat type will be impacted due to offsite roadway construction and intersection improvements (see Table 4). These additional offsite impacts are also considered significant in accordance with Thresholds 1 and 10.

Pasture

Onsite:

The proposed project will directly impact approximately 133.8 acres of the 135.4 acres of pasture. The loss of 133.8 acres would be considered a significant biological impact to raptor foraging in accordance with Threshold 10.

Offsite:

Impacts to an additional 7.9 acres of pasture will occur due to offsite grading and fuel modification(see Table 4). This impact is considered significant in accordance with Threshold 10.

Disturbed Habitat , Developed , Eucalyptus , Non-native Vegetation, Orchards

Onsite:

Implementation of the project would result in direct impacts to approximately 3.9 acres onsite and 11.91 acres offsite of disturbed habitat, 2.1 acres onsite of developed land, 0.1 acre of non-native vegetation (ornamental trees), 0.1-acre onsite of eucalyptus woodland habitat. These impacts are regarded as not significant due to the lack of biological value.

Offsite:

An additional 38.58 acres of disturbed land including non-native vegetation, disturbed, developed, eucalyptus trees and orchards would be impacted due to offsite grading, fuel management zones, and road extensions. These impacts are not considered significant due to the lack of biological value these habitats provide.

5.2.2 Direct Sensitive Plant Impacts

Parry's tetracoccus is typically found in low growing chamise chaparral with a moderate dense canopy cover. This shrub is listed as a California Native Plant Society (CNPS) List 1B species (rare/threatened/endangered in California and elsewhere) and as a County of San Diego Group A species. This species currently has no state listing or federal listing. On the Campus Park property, Parry's tetracoccus was observed growing in the coastal sage scrub habitat on the south facing slope and smaller remnant patch on a small hill near the north central portion of the site. The majority of the impact to this species is proposed to occur to the remnant patch consisting of 248 specimens. The population proposed within open space is expansive and is scattered throughout the habitat on the south-facing slope. It is approximated that 1440 plants occur in this area. This was based on both field counts and estimation utilizing binoculars. The proposed project will directly and permanently impact the smaller remnant population of 248 plants. The larger numbers occur on the undisturbed south face slope within open space. Impacts to 248 individual (approximately 15%) would be significant in accordance with Threshold 13a, and require mitigation. This impact is not expected to significantly impact the survival of this species in the wild since the majority of the population will be protected, mitigation measures in conformance with the Biological Guidelines for the County of San Diego will ensure the viability of this population.

Palmer's grappling-hook occurs in open grassland habitat. This annual herb is listed as a CNPS List 4, County Group D species with no state or federal listing. One individual of this species was located on a dirt trail in the northern section of the property and will not be impacted from the proposed development.

5.2.3 Direct Sensitive Wildlife Impacts

Orange-Throated Whiptail

One orange-throated whiptail was observed within the grading envelope and would be directly impacted. This individual would potentially be impacted by the project due to trail construction and use. Four additional individuals of this species were observed in the coastal sage scrub habitat onsite. Impacts to this species would not be considered significant since the majority of observations were within an area of habitat proposed for preservation. Long term endangerment to the survival of this species in the wild is not expected from this project as only one individual is expected to be affected.

Northern Red-Diamond Rattlesnake

The proposed project will not directly impact the observed location of the northern red rattlesnake observed onsite. Therefore, no significant direct impacts to this species will occur.

Southern California Rufous Crowned Sparrow

The project will not directly impact the observed locations of the two southern California rufous crowned sparrows observed onsite. Therefore, no significant direct impacts to this species would occur.

Coastal California Gnatcatcher

The proposed project will directly impact the location of one pair of coastal California gnatcatchers as well as impact 46.7 acres (on and offsite) of this species' habitat. This impact would be considered significant in accordance with Threshold 13a since there will be impacts to a species listed as federally or state endangered or threatened, or a County Group A or B plant species or a federal or State Species of Concern. Habitat for this species onsite will be reduced by 32% and is significant under Threshold 9. Brushing, clearing and grading will avoid the breeding season for this species or stay at least 300 feet from occupied habitat. The breeding season for this species is February 15 to August 31. In addition, noise levels are expected to be below 60 dBA 50 feet from the edge of the residences. Therefore, noise levels exceeding 60dBA should be contained within the rear yards or within the fuel management zones in avoidance of Threshold 13g and 4a.

The proposed project is not expected to contribute to the long term endangerment of this species in the wild due to preservation of habitat onsite.

Yellow Warbler

The observed location of the yellow warbler observed onsite would be directly impacted by the project. This species is a California Species of Special Concern but is not listed

as rare, threatened, or endangered. This impact would be considered significant under Threshold 13a. Yellow warblers will be protected from further impacts by the proposed enhanced and revegetated buffer adjacent to the main riparian area. The enhancement of the revegetated wetland buffer will be on manufactured slopes or existing pasture depending on the location of occurrence. The breeding season for this species will be avoided during brushing, clearing and grading (March 15 to September 15) or for a distance of 300 feet from occupied habitat in avoidance of Threshold 13g.

Impacts to the yellow warbler during project implementation are not expected to contribute to the long-term endangerment of the species in the wild because the majority of the habitat for this species is preserved onsite and creation/enhancement of riparian areas offsite will provide suitable habitat for this species.

Yellow Breasted Chat

The proposed project will directly impact two of the four observed locations of the yellow-breasted chats observed onsite. The loss would be considered significant in accordance with Threshold 13g. Yellow-breasted chat will be protected from further impacts by the proposed enhanced and revegetated buffer adjacent to the main riparian area. The enhancement of the revegetated wetland buffer will be on manufactured slopes or existing pasture depending on the location of occurrence. The breeding season for this species will be avoided during brushing, clearing and grading (March 15 to September 15) or for a distance of 300 feet from occupied habitat in avoidance of Threshold 13g.

Impacts to the yellow-breasted chat during project implementation are not expected to contribute to the long-term endangerment of the species in the wild because the majority of the habitat for this species is preserved onsite and creation/enhancement of riparian areas offsite will provide suitable habitat for this species.

Least Bell's Vireo

The proposed project will directly impact the observed location of one least Bell's vireo. This impact would be considered significant under Threshold 13a and require mitigation since the overall project proposes impacts to a species listed as federally or state endangered or threatened or a federal or state Species of Special Concern. .

Least Bell's vireo will be protected from further impacts by the proposed enhanced and revegetated buffer adjacent to the main riparian area. The enhancement of the revegetated wetland buffer will be on manufactured slopes or existing pasture depending on the location of occurrence. The breeding season for this species will be avoided during brushing, clearing and grading (March 15 to September 15) or for a distance of 300 feet from occupied habitat in avoidance of Threshold 13g.

Impacts to the least Bell's Vireo during project implementation are not expected to contribute to the long-term endangerment of the species in the wild because the

majority of the habitat for this species is preserved onsite and creation/enhancement of riparian areas offsite will provide suitable habitat for this species.

Raptors

The site contains foraging habitat for a variety of raptor species including the observed Cooper's hawk and turkey vulture. Although raptors are opportunistic in their foraging strategies and will use almost any open habitat where rodents, birds, and reptiles are present, they typically prefer open shrub-lands, grassland, and pastureland because prey is more conspicuous and accessible in these areas. The non-native grassland and agriculture area onsite is used for foraging habitat for a variety of raptors. The eucalyptus trees onsite may provide roosting and nesting habitat for relatively common raptors such as red-tailed hawk. The loss of 41.2 acres (and 6.3 acres offsite) of non-native grassland habitat and 133.8 acres (and 7.6 acres offsite) of pasture would result in diminished carrying capacity for raptors on the site and in the immediate project vicinity. The loss of these habitats is considered a significant impact to raptor species in accordance with Thresholds 10 and 13a.

Impacts to raptors during this project are not expected to contribute to the long-term endangerment of populations because sufficient lands for these species will be set-aside in open space.

Impacts to sensitive wildlife species at each of the offsite intersection improvement areas may be potentially significant. This may include direct impacts to habitat for riparian species as well as temporary indirect impacts associated with construction noise.

5.2.4 Direct Impacts to Jurisdictional Drainages

The proposed project will directly impact wetlands and waters of the State and U.S. The following table summarizes impacts to linear waters and to wetlands (Figure 7). These impacts would be considered significant in accordance with Threshold 5.

Table 5 Jurisdictional Wetland Impacts					
Jurisdiction	Waters		Wetlands		
	Existing (acres)	Impacted Onsite (acres)	Existing (acres)	Impacted Onsite (acres)	Impacted Offsite (acres)
Army Corps of Engineers	3.6	1.6	94.1	16.5 (including disturbed wetlands from grazing)	1.16
California Department of Fish and Game	1.4	1.4	85.4	8.8	1.16

Resource Protection Ordinance Compliance

It has been determined by the County of San Diego Planning Commission that the entirety of the property is exempt from the RPO. The exemption allows for impacts to wetland habitats as defined by the RPO. Although the project is exempt from the RPO it should be noted that the project is in conformance with the findings of the RPO as they relate to other issues including steep slopes, archaeological resources, and sensitive habitat lands.

North County Subarea Plan of the MSCP

The County of San Diego requires that projects that are within the County's Subarea Plan of the MSCP conform to the findings set forth in the BMO. The Campus Park project site is not within the County of San Diego approved South County Subarea Plan. The County is in the process of preparing the North County Subarea Plan. However, since it is likely that the North County Subarea Plan may be approved prior to construction of this project, the applicant prepared a hard line approval. The completed hard line open space discussions with the County of San Diego as well as the USFWS and the CDFG. The current project design incorporates the agreed-to hard line open space. The hard line open space allows for take authorization of the impacted area including the project footprint, fuel management zones, and offsite improvements, with no further approvals necessary from the resource agencies as they relate to the NCCP process. The hard line preserve as proposed for Campus Park includes all areas outside the proposed grading and fuel modification limits. The hard line agreement between the applicant, County of San Diego and resource agencies will incorporate the mitigation and protection measures discussed within this report. In addition to the mitigation detailed below, the project will also include a Resource Management Plan (Appendix G) that outlines the management tasks that will need to be conducted to preserve the proposed open space in perpetuity. This includes maintenance, management, sensitive species surveys and funding. The hardline preserve areas will include the open space lots proposed to be conveyed under the Resource Management Plan.

If the NCMSCP is not adopted prior to project initiation, the Campus Park project will be subject to the 4d rule of the Federal Endangered Species Act, allowing impacts to coastal sage scrub but limited to 5 percent of the total acreage occurring within the County. This project will require a Habitat Loss Permit pursuant to Habitat Loss Ordinance 8365 under the NCCP Guidelines. In addition, project impacts will need to be assessed based on the NCCP flowchart (Appendix F).

5.3 Indirect Impacts

Potential indirect/edge effect impacts from the proposed project may include: excess noise level during both day and night; excess night time artificial light; unauthorized encroachment; predation of native wildlife by domestic pets; contaminated water runoff;

encroachment of invasive non-native plants; wetland buffer impacts; habitat isolation; and road kill.

Several measures that have been incorporated into the project design in accordance with Threshold 4a through Threshold 4f, will reduce these impacts to below a level of significance.

5.3.1 Noise

Threshold 4a. states that substantial edge effects may occur if the project creates noise affects greater than ambient levels. Currently portions of the site are severely affected by ambient noise from I-15 to the west. Currently, ambient noise levels in the OS-2 and OS-3 range from 55 to 70 dBA due to the freeway. Noise levels are not expected to increase due to residential activities. The project proposes numerous sound barriers to decrease that noise level for the proposed residences. These noise barriers may provide some protection to the open space on site as well. However given that the ambient noise levels are already elevated due to I-15 no additional significant noise impacts are anticipated to occur.

5.3.2 Night-time Artificial Lighting

Nighttime lighting on native habitats can provide nocturnal predators with an un-natural advantage over their prey. This could cause an increased loss of native wildlife, which, would be potentially significant for listed species such as the California gnatcatcher and the least Bell's vireo. However, the project will conform with the County light code and Zoning Ordinance, shielding and directing street lights away from natural open space, therefore these impacts would not be considered significant.

5.3.3 Human Encroachment

Increases in human activity in the area could result in degradation of sensitive vegetation by fragmenting habitat and forming additional edges through the creation of unauthorized roads or trails and by removing existing vegetation. In addition, illegal dumping of lawn and garden clippings, trash or other refuse could occur. Should they occur, these impacts would be considered significant since Threshold 4c may be exceeded. However, the open space is proposed to be fenced and signed to protect the area from encroachment. The open space will be fenced with a five to six-foot high open view fencing and/or posted with permanent "no trespassing" signs. A fencing plan is included in the attached Resource Management Plan (Appendix G, Figure 6). The implementation of this plan avoids any potential significant impact associated with human encroachment.

5.3.4 Wildlife Predation by Domestic Pets

The project has the potential for nuisance species and domesticated animals to impact native wildlife. Cats are known to prey on wildlife adjacent to residential development,

especially birds and lizards. Dogs may also prey on wildlife. Domestic animals could significantly impact native wildlife in the immediate area. In addition residential uses may increase Argentine ants to local habitat, which could have significant consequence of native ant species and animals that feed on them by out-competing native ant species and replacing them in native habitats. The introduction of nuisance or domesticated animals species into open space would be potentially significant because Threshold 4d may be exceeded.

5.3.5 Increased or Contaminated Water Runoff

Water quality in riparian areas can be adversely affected by potential surface runoff from residential development, including increases in urban contaminants such as fertilizers, pesticides, and car petroleum products. Decreased water quality may adversely affect vegetation, aquatic animals, and terrestrial wildlife that depend upon these resources. Compliance with County requirements and implementation of Project design measures, however, would reduce any potential water quality effect associated with runoff. The proposed project would have an approved Storm Water Management Plan (SWMP) that would incorporate bio-swales and implement BM's to protect the adjacent wetlands from impacts associated with storm water runoff. Accordingly, impacts would be less than significant in accordance with Threshold 4e.

Increased water flow often creates erosion and/or siltation issues for downstream wetland resources. The Project design includes a number of measures to reduce the peak runoff volume and velocity of on-site flows, and to control post-development runoff from the project site during design storm events. With the inclusion of the proposed design measures (hydro-modification plan) post development runoff volumes leaving the project site boundary would be less than or equal to the pre-development volumes. Accordingly impacts association with water flow would be less than significant.

5.3.6 Invasion of Open Space by Invasive Non-native Plant Species

Non-native plants could colonize sites disturbed by construction and could potentially spread into adjacent native habitats, especially following a disturbance such as fire. Many of these non-native plants are highly invasive and can displace native vegetation, reducing native species diversity, potentially increasing flammability and fire frequency, changing ground and surface water levels, and potentially adversely affecting native wildlife that is dependent on the native plant species, as a few examples. Review of the landscape plans indicates that no species identified as invasive are proposed as part of the landscape plans. However, colonization of non-native plant species in non-impact areas and the resulting degradation of native habitat would be considered significant should it occur, in accordance with Threshold 4f and would require mitigation.

5.3.7 Impacts to Buffers

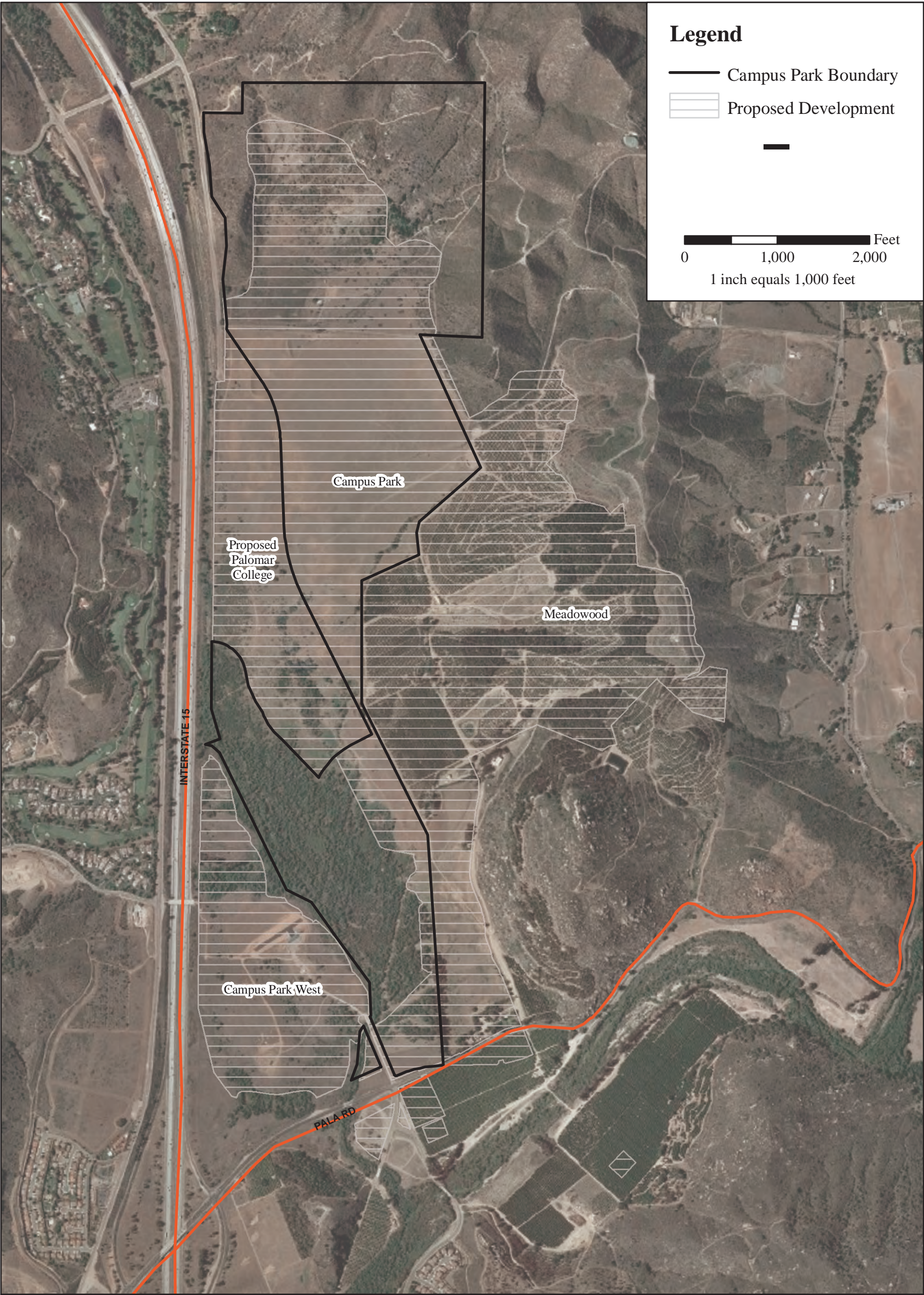
Wetland buffers are an integral part of a preserve system to reduce issues addressed above, such as noise, water quality, and lighting and also serve as a means to reduce edge effects. The proposed project will impact the wetland buffer adjacent to Horse Ranch Creek and side tributaries at three locations. These include MF-1, Pankey Place, and the offsite extension of Pala Mesa Drive. Typically wetland buffers vary in width from 50 to 200 feet depending on the resources within the wetland and the surrounding resources. For Campus Park, due to the constraints posed by the road alignments and intersections, construction will directly impact wetlands thereby not buffering the riparian habitat that will remain onsite. Impacts to wetland buffers would be considered significant in accordance with Threshold 6. Threshold 6 states that significant impacts would occur if the project does not include a wetland buffer adequate to protect the functions and values of existing wetlands. Project grading and ultimate build-out without an adequate buffer may result in degradation of the adjacent habitat and wildlife within the wetland. Once project construction is complete, there will be a manufactured buffer between the proposed buildings and the adjacent habitat. The project proposes to revegetate these areas with native species thereby mitigating this significant impact to buffers.

5.3.8 Impacts to Offsite Habitat due to Isolation

Threshold 3a states that significant biological impacts would occur if the proposed project would prevent wildlife from accessing areas considered necessary to the species for population persistence in the area (i.e. foraging resources, breeding areas, etc). The project was designed to provide (1) a continuous block of habitat connecting to the north Monserate Preserve and (2) a significant block of the riparian habitat of Horse Ranch Creek. Pankey Place was moved further south to reduce fragmentation of this riparian habitat. Pala Mesa Drive and Horse Ranch Creek Road offsite have the potential to fragment habitats both on the Campus Park West property and the Meadowood property. These two properties are proposed for development in the future therefore, no fragmentation of habitat is expected to occur. If these two developments are not built, habitat fragmentation is still not expected to be significant because the agriculture lands are located on Meadowood and Campus Park West will be connected to the larger Horse Ranch Creek Open Space (Figure 8, OS-2). Therefore, no significant impacts are expected to occur in accordance with Threshold 3a.

5.3.9 Road Kill

Road kill could occur as vehicles travel on the roads associated with the project. Increases in road kill could also occur as traffic is added to roads that lead to the project. The open space would be separated from the roads in the northern and central section by development (houses, commercial) etc. therefore the likelihood of significant road kill is low. Road kill is more likely along the proposed Pankey Place that traverses the riparian habitat that supports several sensitive species. This impact would be considered significant and would require mitigation.



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Vicinity Development Plan
Campus Park

Figure
8

5.3.10 Indirect Impacts to Sensitive Species

Plants

Potential indirect impacts to the remaining population of Parry's tetradlea as identified in Threshold 4c will be avoided with backyard fencing, signage and implementation of the management tasks outlined in the RMP.

Wildlife

In general, indirect impacts to remaining sensitive wildlife will be minimized with the same measures used to protect remaining habitat. However, several species are especially sensitive to indirect impacts.

California gnatcatchers and rufous crowned sparrows remaining onsite will be partially protected from development-related edge effects by the presence of the Limited Building Zone (LBZ) between development and remaining coastal sage scrub. Brushing, clearing, and grading will avoid the breeding season for these species or stay at least 300 feet from occupied habitat. The breeding season for these species is February 15 to August 31. In addition, proposed maintenance and monitoring of biological open space and backyard fencing will provide additional protection measures for California gnatcatchers. Avoidance of the breeding season, remaining 300 feet from nesting sites during construction and implementation of protection measures in perpetuity will result no significant indirect impacts to these species. In addition, noise levels are expected to be below ambient levels 50 feet from the edge of the residences. Therefore, noise levels exceeding ambient levels should be contained within the rear yards of the residences and within the LBZ and/or fire management zones.

Least Bell's vireos, yellow-breasted chats, and yellow warblers remaining in the riparian habitat will be protected by the proposed enhanced and revegetated buffer adjacent to the main riparian area. The enhancement of the buffer will be on manufactured slopes or existing pasture depending on the location of occurrence. The slopes in this area will be revegetated with native plant species that are permissible according to fire safety standards. In this way, the slopes will also function as a native upland habitat buffer for the wetland. The breeding season for this species will be avoided during brushing, clearing and grading (March 15 to September 15) or for a distance of 300 feet from occupied habitat. In addition, proposed maintenance and monitoring of biological open space will ensure protection of remaining vireos. Potential indirect impacts to these species at offsite intersection improvements will be avoided through avoidance of construction during the breeding season. These factors are expected to prevent significant indirect impacts to least Bell's vireo in accordance with Threshold 13g.

No indirect impacts to raptor species are expected to occur. To avoid potentially significant indirect impacts to these species brushing and clearing will be avoided during

the raptor breeding season (February 15 to July 15) or a distance of 500 to 800 feet will be provided from known nest locations in accordance with Threshold 13g .

In addition to the sensitive species observed onsite, three sensitive species documented in the vicinity of the project site could also potentially be indirectly impacted by the project: arroyo toad, southwestern willow flycatcher, and Stephens' kangaroo rat. These three species are discussed below and depicted on Figure 6.

Although no arroyo toads were observed onsite during protocol surveys, critical habitat for this species has been designated along the San Luis Rey River. It is not anticipated that indirect impacts to this species will occur onsite since there is no suitable breeding habitats onsite, nor is it considered an area of toad seasonal movement for aestivation in accordance with Threshold 7. No suitable breeding habitat occurs onsite as substantiated by the presence/absence surveys conducted onsite, nor is the site suitable for movement due to widening of SR 76, compaction of onsite soils and based on results of a pitfall trapping study conducted for the adjacent Meadowood project (Ramirez 2005). However indirect impacts could be incurred offsite through Thresholds 6 and 12a. Arroyo toads are known to occur in the project vicinity of the San Luis Rey River to the south. The closest documented location of this species is 0.5 miles southeast of the Campus Park project (Ramirez 2006). Arroyo toads were specifically observed adjacent to Pala Road along the San Luis Rey River (Figure 6). Implementation of Best Management Practices for storm water runoff will avoid potential indirect impacts to this species downstream. Impacts therefore are considered less than significant.

The willow riparian habitat onsite is not suitable to support willow flycatchers due to its structure and lack of standing water. Critical habitat for this species does occur, however, along the San Luis Rey River to the south. Since there is not suitable habitat for this species onsite, no indirect impacts to this species are expected to occur onsite. The nearest known location of Southwestern willow flycatcher is 1.3 miles to the east.

No suitable habitat for the Stephens' kangaroo rat occurs onsite. The nearest known location of this species is 5.6 miles to the southwest on the Fallbrook Weapons station in Bonsall. Due to the intervening topography, the lack of hydrological connection, and the lack of a reasonable upland connection to the Fallbrook site, indirect impacts to this species are not expected to occur as a result of this proposed project.

5.4 Wildlife Corridor Impacts

Significance Threshold 3a – d outlines the criteria for a determining significance related to wildlife corridor impacts:

3. Result in project-related improvements or activities within or adjacent to local corridors, regional linkages, or other areas utilized for wildlife movement that would:

- a. *Prevent wildlife from accessing areas considered necessary to the species for population persistence in the area (i.e. foraging resource, breeding areas, etc.);*

The proposed project will not obstruct access to areas considered essential to species population persistence. The project proposes the majority of the southern riparian forest habitat as a block of habitat and the coastal sage scrub habitat as a block of habitat. The coastal sage scrub block of habitat is connected to the larger Monserate Preserve to the north and Rice Canyon to the East. The wildlife within the southern riparian forest would not be obstructed from utilizing all portions of the riparian habitat including the dense interior, understory and canopy and therefore is not expected to be a significant impact based on this Threshold.

- b. *Restrict wildlife from utilizing their natural movement paths (i.e. those paths used when given the choice absent of human interference); or*

Currently the site does not serve as a regional natural movement path due to the extensive grazing onsite (see discussion below). The proposed project will not interfere with the current movement patterns of riparian or upland species and therefore is not expected to be a significant impact based on this Threshold.

- c. *Further constrain a narrow corridor by reducing width, removing available vegetative cover, creating edge effects, or placing barriers in the movement path;*

The proposed development will not alter the current base line condition of the site's wildlife corridor. The majority of the development is proposed within the pasture area retaining large blocks of open space in the southern riparian forest and coastal sage scrub habitats. Therefore, no significant impact based on this Threshold is expected to occur.

- d. *Create artificial corridors that do not follow natural movement patterns.*

The proposed development will not alter the current base line condition of the site's wildlife corridor. The majority of the development is proposed within the pasture area retaining large blocks of open space in the southern riparian forest and coastal sage scrub habitats. In addition, the proposed project design does not create new or un-natural movement patterns for wildlife utilizing

the site. Therefore, no significant impact based on this Threshold is expected to occur.

The proposed project site is abutted on the west by I-15, on the south by groves, and on the east by existing groves and future development. To the north is Monserate Preserve. Design of an adequate wildlife corridor is based on the quality of habitat, the connectivity of the habitat, cover by native plants, and edge effects from adjacent land uses. The project site, while supporting high quality southern riparian forest to the south and coastal sage scrub to the north, is not expected to provide an adequate wildlife corridor for native upland bird and mammal species dispersal from the south or north. This is due to the lack of connection of native habitat between the southern riparian forest and the coastal sage scrub, the adjacency of a major interstate highway, and the highly degraded nature of the grazed pasture onsite. Though unobstructed from development, the pasture area between the northern Monserate Preserve and the southern San Luis Rey River has been fenced and grazed since the 1950's and is considered the baseline/existing condition. The proposed development footprint would not change the exiting baseline condition that this area is not used as a regional wildlife corridor. In addition, the pasture area has historically and is currently being used for livestock grazing and thus is largely barren or sparsely vegetated with non-native forbs. The project site does not have well protected habitat cover for upland bird species and/or mammals to traverse the project site between the southern riparian forest and the coastal sage scrub habitat to the north. Higher quality cover and habitat linkages are provided east of the project site through Rice Canyon that could be utilized for dispersal of wildlife (Figure 9). Rice Canyon is a relatively undeveloped area east of the project site that connect habitat from the south to the Monserate Preserve to the north. Adequate cover and linkage also exists west of the I-15 via patches of coastal sage scrub habitat that create a series of sequential habitat "stepping stones" that can be used by upland species. In addition, the area along Interstate 15 west of the project site are small to medium sized patches of coastal sage scrub that form a series of habitat "stepping stones" ideal for foraging birds. In addition, California gnatcatchers are known to occur within these patches of coastal sage scrub habitat east of Interstate 15 (County of San Diego 2004, USFWS 2004). Both the Rice Canyon corridor and the stepping stones to the west provide a more suitable regional corridor than onsite resources. No current onsite regional wildlife corridor exists. Therefore, no significant direct impacts to wildlife corridors are expected to occur due to the project site in accordance with Threshold 3.

Wildlife corridors are typically utilized for different purposes depending on the focus species. One important species to consider is the California gnatcatcher. Although wildlife corridors are a commonly accepted conservation measure, very little research on their use by the California gnatcatcher has been done. The preserve area north of the project site is dominated by coastal sage scrub which extends to the east into Rice Canyon. There is little vegetation for the California gnatcatcher to utilize between the coastal sage scrub onsite and the habitat to the south. When viewed regionally, the most viable connection for California gnatcatchers is either from coastal sage scrub south of San Luis Rey River through Rice Canyon habitat to the east or through the

series of coastal sage scrub habitat “stepping stones” located west of I-15. Therefore, no significant impacts to the connection of California gnatcatcher populations are expected to occur with implementation of this project in accordance with Threshold 3.

For localized corridors, wildlife would be expected to utilize the large southern riparian forest onsite as well as the coastal sage scrub onsite (Figure 9). In addition, various upland drainages occur within the coastal sage scrub habitat that could be utilized by small wildlife movement as localized corridors. The project has been designed to provide large blocks of habitats that connect to offsite open space. The coastal sage scrub habitat in the northern portion of the site abuts the Monserate Open Space Preserve, while the southern riparian forest provides habitat within Horse Ranch Creek between I-15 and Pala Road. The proposed development will not interfere with these local wildlife use areas; therefore, no significant impacts will occur

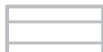




5.5 Cumulative Impacts

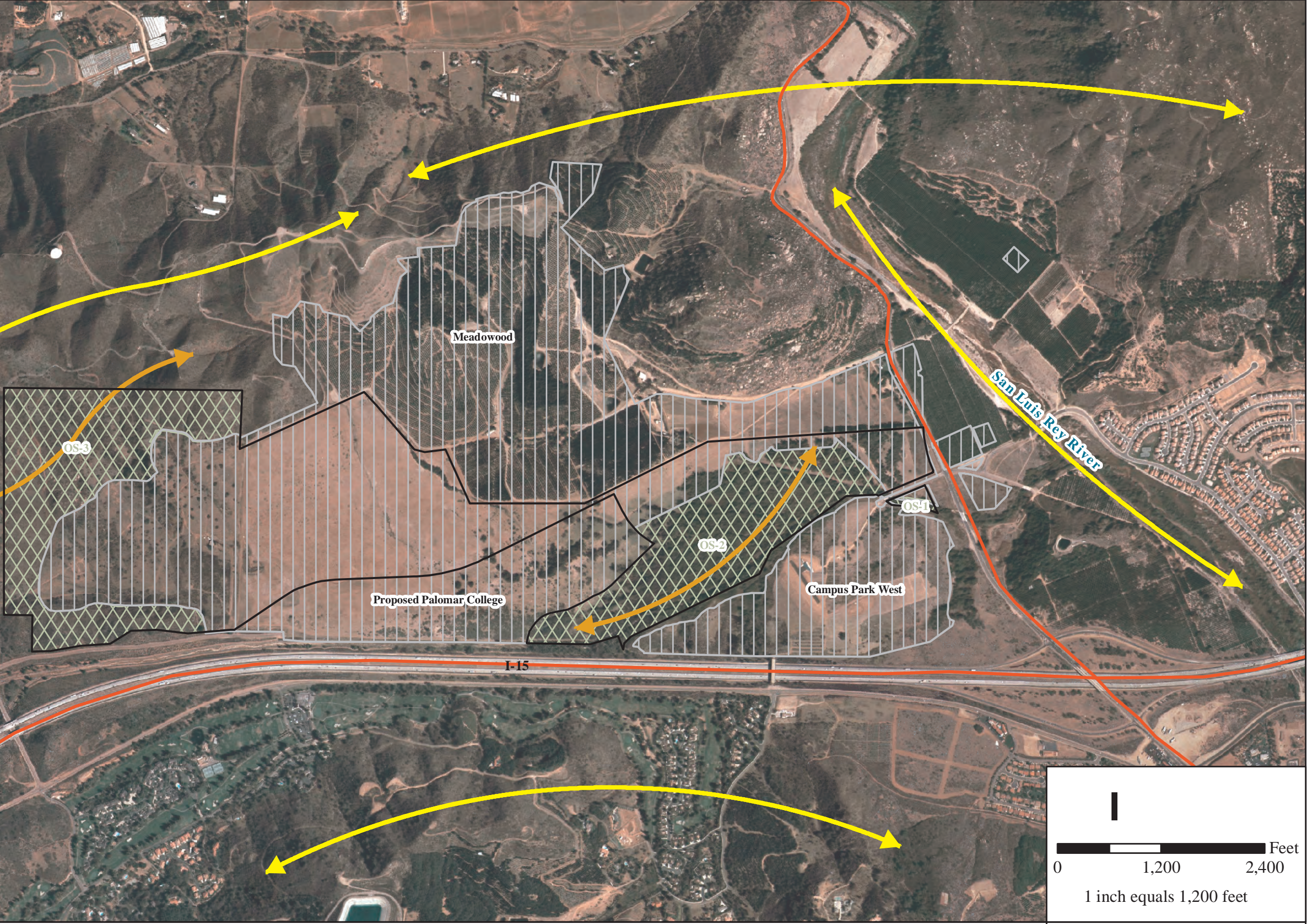
According to Appendix G of the State CEQA guidelines, implementation of foreseeable projects will normally have a significant cumulative effect on biological resources if they will:

- Have a substantial cumulative adverse effect on a species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the CDFG or USFWS,
- Have a substantial cumulative adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFG or USFWS,
- Have a substantial cumulative effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to, marsh, riparian scrub, etc.) through direct removal, filling, hydrological interruption, or other means,
- Interfere substantially and cumulatively with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites,
- Cumulatively conflict with any local policies or ordinances protecting biological resources such as a tree preservation policy or ordinance; or
- Cumulatively conflict with the provision of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plan.

Impacts that may not be considered significant on a project specific level can become significant when viewed in the context of other losses in the vicinity of the project site. When evaluating cumulative impacts, CEQA states that: “lead agencies should define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used” (sec. 15130(b)(3)). When assessing cumulative impacts to biological resources the geographic area included in the cumulative analysis should reflect meaningful biological parameters such as:

Legend

-  Surrounding Development Boundary
-  Freeways
-  Campus Park Boundary
-  Proposed Open Space
- Wildlife Corridors**
 -  Local Corridor
 -  Regional Corridor



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**Wildlife Corridors
Campus Park**

**Figure
9**

May 2009

- Watershed area (for wetlands, waters, and aquatic species),
- Distribution of sensitive species populations and home ranges, and
- Habitat use patterns of common wildlife.

Ecological Region

The proposed project is partially located in an eastern arm of the Northern Valley Humid Temperate Ecological Region and partially in the Northern Foothills Humid Temperate Ecological Region, as mapped by the County of San Diego. The project site sits east of I-15 in the Pala Mesa Valley and watershed of the San Luis Rey River. The area is sparsely developed consisting primarily of rural residential, active groves, and riparian habitats along the flood plain of the San Luis Rey River and its tributaries. Natural habitats of the region consist of sage scrubs, chaparrals, riparian and oak woodlands and sandy washes.

Areas that are important to the wildlife of the region include the San Luis Rey River corridor, large tracts of undeveloped coastal sage scrub to the east (Rice Canyon), and the coastal sage scrub/chaparral “stepping stone” areas west of I-15.

Cumulative Impact Area for Wetlands, Southern riparian forests and Scrubs, Oak Woodlands, and wetland sensitive species

When analyzing cumulative impacts to wetlands, waters and aquatic species it is important to consider impacts within the watershed in which the project is located, as impacts outside the watershed will be less relevant. The area analyzed for the Campus Park project includes the San Luis Rey River watershed within the Eco-region defined above from approximately Bonsall to Pala. Oak woodlands are included within this cumulative impact assessment because the oak woodlands in the region are generally associated with minor tributaries to this river.

The least Bell's vireo is known to occur throughout the San Luis Rey River, the Santa Margarita River, the San Diego River and the Sweetwater River and their tributaries. For this assessment least Bell's vireo impacts are assessed utilizing the San Luis Rey River corridor and its tributaries.

Cumulative Impact Area for Coastal Sage Scrub, Grasslands, California gnatcatcher, raptors and Parry's tetracoccus.

Many species associated with upland habitats are locally migratory and do not tend to traverse many miles. Therefore cumulative analysis for the upland habitats of coastal sage scrub and non-native grasslands is comprised of the area within the Northern Foothills and Northern Valley Humid Temperate Ecological Regions. These two regions are quite large and the habitats considered herein are known from throughout the entire

county. Therefore, to provide an adequate cumulative assessment, the impact area is to be determined by those habitats within these regions from Fallbrook, to Bonsall, to Lilac to Pala (approximately a five mile radius around the site). This provides sufficient range for resident species while encompassing enough lands to provide an adequate assessment.

The California gnatcatcher and raptors are analyzed within the eco-region described above. Parry's Tetracoccus is known to occur primarily in the inland north county, but has been observed as far south as Dehesa and McGinty Mountain near Jamul. For this analysis, the assessment of cumulative impacts to Parry's Tetracoccus incorporates the two eco-regions defined above.

Cumulative Projects

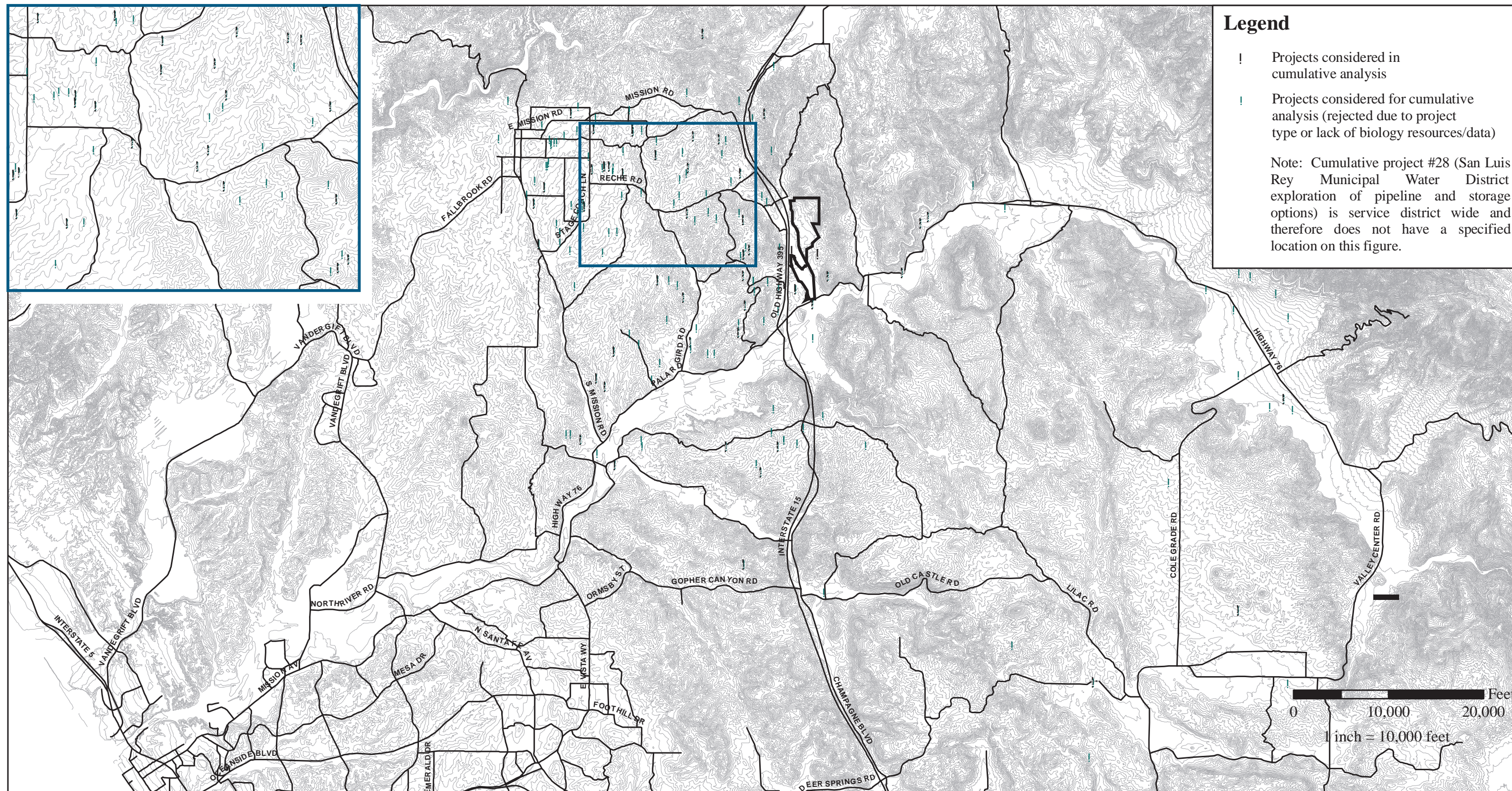
There are 95 private projects and one public works project (SR 76 widening and realignment project) in the vicinity of the proposed project. Table 6 provides a list of the cumulative projects within the vicinity of the proposed project and Figure 10 shows the general locations of each project listed. Of these 95 projects, 87 are known to support biological resources similar to those found on the proposed project site. Projects not utilized in this analysis either did not support biological resources, were categorically exempt and therefore no information was available, or did not support the resources under consideration for the proposed project. The projects utilized for this analysis are noted accordingly in Appendix H.

5.5.1 Cumulative Impacts for Sensitive Habitats

Permanent impacts to sensitive habitats associated with the proposed project include impacts to coastal sage scrub, oak woodland, riparian woodland/scrub and non-native grassland/pasture. Of the 89 projects in the vicinity, 87 projects support one or more of these habitat types. These projects while adding to the cumulative loss of these habitats are also required to set aside open space to protect the habitats. In the case of wetland habitats, mitigation is required at a minimum ratio of 1:1 creation and 2:1 restoration, such that there is no net loss of this habitat type. Therefore, cumulative impacts to wetland habitats would not be considered significant due to the no net loss policy of the county, state and federal regulations. Incremental loss of upland habitats including coastal sage scrub, oak woodlands, and non-native grasslands are expected to be less than significant. This is primarily due to the rural undeveloped nature of the Fallbrook and Pala Mesa portion of the county. Most land in this region is large lot rural residential or undeveloped land that will be required to comply with the NCCP guidelines and eventually the North County MSCP thereby reducing or hindering the cumulative loss of sensitive upland habitats.

5.5.2 Cumulative Impacts for Sensitive Plants

Impacts to Parry's Tetracoccus are not expected to be cumulatively significant due to the relative abundance of this species both onsite and offsite. This species is prevalent



Consultants, Inc.

Cumulative Projects Campus Park

See Appendix H for List of Projects

Figure
10

May 2009

on the Monserate open space to the north and within the chaparral habitats of the region. This species often occurs on steep slopes that preclude development impacts thereby protecting this species from cumulative losses.

5.5.3 Cumulative Impacts for Sensitive Wildlife

Significant impacts to least Bell's vireo, California gnatcatcher, yellow warbler, yellow-breasted chat and raptor species are expected to occur onsite. Least Bell's vireo occur in the major river systems of San Diego County and more locally to the project site within Santa Margarita River and its tributaries and San Luis Rey River as far east as Pala and as far west as Oceanside. This species is also known to occur in Windmill and Pilgrim Creeks. The population of least Bell's vireos in these riparian systems account for 74% of the total population in the County in 1996 (Unitt 2004). Least Bell's vireo are also known to re-colonize within restored southern riparian forest habitat. The project proposes to mitigate for impacts to southern riparian forest by creating least Bell's vireo quality habitat and restore the habitat that occurs onsite. Based on this information the loss of habitat for this species onsite would not be considered significantly cumulative.

California gnatcatchers occur within coastal sage scrub habitats from the foothills to the coast of San Diego County. Onsite the loss of 42.3 acres of predominantly disturbed non-occupied habitat would not significantly add to the cumulative loss of this species regionally. The majority of the high quality habitat and the observed locations of this species are proposed to be preserved onsite. In addition, open space proposed connects to open space offsite allowing for local distribution of this species.

The loss of the pasture area and non-native grassland (raptor foraging habitat) onsite, while locally significant, would not be considered cumulatively significant. Sufficient open land, including agriculture lands, non-native grasslands and open coastal sage scrub occur throughout the region to support raptor species.

6.0 MITIGATION MEASURES

Under CEQA, mitigation is required for all significant biological impacts. The following mitigation measures are proposed to offset significant biological impacts. Mitigation measures are also proposed to offset locally important biological impacts. Although mitigation measures are not often required for locally important impacts, local jurisdictions often implement these measures to minimize cumulative impacts within the region.

The public agencies have adopted planning and mitigation guidelines to offset significant biological impacts. These include, in order of preference: 1) avoidance of impacts, 2) minimization of impacts to the maximum extent practicable, and 3) mitigation, only if avoidance is not feasible and the impacts have been minimized. Whenever possible, the significant impact should be avoided using design alternatives, such as increasing development density in disturbed habitats while reducing or eliminating density in areas that support sensitive biological resources. If it is not feasible to avoid the impact due to either jurisdictional policy or to economic or topographic constraints, then impacts on significant resources should be minimized to the greatest extent feasible. Minimizing includes decreasing lot size, narrowing roadways, increasing buffer zones, etc. If unavoidable impacts to significant resources would still occur, a mitigation plan that would meet the requirements of the reviewing or permitting agencies is required.

The entirety of the open space will be addressed in a Resource Management Plan (Appendix G) including a requirement for management and monitoring in perpetuity. Therefore, indirect impacts to sensitive habitats onsite would not be significant.

The project shall implement the required Resource Management Plan (REC 2009 , Appendix G) for the Proposed Project, including the following measures:

- Selected areas along on-site trails shall be fenced with lodge pole fencing at select locations to prevent encroachment into the open space. The on-site trails shall be posted with "off-limits" signs that state, "No trespassing. Sensitive environmental resources. Disturbance beyond this point is restricted by an easement. Information: Contact County of San Diego, Department of Planning and Land Use."
- The Project Applicant shall participate in a Landscape Maintenance District as the funding mechanism for the long-term management of open space.
- Exotic plant species shall be removed from high quality woodlands, wetlands, and grasslands on an as-needed basis to be assessed every five years.
- Sensitive plant population boundaries shall be mapped every three years.
- Trash shall be removed from open space annually.
- All habitats and sensitive plant and animal species shall be monitored annually. Biological surveys shall be conducted every five years for sensitive plant and animal species.

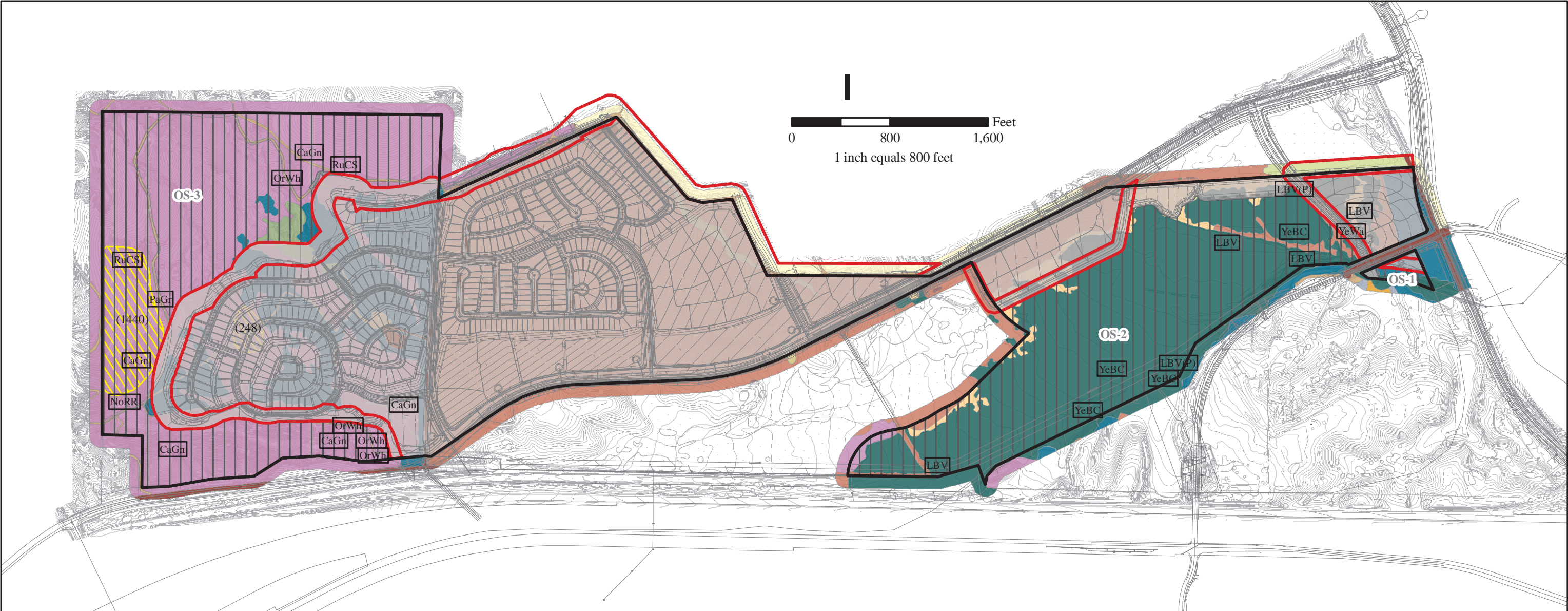
Table 6 summarizes the amount of habitat impacted, the required mitigation, and habitat preserved onsite and Figure 11 depicts the proposed Open Space onsite.

<p align="center">Table 6 Campus Park Habitat/Vegetation Communities, Impacts, Mitigation</p>							
Habitat / Vegetation Community	Existing (Acres)	Impacts (Acres)	Offsite Impacts (Acres)	Mitigation Ratio	Mitigation required (Acres)	Preserved On-site (acres)	Off-site Mitigation (acres)
Southern Riparian Forest	85.6	9.5	1.0	3:1	31.5 (10.5 ac creation, 21.0 ac. Enhancement)	76.1	10.5 acres creation offsite
Southern Willow Scrub	1.6	1.6	0.06	3:1	4.98 (1.66 ac creation, 3.32 ac. Enhancement)	0	1.6 acres creation offsite
Freshwater Marsh	10.3	7.8	0.1	3:1	23.7 (7.9 ac. Creation, 15.8 ac. Enhancement)	2.5	7.9
Coast Live Oak Woodland	2.8	1.3 (1.0 FMZ) (0.3 grading)	0.01	2:1 3:1	2.93	1.5	1.4
Diegan Coastal Sage Scrub	129.6	42.3	4.4	2:1	93.4	87.3	6.1
Non-native Grassland	44.1	41.2	6.4	0.5:1	23.8	2.9	20.9
Non-native Vegetation	0.1	0.1	0.68	0:1	0	0	0
Pasture	135.4	133.8	7.9	0.5:1	70.8	1.6	65.3
Disturbed	4.4	3.9	14.3	0:1	0	0.5	0
Developed	2.1	2.1	2.1	0:1	0	0	0
Eucalyptus Woodland	0.1	0.1	1.7	0:1	0	0	0
Orchard	0	0	11.9	0:1	0	0	0
Total	416.1	243.7	50.55		251.11	172.4	113.7

Preservation of open space and mitigation measures are proposed to occur upon issuance of grading permit for each particular area. Project mitigation will be tied to impacts as they occur. Therefore project mitigation has been divided into phases. Phasing may increase or decrease based on economic factors. Mitigation has been divided into three major phases (Figure 12):

Phase 1: Mitigation for impacts as they occur south of Baltimore Oriole Road, including offsite extension of Horse Ranch Creek Road, Pankey Place, and Pala Mesa Drive

Phase 2: Mitigation for impacts as they occur north of Baltimore Oriole Road and



Legend

Sensitive Species

- CaGn Coastal California Gnatcatcher (pair) (*Polioptila californica californica*)
- LBV(P) Least Bell's Vireo (Juvenile) (*Vireo bellii pusillus*)
- LBV(J) Least Bell's Vireo (Pair) (*Vireo bellii pusillus*)
- LBV Least Bell's Vireo (*Vireo bellii pusillus*)
- NoRR Northern Red Diamond Rattlesnake (*Crotalus ruber ruber*)

- OrWh Orange-throated Whiptail (*Aspidoscelis hyperythrus*)
- PaGr Palmer's Grappling-hook (*Harpagonella palmeri*)
- RuCS Southern California Rufous Crowned Sparrow (*Aimophila ruficeps canescens*)
- YeBC Yellow Breasted Chat (*Icteria virens*)
- YeWa Yellow Warbler (*Dendroica petechia*)
- Parry's Tetracoccus (*Tetracoccus dioicus*) (#)

Note: Raptors observed throughout site or overhead include Cooper's Hawk, Turkey Vulture, American Kestrel, White Tailed Kite, Red Shouldered Hawk, and Red Tailed Hawk.

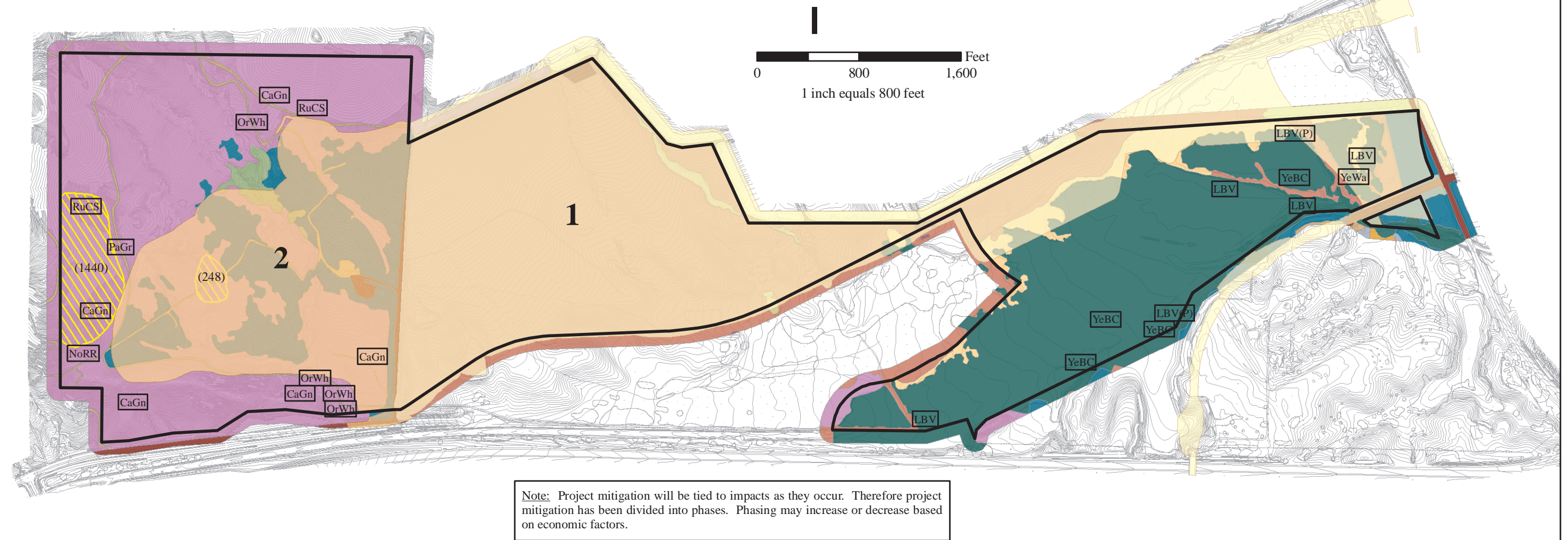
Habitats

- Coast Live Oak Woodland (71160)
- Developed (12000)
- Diegan Coastal Sage Scrub (32500)
- Disturbed (11300)
- Eucalyptus (11100)
- Freshwater Marsh (52400)
- Non-Native Grassland (42200)
- Oak Woodland (71100)
- Non-native Vegetation (11000)
- Pasture (18310)
- Southern Riparian Forest (61300)
- Southern Willow Scrub (63320)
- Mulefat Scrub (63310)
- Orchard (18100)
- Tamarisk Scrub (63810)
- Other**
- Proposed Impact Area
- Fuel Management Zone / LBZ
- Proposed Open Space



**Biological Open Space
Campus Park**

**Figure
11**



Legend

Sensitive Species

CaGn Coastal California Gnatcatcher (pair) (*Polioptila californica californica*)
 LBV(P) Least Bell's Vireo (Juvenile) (*Vireo bellii pusillus*)
 LBV(J) Least Bell's Vireo (Pair) (*Vireo bellii pusillus*)
 LBV Least Bell's Vireo (*Vireo bellii pusillus*)
 NoRR Northern Red Diamond Rattlesnake (*Crotalus ruber ruber*)

OrWh Orange-throated Whiptail (*Aspidoscelis hyperythrus*)
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 RuCS Southern California Rufous Crowned Sparrow (*Aimophila ruficeps canescens*)
 YeBC Yellow Breasted Chat (*Icteria virens*)
 YeWa Yellow Warbler (*Dendroica petechia*)
 Parry's Tetracoccus (*Tetracoccus dioicus*) (#)

Note: Raptors observed throughout site or overhead include Cooper's Hawk, Turkey Vulture, American Kestrel, White Tailed Kite, Red Shouldered Hawk, and Red Tailed Hawk.

Habitats

Coast Live Oak Woodland (71160)	Non-Native Grassland (42200)	Mulefat Scrub (63310)
Developed (12000)	Oak Woodland (71100)	Orchard (18100)
Diegan Coastal Sage Scrub (32500)	Non-native Vegetation (11000)	Tamarisk Scrub (63810)
Disturbed (11300)	Pasture (18310)	
Eucalyptus (11100)	Southern Riparian Forest (61300)	
Freshwater Marsh (52400)	Southern Willow Scrub (63320)	

Phasing

Phase 1
 Phase 2
 Phase 3 - Offsite intersections: mitigated per intersection improvement

Phase 3: Mitigation for impacts to offsite intersection improvements as each intersection is improved.

Mitigation for Phase 1 includes impacts to the following habitats:

- Southern Riparian Forest
- Southern Willow Scrub
- Freshwater Marsh
- Diegan Coastal Sage Scrub
- Non-native grassland
- Non-native vegetation (orchard)
- Pasture
- Dist./Developed
- Eucalyptus woodland

Mitigation for Phase 2 includes impacts to the following habitats:

- Coast Live Oak Woodland
- Diegan Coastal Sage Scrub, including at least 496 individuals of Parry's tetracoccus
- Non-native grassland
- Disturbed/Developed

Mitigation for Phase 3 (offsite intersections) includes the following habitats:

- Southern Riparian Forest
- Diegan Coastal Sage Scrub
- Coast Live Oak Woodland
- Non-native grassland
- Non-native vegetation (orchard)
- Pasture
- Dist./Developed

Since mitigation will be phased an impact and mitigation tracking system will be utilized for the project. The project applicant or monitoring biologist will tally impacts as they occur and ensure that the appropriate mitigation (preservation, creation and/or enhancement) occur concurrently. The applicant, County, or monitoring biologist will ensure that at no time does the total impact for each habitat exceed that which is identified in the table above.

6.1 Mitigation for Direct Impacts

6.1.1 Mitigation for Direct Habitat Impacts

The mitigation outlined below for direct impacts to habitats both on and offsite include preservation (both on and offsite), creation of habitat offsite, and enhancement of habitat onsite. Two Conceptual Revegetation Plans (Appendix I) are included within this report: the first details the offsite creation of wetland habitat, and the second

discusses onsite enhancement of habitat. The RMP for this project discusses short and long term management of the habitat to be preserved.

Wetland habitats including southern riparian forest, southern willow scrub, and freshwater marsh are proposed to be mitigated through offsite creation and onsite enhancement of existing habitat. The offsite revegetation plan and the onsite enhancement plan details the feasibility, site selection criteria, and success criteria to achieve this goal. At a minimum the site selected for offsite creation must:

1. Be within a mitigation bank or be any other land deemed acceptable to the County of San Diego Director of Planning and Land Use,
2. Be approved by the appropriate state and federal resource agencies as part of the wetland permitting process under separate permit authority.
3. Comprise at least 10.5 acres of southern riparian forest, 1.6 acres of southern willow scrub, and 7.9 acres of freshwater marsh at the completion of all impacts (these acreages may be implemented in increments based on mitigation phasing),
4. Not remove other habitat considered important regionally or provide mitigation for such lands,
5. Be selected based on its hydrological regime, ability to be protected from future impacts and existing habitat onsite,
6. Provide for adequate hydrology to support hydrophytic plant species either through surface water or groundwater or a combination of both,
7. Not be implemented in an area prone to scour or sedimentation
8. Provide soils that enhance the establishment of wetland habitat.

The wetland creation site will be located within the same watershed as the San Luis Rey River to the greatest extent practicable. Once the offsite creation area is selected it must be described in detail in a final revegetation plan.

Upland habitats including Diegan coastal sage scrub, non-native grassland, pasture and coast live oak woodland are proposed to be mitigated through onsite and offsite preservation. Offsite preservation should occur within the watershed of the San Luis Rey River to the greatest extent practicable, be approved by the County of San Diego Director of Planning and Land Use and may be implemented incrementally based on the mitigation phasing. Onsite preservation management is addressed within the attached RMP. Offsite preservation management will be addressed once a site is selected and may either be incorporated into an existing RMP for the property.

Southern Riparian Forest

Onsite:

Significant direct impacts to 9.5 acres of southern riparian forest will require mitigation at a 3:1 ratio, including 1:1 creation and 2:1 enhancement. A total of 9.5 acres of riparian forest will be created offsite. Offsite mitigation for this habitat type must be of sufficient

quality to support least Bell's vireo, yellow warbler and yellow-breasted chat. Mitigation will either occur at an approved mitigation bank, or any other land determined acceptable by the Director of Planning and Land Use. A conceptual mitigation plan for wetland creation and enhancement is included as Appendix I to this report. In addition, 19 acres of the onsite riparian forest will be enhanced. Onsite enhancement may include cowbird trapping, removal of exotics, and removal of the existing berms. This mitigation will reduce project impacts to southern riparian forest to below a level of significance.

Offsite:

Offsite impacts to 1.0 acres of southern riparian forest will require mitigation at a 3:1 ratio with at least 1.0 acres of creation. Mitigation will either occur at an approved mitigation bank, or any other land determined acceptable by the Director of Planning and Land Use. Implementation of this mitigation measure will reduce these impacts to below a level of significance.

Southern Willow Scrub

Onsite:

Significant direct impacts to 1.6 acres of southern willow scrub will require mitigation at a 3:1 ratio, including 1:1 creation and 2:1 enhancement. This mitigation will consist of creating 1.6 acres of southern willow scrub habitat offsite. An additional 3.2 acres of the onsite southern riparian forest will be enhanced. Onsite enhancement may include cowbird trapping, removal of exotics, and removal of existing berms. This mitigation will reduce project impacts to southern willow scrub to below a level of significance.

Offsite:

Offsite impacts to 0.06 acre of southern willow scrub will require mitigation at a 3:1 ratio with at least 1:1 creation. Mitigation will be completed at the same location as the wetland impact mitigation for the onsite resources. Mitigation will either occur at an approved mitigation bank or any other land determined acceptable by the Director of Planning and Land Use. Implementation of this mitigation measure will reduce these impacts to below a level of significance.

Freshwater Marsh

Onsite:

Significant direct impacts to 7.8 acre of freshwater marsh will require mitigation at a 3:1 ratio, including 1:1 creation and 2:1 enhancement. This mitigation will consist of creating 7.8 acre of freshwater marsh habitat offsite. In addition, 15.6 acres of the onsite southern riparian forest will be enhanced . Onsite enhancement may include

cowbird trapping, removal of exotics, and removal of existing berms. This mitigation will reduce project impacts to freshwater marsh to below a level of significance.

Offsite:

Offsite impacts to 0.1 acre of freshwater marsh will require mitigation at a 3:1 ratio with at least 1:1 being creation. Mitigation will be completed at the same location as the wetland impact mitigation for the onsite resources. Mitigation will either occur at an approved mitigation bank or any other land determined acceptable by the Director of Planning and Land Use. Implementation of this mitigation measure will reduce these impacts to below a level of significance.

Coast Live Oak Woodland

Onsite

Significant impacts to 1.3 acres of coast live oak woodland will require mitigation at a ratio of 2:1 and 3:1. One acre of this habitat will be mitigated at 2:1 since it is in the fuel management zone, and 0.3 acre will be mitigated at 3:1 since it will be impacted due to grading. Therefore a total of 2.3 acres is required to mitigate this habitat type. This mitigation will consist of preserving 1.5 acres onsite and purchasing 0.8 acres of oak woodland in an offsite mitigation bank or on other land as approved by the Director of Planning and Land Use.

Offsite:

Approximately 0.01 acre of oak woodland habitat will be impacted as part of the offsite intersection improvements. This impact will be mitigated at 3:1 for a total mitigation of 0.03 acres to be purchased offsite.

Diegan Coastal Sage Scrub

Onsite:

Significant direct impacts to 42.3 acres of Diegan coastal sage scrub will require mitigation at a 2:1 ratio for a total mitigation requirement of 84.6 acres. This impact will be mitigated through preservation of 84.6 acres (with the remainder used for offsite impacts) of Diegan coastal sage scrub onsite. This mitigation will reduce project impacts to Diegan coastal sage scrub to below a level of significance.

Offsite:

Offsite impacts to 4.4 acres of coastal sage scrub will require mitigation at a 2:1 ratio. Therefore a total of 8.8 acres of Diegan coastal sage scrub habitat will be required to be preserved. There are 2.7 acres of this habitat in permanent open space on the

Campus Park site that has not been utilized for mitigation. Therefore with the inclusion of that land and an additional 6.1 acres of like functioning habitat preserved offsite, this impact would be reduced to below a level of significance.

Non-native grassland

Onsite:

Significant direct impacts to 41.2 acres of non-native grassland habitat will require mitigation at a ratio of 0.5:1 for a total mitigation requirement of 20.6 acres. Mitigation will consist of preserving the remaining 2.9 acres of non-native grassland onsite and purchasing 17.7 acres of equal or like-functioning habitat offsite in a mitigation bank or other land as approved by the Director of Planning and Land Use. This mitigation will reduce project impacts to non-native grassland to below a level of significance.

Offsite:

Offsite impacts to 6.4 acres of non-native grassland will be mitigated at a ratio of 0.5:1 requiring 3.2 acres of habitat. Equal or like functioning mitigation habitat will be purchased from an approved mitigation bank or any other land determined acceptable by the Director of Planning and Land Use. Implementation of this mitigation measure will reduce these impacts to below a level of significance.

Non-native Vegetation (Ornamental plantings)

Onsite and Offsite:

Impacts to the ornamental plantings are not considered significant and therefore do not require mitigation.

Pasture

Onsite:

Impacts to 133.8 acres of pasture are significant and will require mitigation. Mitigation for pasture will be at 0.5:1 ratio and will be accomplished through the purchase of 66.9 acres of mitigation credit at a mitigation bank or on land approved by the Director of Planning and Land Use that is equal to or "like functioning" to the impacted pasture.

Offsite:

Offsite impacts to 7.9 acres of pasture and will be mitigated at a ratio of 0.5:1 requiring 3.9 acres of habitat. Equal or like functioning mitigation habitat will be purchased from an approved mitigation bank or from any land deemed appropriate by the Director of Planning and Land Use. Implementation of this mitigation measure will reduce these impacts to below a level of significance.

Disturbed land

Onsite and offsite:

Impacts to disturbed land are not significant and do not require mitigation.

Developed land

Onsite and Offsite:

Impacts to developed land are not significant and do not require mitigation.

Eucalyptus woodland

Onsite and offsite:

Impacts to Eucalyptus woodland are not significant and do not require mitigation.

6.1.2 Mitigation for Direct Impacts to Sensitive Plants

Onsite:

The project site burned during the October 2007 wildfires. It is anticipated for this analysis that the population of sensitive plant species will re-germinate to their original population size.

Mitigation for direct significant impacts to Parry's Tetracoccus will be mitigated through the preservation of the remaining population of this species onsite. Minor encroachment into the larger northern population will be mitigated through avoidance during brushing and clearing. This area occurs within the outer limits of the fuel modification zone. The limits of the population will be flagged and fenced (with drift fence) to demarcate the limits of brush clearing. In addition, prior to brushing and clearing, the limits of grading should be clearly marked to ensure no additional impacts occur. To mitigate for the loss of the 248 plants in the north central portion of the site, habitat supporting this plant species at a 2:1 ratio will be purchased or created offsite. This may co-occur with other mitigation/habitat needs of the project. Preservation of a population of this species in proximate numbers will reduce this impact to below a level of significance. Offsite lands must be within an approved mitigation bank, or lands deemed acceptable by the Director of Planning and Land Use. This plant, though sensitive, is still relatively abundant in the County. Therefore locating this plant for preservation is expected to be feasible. If for any reason, a population cannot be located to be preserved, the Director of Planning and Land Use will be contacted and an alternate mitigation will be determined. Alternative mitigation may include propagation of the plant from seed.

No mitigation for direct impacts to Palmer's grappling-hook will be required because direct impacts to this species will not be significant.

Offsite: No sensitive plant species were observed at the offsite improvement areas, therefore no mitigation is required.

6.1.3 Mitigation for Direct Impacts to Sensitive Wildlife

Onsite:

Impacts to orange-throated whiptail are not considered significant since the majority of this species habitat is preserved onsite. Mitigation for coastal sage scrub impacts will further reduce any adverse impacts to this species. .

Because the project will not significantly impact the northern red rattlesnake, no mitigation is required.

Because the project will not significantly impact southern California rufous-crowned sparrow, no mitigation is required.

Significant direct impacts to yellow warbler will be mitigated through habitat-based mitigation in conjunction with the Southern Riparian Forest mitigation. Habitat mitigation for this species will consist of creation of southern riparian forest at a ratio of 1:1, enhancing the southern riparian forest remaining onsite. Creation of habitat offsite and enhancement of habitat onsite will be conducted in accordance with habitat requirements of this species. Mitigation for southern riparian forest will reduce direct impacts to yellow warbler to below a level of significance.

Because the project will significantly impact yellow-breasted chat, mitigation is required. Mitigation will be in form of habitat enhancement and creation of southern riparian forest habitat as per the mitigation for southern riparian forest impacts. Creation of habitat offsite and enhancement of habitat onsite will be conducted in accordance with habitat requirements of this species and will reduce this impact to less than significant.

Significant direct impacts to California gnatcatchers will be mitigated through habitat preservation and management of remaining onsite coastal sage scrub habitat and offsite habitat, as well as avoidance of clearing during the breeding season. This mitigation will reduce direct project impacts to California gnatcatcher to below a level of significance.

Significant direct impacts to the least Bell's vireo will be mitigated through habitat-based mitigation in conjunction with the Southern Riparian Forest mitigation. Habitat mitigation will consist of creating southern riparian forest at a ratio of 1:1, and enhancement of the southern riparian forest habitat remaining onsite. Creation of habitat offsite and enhancement of habitat onsite will be conducted in accordance with habitat requirements of this species. Mitigation for southern riparian forest will reduce direct impacts to least Bell's Vireo to below a level of significance.

Prior to brushing or clearing during raptor breeding season, a raptor nesting survey shall be completed to ensure that an active raptor nest has not been developed in any of the trees onsite.

Offsite: Potentially significant impacts to offsite riparian species adjacent to the offsite intersection improvements will be avoided through construction avoidance.

6.2 Mitigation for Indirect Impacts

Potentially significant indirect impacts have been identified including encroachment by non-native species, predation by domestic pets, siltation/erosion, and potential for road kill on proposed roads. . To avoid potentially significant impacts the following measures should be incorporated into the conditions of approval.

1. The proposed project will implement a Resource Management Plan (RMP). The RMP is attached herein as Appendix G. The RMP describes management of the open space onsite in perpetuity, including methods of identifying a manager, fence/sign maintenance, invasive species eradication, trash removal, etc. Implementation of this RMP reduces any potential, unforeseen indirect impacts to sensitive resources to below a level of significance.
2. The presence of the Limited Building Zones between development and the remaining habitat will provide a buffer to minimize edge effects such as encroachment and future Fuel Management of open space. The LBZ reduces potential significant impacts associated with highly invasive non-native plant invasion as stated in item 1 above (impact 5.3.6), domestic animal predation (impact 5.3.4), and human encroachment (impact 5.3.3) through signage of the open space and backyard fencing as proposed on the Fencing Plan located in the Resource Management Plan. The LBZ on this project site is within the fuel modification zone. Specifically between MF-1 and OS-2 the LBZ is included within the proposed enhanced wetland buffer and the fuel modification zone.
3. The landscape plan will include specifics regarding the types of plants allowed along the project boundary. The final landscape plans will be reviewed prior to issuance of grading permit to ensure that invasive non-native plants adjacent to any of the biological open space areas in accordance with section 5.3.6 and threshold 4f, as identified by the California Invasive Plant Council.

Signage along the trails and LBZ and backyard fencing will minimize off trail activities by humans and unleashed domestic animals. After completion of grading permanent signs stating:

“Sensitive Environmental Resources

Area Restricted by Easement

Entry without express written permission from the county of San Diego is prohibited. To report a violation or for more information about easement restrictions and exceptions contact the county of San Diego, Department of Planning and Land Use"

shall be erected per signage plan along the limits of the open space. Backyard fencing between the open space will also deter trespassing and decrease domestic animal encroachment. The LBZ reduces the potential significant impacts associated with non-native plant invasion to avoid impacts associated with highly invasive plant material adjacent to open space (impact 5.3.6), domestic animal predation (Impact 5.3.4), and human encroachment (impact 5.3.3).

5. To limit siltation and erosion, an enhanced wetland buffer along the edge of the main riparian habitat will be installed between the existing wetland and development by planting wetland and upland plant species. The proposed project will have an approved Storm Water Management Plan that will incorporate bio-swales and implement Best Management Practices (BMP) to protect the adjacent wetlands from impacts associated with storm water runoff. Implementation of BMP's will reduce any potentially significant impacts to below a level of significance (Impact 5.3.5). BMP's will be installed as grading and construction proceeds.
6. To limit impacts to sensitive plants, construction activities will avoid locations where these species occur. Preserved Parry's Tetracoccus in the northern portion of the site will be protected by the measures used to protect the habitats in which they occur. These measures include open space fencing as shown on the fencing plan, and population monitoring and management as part of the RMP. Therefore, indirect impacts to this species would not be significant and mitigation is not required. In general, indirect impacts to sensitive birds such as California gnatcatchers, rufous crowned sparrows, least Bell's vireos, yellow breasted chats, yellow warblers and raptors will be minimized with the same measures used to protect the open space onsite. These measures include open space fencing as shown on the fencing plan, and population monitoring and management as part of the RMP. Habitat will be enhanced in the buffer zones adjacent to the riparian and wetland areas. Upland habitat will be created and on manufactured slopes or existing pasture when it is adjacent to the riparian zones. This will create essential habitat needed for dispersal behaviors and foraging requirements for least Bell's vireo and other sensitive bird species. Therefore impacts to buffers are reduced to below a level of significant (Impacts 5.3.7 and 5.3.10).
7. Construction activity will avoid the breeding season for California gnatcatchers, rufous crowned sparrows, least Bell's vireos, yellow breasted chats, yellow warblers and raptors or stay at least 300-800 feet from occupied habitat.

These factors are expected to prevent significant indirect impacts to sensitive bird species in accordance with Threshold 12g.

8. Ambient noise levels within the open space onsite are 55 to 70 dbA (Leq). Noise from future residential activities are expected to be below ambient levels 50 feet from the edge of the residences. Therefore noise levels exceeding ambient or 60dbA (Leq), whichever is greater, will be contained within the rear yards of the residences and within the LBZ and/or fuel management zones and no additional mitigation is required.

The following measures will be taken to avoid further impacts during project implementation.

1. The limits of grading will be flagged or marked with silt fence prior to grading to prevent inadvertent impacts to adjacent sensitive habitat. Prior to brushing a qualified biologist will review the flagging and silt fencing.
2. A qualified biologist shall monitor the limits grubbing and grading. Monitoring should be conducted as needed with reports submitted to the County of San Diego Planning Department. If inadvertent impacts occur, impacts will be reported to the appropriate agency within 24 hours of detection.
3. All proposed lighting of the completed project will comply with County of San Diego light codes and should be shielded and directed away from the open space areas.
4. No staging, parking, trash storage or other misc. items shall be placed within the biological open space during construction.
5. No grubbing, clearing, road improvements or grading within 300 feet of occupied habitat shall be conducted during the
 - least Bell's vireo breeding season (March 15 to September 15),
 - California gnatcatcher (February 15 to August 31), and
 - raptor breeding season (February 15 to July 15 for a distance of 500 feet for tree nesting raptors and 800 feet for ground nesting raptors) or as specified in the Significance Thresholds.
6. If clearing or grading would occur during California gnatcatcher, and/or raptor nesting seasons, a pre-construction survey shall be conducted to determine if these species occur within noise-impacted areas. If these species are not found nesting within this area, development shall be allowed to proceed.
7. If nests are found and grading is to commence during the breeding season, noise monitoring shall be conducted to ensure that noise levels do not exceed ambient levels or 60dbA, whichever is greater, at the nest location.
8. All construction within the wetland and riparian areas shall be completed outside of the least Bell's vireo season (March 15 to September 15).
9. The following limitations shall be placed on ground disturbance activities as they relate to nesting sensitive species:
 - No grading or clearing shall be initiated within 300 feet of occupied Diegan Coastal sage scrub during coastal California gnatcatcher breeding season (February 15 through August 31), 500 feet of occupied tree-nesting raptor habitat or within 800 feet of ground nesting raptor habitat during raptor

breeding season (February 15 through July 15). All grading permits, grading plans, and improvement plans shall state the same. If clearing or grading would occur during gnatcatcher and/or raptor nesting seasons, a qualified biologist shall conduct a pre-construction survey to determine if these species occur within impacted areas. If there are no gnatcatchers or raptors nesting (includes nest building or other breeding/nesting behavior) within this area, development shall be allowed to proceed.

- If grading activities, including blasting and associated drilling, in the development area are scheduled to occur during sensitive bird breeding seasons, the coastal sage scrub in the northern section of the site and the southern riparian forest in the southern section of the site shall be surveyed by a qualified biologist to determine if nests occupied by these species are present. Drilling is known to create noise at a level of 94 dBA at a distance of 50 feet. This corresponds to 60dBA at a distance of 2,500 feet. Where drilling is required, maximum feasible sound attenuation measures will be incorporated.
- Therefore, if nests are present and if drilling is necessary maximum feasible sound attenuation will be accomplished. This includes, a temporary sound barrier deemed appropriate by the monitoring biologist and acoustician, will be installed that completely blocks any part of the drilling site facing sensitive avian habitat. Outside of the nesting season, or during the nesting season if pre-construction surveys are negative, no restriction shall be placed on grading, including blasting/drilling activities. A report shall be submitted to the Director of DPLU describing the survey results and dates of clearing or grading activities. This design measure may be modified as necessary with written approval of the Director of the DPLU.
- To prevent the potential for significant road kill impacts on Pankey Place a barrier will be erected on the north side of the road. The barrier should be a 5 foot black or green chain link fence. It should be erected at the edge of biological open space easements between slopes, trails/landscaping and the open space. The fence openings should be small enough to deter climbing and encroachment by humans.

7.0 ALTERNATIVES ANALYSIS

Section 15126.6(a) of the CEQA Guidelines requires the discussion of “a reasonable range of alternatives to a project, or the location of a project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.”

Section 15126.6(f) also states that “the range of alternatives in an Environmental Impact Report (EIR) is governed by the ‘rule of reason’ that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice.” The CEQA Guidelines provide several factors that should be considered with regard to the feasibility of an alternative: (1) site suitability; (2) economic viability; (3) availability of infrastructure; (4) general plan consistency; (5) other plans or regulatory limitations; (6) jurisdictional boundaries; and (7) whether the project applicant can reasonably acquire, control or otherwise have access to the alternative site (if an off-site alternative is evaluated). The alternatives evaluated in Chapter 5.0 of the Campus Park EIR and discussed within this technical report are shown on Figures 13 a through 13d and include the:

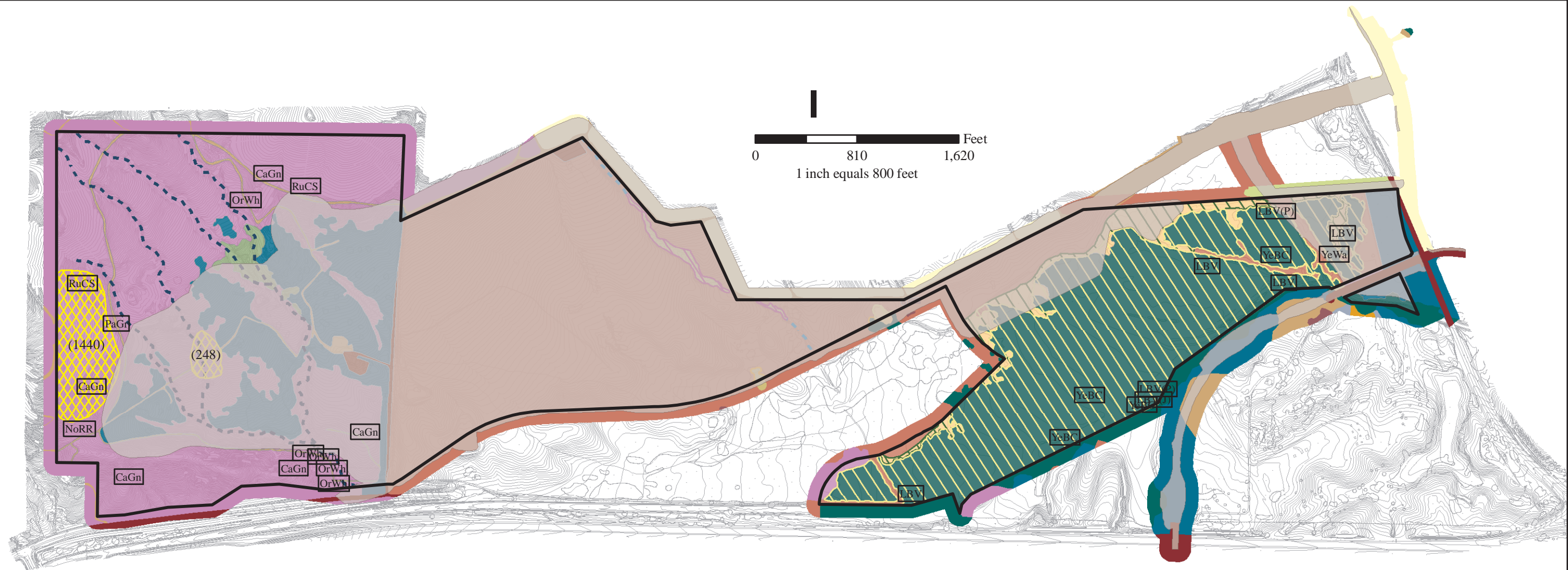
- No Project/No Development Alternative
- No Project/Existing Plan Alternative
- Single-family Alternative
- Biological Reduced Footprint Alternative
- General Plan Update Draft Land Use Map Alternative
- General Plan Update Board Referral Map Alternative

Alternatives Discussions

In accordance with Section 15126.6(e) of the CEQA Guidelines, the No Project Alternative should include a discussion of: (1) the existing conditions at the time the NOP is published; and (2) the circumstance under which the project does not proceed, taking into account what would reasonably be expected to occur in the foreseeable future by others (e.g., in accordance with the previously approved Specific Plan and current zoning). Discussions of build alternative descriptions follow the two No Project alternatives.

No Project/No Development Alternative Description

Under the No Project/No Development Alternative, the Project site would remain in its current condition of native and non-native habitats, together with pastureland and disturbed/developed areas. The approximately 409 acres of native and naturalized habitat (including pasture) throughout the site would remain, as would the existing dirt roads and one single-family residence. The non-commercial grazing of 40 to 60 head of cattle would continue.



Legend

Sensitive Species

- CaGn Coastal California Gnatcatcher (pair) (*Poliophtila californica californica*)
- LBV(P) Least Bell's Vireo (Juvenile) (*Vireo bellii pusillus*)
- LBV(J) Least Bell's Vireo (Pair) (*Vireo bellii pusillus*)
- LBV Least Bell's Vireo (*Vireo bellii pusillus*)
- NoRR Northern Red Diamond Rattlesnake (*Crotalus ruber ruber*)

- OrWh Orange-throated Whiptail (*Aspidoscelis hyperythrus*)
- PaGr Palmer's Grappling-hook (*Harpagonella palmeri*)
- RuCS Southern California Rufous Crowned Sparrow (*Aimophila ruficeps canescens*)
- YeBC Yellow Breasted Chat (*Icteria virens*)
- YeWa Yellow Warbler (*Dendroica petechia*)
- Parry's Tetracoccus (#)

Note: Raptors observed throughout site or overhead include Cooper's Hawk, Turkey Vulture, American Kestrel, White Tailed Kite, Red Shouldered Hawk, and Red Tailed Hawk.

Habitats

- Coast Live Oak Woodland (71160)
- Diegan Coastal Sage Scrub (32500)
- Developed (12000)
- Disturbed (11300)
- Eucalyptus (11100)
- Freshwater Marsh (52400)
- Non-Native Grassland (42200)
- Non-native Vegetation (11000)
- Pasture (18310)
- Southern Riparian Forest (61300)
- Southern Willow Scrub (63320)
- Mulefat Scrub (63310)
- Tamarisk Scrub (63810)
- Orchard (18100)

- Alternative Impact Area
- Jurisdictions**
- ACOE Waters
- ACOE Waters, CDFG
- ACOE Waters, CDFG
- ACOE Wetlands, CDFG
- ACOE Wetlands
- CDFG



Existing General Plan
Alternative 1
Campus Park

Figure 13A



Legend

Sensitive Species

CaGn	Coastal California Gnatcatcher (pair) (<i>Poliopitla californica californica</i>)
LBV(P)	Least Bell's Vireo (Juvenile) (<i>Vireo bellii pusillus</i>)
LBV(J)	Least Bell's Vireo (Pair) (<i>Vireo bellii pusillus</i>)
LBV	Least Bell's Vireo (<i>Vireo bellii pusillus</i>)
NoRR	Northern Red Diamond Rattlesnake (<i>Crotalus ruber ruber</i>)

OrWh	Orange-throated Whiptail (<i>Aspidoscelis hyperythrus</i>)
PaGr	Palmer's Grappling-hook (<i>Harpagonella palmeri</i>)
RuCS	Southern California Rufous Crowned Sparrow (<i>Aimophila ruficeps canescens</i>)
YeBC	Yellow Breasted Chat (<i>Icteria virens</i>)
YeWa	Yellow Warbler (<i>Dendroica petechia</i>)
Parry's Tetracoccus	(<i>Tetracoccus dioicus</i>) (#)

Note: Raptors observed throughout site or overhead include Cooper's Hawk, Turkey Vulture, American Kestrel, White Tailed Kite, Red Shouldered Hawk, and Red Tailed Hawk.

Habitats

Coast Live Oak Woodland (71160)	Non-Native Grassland (42200)
Diegan Coastal Sage Scrub (32500)	Non-native Vegetation (11000)
Developed (12000)	Pasture (18310)
Disturbed (11300)	Southern Riparian Forest (61300)
Eucalyptus (11100)	Southern Willow Scrub (63320)
Freshwater Marsh (52400)	Mulefat Scrub (63310)
	Tamarisk Scrub (63810)
	Orchard (18100)

Alternative Impact Area
ACOE Waters
ACOE Waters, CDFG
ACOE Waters, CDFG
ACOE Wetlands, CDFG
ACOE Wetlands
CDFG



Legend

Sensitive Species

CaGn	Coastal California Gnatcatcher (pair) (<i>Poliptila californica californica</i>)
LBV(P)	Least Bell's Vireo (Juvenile) (<i>Vireo bellii pusillus</i>)
LBV(J)	Least Bell's Vireo (Pair) (<i>Vireo bellii pusillus</i>)
LBV	Least Bell's Vireo (<i>Vireo bellii pusillus</i>)
NoRR	Northern Red Diamond Rattlesnake (<i>Crotalus ruber ruber</i>)

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PaGr	Palmer's Grappling-hook (<i>Harpagonella palmeri</i>)
RuCS	Southern California Rufous Crowned Sparrow (<i>Aimophila ruficeps canescens</i>)
YeBC	Yellow Breasted Chat (<i>Icteria virens</i>)
YeWa	Yellow Warbler (<i>Dendroica petechia</i>)
	Parry's Tetracoccus (<i>Tetracoccus dioicus</i>) (#)

Note: Raptors observed throughout site or overhead include Cooper's Hawk, Turkey Vulture, American Kestrel, White Tailed Kite, Red Shouldered Hawk, and Red Tailed Hawk.

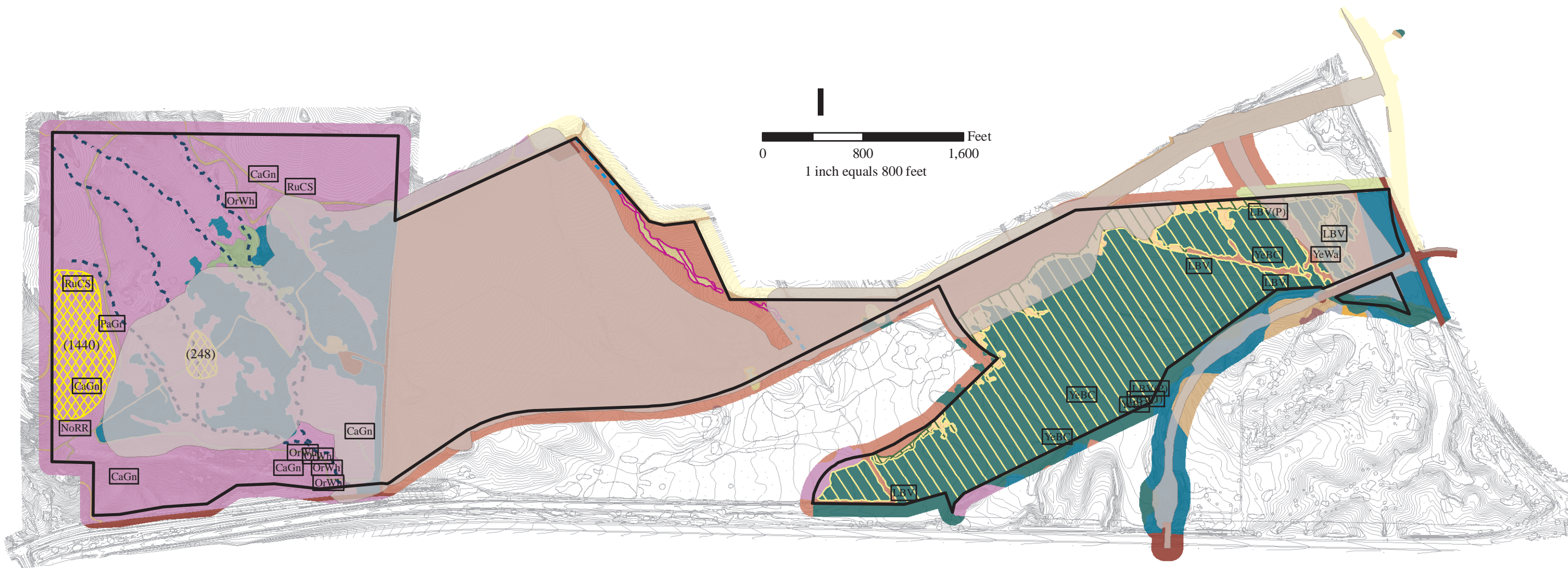
Habitats

	Coast Live Oak Woodland(71160)		Non-Native Grassland (42200)
	Diegan Coastal Sage Scrub (32500)		Non-native Vegetation (11000)
	Developed (12000)		Pasture (18310)
	Disturbed (11300)		Southern Riparian Forest (61300)
	Eucalyptus (11100)		Southern Willow Scrub (63320)
	Freshwater Marsh (52400)		Mulefat Scrub (63310)
			Tamarisk Scrub (63810)
			Orchard (18100)

Alternative Impact Area

Jurisdictions

	ACOE Waters
	ACOE Waters, CDFG
	ACOE Waters, CDFG
	ACOE Wetlands, CDFG
	ACOE Wetlands
	CDFG



Legend

Sensitive Species

- CaGn Coastal California Gnatcatcher (pair) (*Poliophtila californica californica*)
- LBV(P) Least Bell's Vireo (Juvenile) *Vireo bellii pusillus*)
- LBV(J) Least Bell's Vireo (Pair) (*Vireo bellii pusillus*)
- LBV Least Bell's Vireo (*Vireo bellii pusillus*)
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- OrWh Orange-throated Whiptail (*Aspidoscelis hyperythrus*)
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- YeBC Yellow Breasted Chat (*Icteria virens*)
- YeWa Yellow Warbler (*Dendroica petechia*)
- Parry's Tetracoccus (*Tetracoccus dioicus*) (#)

Note: Raptors observed throughout site or overhead include Cooper's Hawk, Turkey Vulture, American Kestrel, White Tailed Kite, Red Shouldered Hawk, and Red Tailed Hawk.

Habitats

- Coast Live Oak Woodland (71160)
- Diegan Coastal Sage Scrub (32500)
- Developed (12000)
- Disturbed (11300)
- Eucalyptus (11100)
- Freshwater Marsh (52400)
- Non-Native Grassland (42200)
- Non-native Vegetation (11000)
- Pasture (18310)
- Southern Riparian Forest (61300)
- Southern Willow Scrub (63320)
- Mulefat Scrub (63310)
- Tamarisk Scrub (63810)
- Orchard (18100)

- Alternative Impact Area
- Jurisdictions**
- ACOE Waters
- ACOE Waters, CDFG
- ACOE Waters, CDFG
- ACOE Wetlands, CDFG
- ACOE Wetlands
- CDFG



GPA 2020 Draft Land Use Map
Alternative 4
and
GP 2020 - Board Referral
Alternative 5
Campus Park

**Figure
13D**

The proposed mixed-use Project with single-family and multi-family residential, office professional uses and a Town Center, including supporting infrastructure (i.e., roadways and utilities connections), would not be constructed, nor would the multi-use community and hiking trails be created. The active park, neighborhood parks, and HOA recreation facilities would not be provided. There would be no off-site improvements or preserved biological open space.

No Project/Existing Plan Alternative Description

This alternative addresses the land uses and densities currently permitted under the County General Plan (northern 176 acres of the site) and the approved Campus Park Specific Plan (southern 241 acres of the site). As described in Section 4.1.6, Land Use and Planning, of the Campus Park EIR, the existing General Plan designation for the northern area would allow low-density residential and agricultural uses with lot sizes of 2 to 20 acres, depending on the slope gradient. This would allow a maximum of 90 dwelling units. In consideration of the steep slopes near the western, northern, and eastern sides of the property and the consequential increase in lot sizes, however, this alternative would include 63 dwelling units.

Within the southern area of the Project site, the existing Campus Park Specific Plan would allow development of 2.5 million square feet (s.f.) of industrial research park in buildings up to 50 feet tall, parking for 5,500 cars, a pond, community trails, and a variety of recreational amenities for use by employees. Due to sale of the college site, however, this alternative would include 1.975 million s.f. of light industrial and professional office uses. Some riparian habitat in the extreme southern portion of the site would be preserved; however, portions of the southern riparian forest would be impacted by the development of recreational facilities. Primary internal access would be along Pankey Road, which would extend from its current northern terminus (southern extension) north along the western property boundary to connect to the current northern extension of Pankey Road.

Although some residential uses were proposed for the adjacent Campus Park West property under the adopted plan, this alternative would not involve the construction of single-family or multi-family residential, commercial, and park uses associated with the Proposed Project, nor would it include off-site road improvements assumed as part of the Project.

Single-family Alternative Description

This alternative would have the same development footprint as the Proposed Project. It also would be similar to the Proposed Project in that it would have the same uses except it would not include multi-family residential units. Single-family lots would replace the multi-family lots of the Proposed Project. This alternative would include 751 single-family homes on lots ranging from 40 by 100 feet to 50 by 100 feet, and similar to the Proposed Project would include 61,000 s.f. of town center, 157,000s.f. of professional office use, and 216.9 acres of park and open space.

Biological Reduced Footprint Alternative Description

This alternative would preserve a greater amount of biological resources by decreasing the development footprint. Development would be greatly reduced in the northern portion of the site, and no development would occur in the southern portion of the site except infrastructure such as the detention basin and sewer pump station. This alternative would include 390 single-family units on lot sizes ranging from 40 by 100 feet to 50 by 100 feet, 255 multi-family units, 62,000 s.f. of Town Center, and 116,000 s.f. of professional office use. Approximately 64 percent of the site (267 acres) would be open space or parks as opposed to 52 percent (214 acres) for the Proposed Project.

General Plan Update Draft Land Use Map Alternative Description

This alternative would result in development in accordance with the proposed General Plan Update draft land use map. This alternative would generally have the same development footprint as the Proposed Project; except it would have a small amount of open space immediately north of SR 76 and on the eastern edge of the central portion of the project site. Single-family dwelling units would be located only in the northern portion of the site, while multi-family dwelling units would be located in the central and southern portion of the site. This alternative would replace the southernmost multi-family area with highway commercial, which is not included in the Proposed Project. This alternative would result in 248 single-family dwelling units ranging from 45 by 100 feet to 50 by 100 feet, 1,059 multi-family dwelling units, 188,000 s.f. of Town Center and highway commercial, 34,000 s.f. of professional office, and 234.4 acres of open space and parks.

General Plan Update Board Referral Map Alternative Description

This alternative would result in development in accordance with a draft General Plan Update land use map proposed by the Board of Supervisors. This alternative would generally have the same development footprint as the Proposed Project; except it would have a small amount of open space immediately north of SR 76 and on the eastern edge of the central portion of the project site. There would be only two multi-family areas with this alternative, one in the central portion and one in the southern portion of the site. This alternative would replace the southernmost multi-family area with highway commercial, which is not included in the Proposed Project. This alternative would result in 404 single-family dwelling units ranging from 45 by 100 feet to 80 by 100 feet, 258 multi-family dwelling units, 120,000 s.f. of Town Center and 68,000 s.f. highway commercial, 34,000 s.f. of professional office, and 234.9 acres of open space and parks.

Table 7 summarizes the impacts to habitats based on the above alternatives and provides a conclusion as to whether or not the impacts from the alternatives are more or less significant than the proposed project.

Table 7
Alternative Project Impact Acreage Comparative Analysis

Habitats	Proposed Project	Alternative 1, GP Zoning Compliant Alternative	Alternative 2, Single Family Alternative	Alternative 3, Biological Reduced Impact Alternative	Alternative 4, GP 2020	Alternative 5, Board Referral Map
Southern Riparian Forest	9.5	8.2 (=)	8.0 (=)	1.1 (-)	8.1 (=)	8.1 (=)
Southern Willow Scrub	1.6	1.6 (=)	1.6 (=)	1.6 (-)	0.3 (-)	0.3 (-)
Freshwater Marsh	7.8	0.8 (=)	0.8 (=)	0.2 (-)	0.8 (=)	0.8 (=)
Coast Live Oak Woodland	1.3	1.3 (=)	1.1 (=)	0.1 (-)	1.1 (=)	1.1 (=)
Diegan Coastal Sage Scrub	42.7	41.0 (=)	40.4 (=)	17.9 (-)	38.8 (=)	38.8 (=)
Non-native Grassland	41.2	41.6 (=)	41.1 (=)	21.4 (-)	39.4 (=)	39.4 (=)
Non-native Vegetation	0.1	0.1 (=)	0.1 (=)	0.1 (-)	0.1 (=)	0.1 (=)
Pasture	133.8	139.2 (=)	137.2 (=)	127.6 (-)	130.8 (=)	130.8 (=)
Disturbed	3.9	2.4 (=)	2.4 (=)	1.5 (-)	2.4 (=)	2.4 (=)
Developed	2.1	2.1 (=)	2.1 (=)	2.1 (-)	2.1 (=)	2.1 (=)
Eucalyptus Woodland	0.1	0.1 (=)	0.1 (=)	0.03 (-)	0.1 (=)	0.1 (=)
TOTAL	243.7	238.4 (=)	235.0 (=)	173.7 (-)	224.0 (=)	224.0 (=)
OTHER RESOURCES:						
California gnatcatcher	Significant Mitigated	=	=	(-)	=	=
Least Bell's vireo	Significant Mitigated	=	=	(-)	=	=
Yellow Breasted Chat	Significant Mitigated	=	=	(-)	=	=
Yellow Warbler	Significant Mitigated	=	=	(-)	=	=
Southern California Rufous Crowned	Significant Mitigated	=	=	(-)	=	=

Habitats	Proposed Project	Alternative 1, GP Zoning Compliant Alternative	Alternative 2, Single Family Alternative	Alternative 3, Biological Reduced Impact Alternative	Alternative 4, GP 2020	Alternative 5, Board Referral Map
sparrow						
Orange Throated whiptail	Not significant	=	=	(-)	=	=
Northern Red Diamond Rattlesnake	Not significant	=	=	(-)	=	=
Palmer's Grappling hook	Not significant	=	=	(-)	=	=
Parry's Tetracoccus	Significant Mitigated	=	=	(-)	=	=
Wildlife Corridors	Not significant	=	=	(-)	=	=
Indirect impacts	Significant Mitigated	=	=	(-)	=	=

Please note, that where an impact in acreage was more or less by less than 10% the impacts were considered equal since they would still be considered significant

(+) More Significant

(-) Less Significant

(=) equal significance to proposed project

8.0 LITERATURE CITED

Army Corps of Engineers, 1987, Army Corps of Engineers Wetland Delineation Manual

AOU. 2000. American Ornithologists' Union. *42nd Supplement to the to the American Ornithologists' Union Check-list of North American Birds*, as published in *The Auk* 117: 847-858.

Atwood, J.L. 1998. Analysis of edge effects on California gnatcatcher reproductive success. Prepared for the City of Rancho Palos Verdes.

Bowman, R. H. 1973. *Soil Survey, San Diego Area, California*. United States Department of Agriculture. 104 pp. + appendices.

CDFG. 2006. State and Federally Listed Endangered and Threatened Animals of California. California Natural Diversity Database, Wildlife and Habitat Data Analysis Brach: online publication, January 2006.

CDFG. 2006. State and Federally Listed Endangered, Threatened and Rare Plants of California. California Department of Fish and Game California Natural Diversity Database, Wildlife and Habitat Data Analysis Brach: online publication, April 2006.

CDFG. 2002 California's Plants and Animals: Species of Special Concern. California Department of Fish Habitat Conservation Planning Branch: online publication, 2002

CDFG. 2006. State and Federally Listed Endangered and Threatened Animals of California. California Natural Diversity Database, Wildlife and Habitat Data Analysis Brach: online publication, January 2003.

CNDDDB. 2008. California Natural Diversity Data Base Rare Find 2 searchable database, California Department of Fish and Game.

County of San Diego. 2007. Resource Protection Ordinance. Board of Supervisors, County of San Diego.

County of San Diego 2003. County Code of Regulatory Ordinances. Chapter 3 – County Fire Codes Section 16 – Clearance of Brush or Vegetation Growth around Structures.

County of San Diego. 2008 . Biological Resources Mapping Requirements. Department of Planning and Land Use, County of San Diego. September 2006.

- CNPS. 2006. *Inventory of Rare and Endangered Plants of California* (sixth edition, electronic version). Rare Plant Scientific Advisory Committee, David P. Tibor, convening editor. Sacramento, CA.
- Environmental Laboratory. 1987. *Corps of Engineers Wetland Delineation Manual*, Technical Report Y-87-1, US Army Engineer Waterways Experiment Station, Vicksburg, Miss.
- Hickman, J. C., ed. 1996. *The Jepson Manual Higher Plants of California*. University of California Press, Berkeley.
- Holland, R. F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. Non-game Heritage Program, State of California Department of Fish and Game, Sacramento.
- Hunt Research Corporation. 2007. Fire Protection Plan/Vegetation Management Plan. September.
- Jennings, M. R. 1983. *An Annotated Checklist of the Amphibians and Reptiles of Southern California*. California Department of Fish and Game 69(3):151-171.
- Jones, J.K., et al. 1992. *Revised Checklist of North American Mammals North of Mexico, 1991*. Occasional Papers The Museum Texas Tech. University. Number 146. February 7, 1992.
- Oberbauer, T. 1996. *Terrestrial Communities in San Diego County Based on Holland's Descriptions*. San Diego Association of Governments, San Diego, CA.
- Powell, J.A., C.L. Hogue. 1979. *California Insects*. University of California Press, Berkeley.
- Ramirez. 2005. Focused Surveys for the Southwestern Arroyo Toad, Meadowood. Cadre Environmental
- Reiser, C. H. 2001. *Rare Plants of San Diego County*.
- Schoenherr, A. G., 1992. *A Natural History of California*. University of California Press: Berkeley and Los Angeles, CA.
- Simpson, M. .G. and J.P. Rebman, 2001. *Checklist of the Vascular Plants of San Diego County*. Third Edition. SDSU Herbarium Press: San Diego, CA.
- Stebbins, R. C. 2003. *Field Guide to Western Reptiles and Amphibian*. Houghton Mifflin Co., Boston.

- Unitt, P. 1984. *The Birds of San Diego County*. San Diego Society of Natural History: San Diego, CA.
- Unitt, P. 2004. *San Diego County Bird Atlas*. San Diego Natural History Museum: San Diego, CA.
- USFWS. 1997. Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Protocol. August 6, 1997.
- USFWS. 2006. Threatened and Endangered Species System Listings by State and Territory. U.S. Fish and Wildlife Service: online publication, May 2003.

8.0 CERTIFICATION

This report has been prepared by REC Staff:

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Hedy Levine - Review,

Catherine MacGregor – Field surveys, secondary Author,

Victor Novik – focused surveys

Jessica Houghton – Graphics and calculations

APPENDIX A

Plant Species Observed on the Campus Park Property

APPENDIX A PLANT SPECIES OBSERVED ON THE CAMPUS PARK PROPERTY			
Species	Common Name	Family	Habitat
<i>Achnatherum hymenoides</i>	Indian ricegrass	Poaceae	SRF
<i>Acourtia microcephala</i>	sacapellote	Asteraceae	CSS
<i>Adenostoma fasciculatum</i>	chamise	Rosaceae	CSS
<i>Agave americana</i> *	century plant	Agavaceae [Liliaceae]	NNG
<i>Allium</i> sp.	onion	Aliiaceae [Liliaceae]	CSS, NNG
<i>Allophyllum glutinosum</i>	blue false-gilia	Polemoniaceae	CSS
<i>Ambrosia psilostachya</i>	western ragweed	Asteraceae	CSS, PAS, FW, CBS, SRF
<i>Ambrosia</i> sp.	bur-sage	Asteraceae	SRF, SWS, FW
<i>Amsinckia menziesii</i> var. <i>intermedia</i>	rancher's fiddleneck	Boraginaceae	CBS, CSS
<i>Anemopsis californica</i>	yerba mansa	Saururaceae	SRF, SWS, FW
<i>Apiastrum angustifolium</i>	mock parsley	Apiaceae	CSS, NNG
<i>Apium graveolens</i> *	common celery	Apiaceae	CSS, OW, SRF
<i>Artemisia californica</i>	coastal sagebrush	Asteraceae	CSS, DCSS, PAS, CBS, SLO
<i>Artemisia douglasiana</i>	Douglas mugwort	Asteraceae	SRF
<i>Artemisia dracunculus</i>	tarragon, dragon sagewort	Asteraceae	CSS
<i>Arundo donax</i> *	giant reed	Poaceae	SWS, FW, SRF
<i>Atriplex semibaccata</i> *	Australian saltbush	Chenopodiaceae	PAS
<i>Avena</i> sp.*	oats	Poaceae	DCSS, FW, CSS, NNG, DIS
<i>Baccharis pilularis</i>	chaparral broom, coyote brush	Asteraceae	DCSS, NNG, CBS, FW, SWS, PAS, CSS
<i>Baccharis salicifolia</i>	mulefat, seep-willow	Asteraceae	FW, SWS, SRF, PAS
<i>Baccharis sarothroides</i>	broom Baccharis	Asteraceae	CSS, PAS
<i>Bowlesia incana</i>	American Bowlesia	Apiaceae	CSS
<i>Brassica nigra</i> *	black mustard	Brassicaceae	DCSS, NNG, DIS, CLO
<i>Brickellia californica</i>	brickellbush	Asteraceae	CSS
<i>Bromus diandrus</i> *	ripgut grass	Poaceae	CBS, CSS, DIS, NNG, SRF

Species	Common Name	Family	Habitat
<i>Bromus hordeaceus</i> *	soft chess	Poaceae	CBS, CSS, DIS, NNG
<i>Bromus madritensis ssp. rubens</i> *	foxtail chess	Poaceae	CBS, CLO, CSS, NNG, DIS
<i>Calochortus sp.</i>	mariposa lily	Liliaceae	NNG
<i>Calochortus splendens</i>	splendid mariposa lily	Liliaceae	CSS
<i>Calystegia macrostegia</i>	morning-glory	Convolvulaceae	CSS
<i>Camissonia bistorta</i>	California sun cup	Onagraceae	CSS
<i>Carduus pycnocephalus</i> *	Italian thistle	Asteraceae	CLO, CSS, SRF, PAS
<i>Castilleja affinis ssp. affinis</i>	coast paintbrush	Scrophulariaceae	CSS
<i>Castilleja exserta ssp. exserta</i>	purple owl's-clover	Scrophulariaceae	CSS, NNG
<i>Ceanothus spp.</i>	lilac	Rhamnaceae	CSS
<i>Ceanothus tomentosus</i>	Ramona-lilac	Rhamnaceae	CSS
<i>Centaurea melitensis</i> *	toalote	Asteraceae	CSS, NNG, PAS, DIS, CLO
<i>Centaurea sp. *</i>	star thistle	Asteraceae	CSS, DCSS, NNG
<i>Centaurium venustum</i>	canchalagua	Gentianaceae	CSS
<i>Cercocarpus minutiflorus</i>	San Diego mountain-mahogany	Rosaceae	CSS
<i>Chaenactis glabriuscula var. glabriuscula</i>	yellow pincushion	Asteraceae	CSS
<i>Chaenactis sp.</i>	pincushion	Asteraceae	CSS
<i>Chamaesyce polycarpa</i>	prostrate spurge	Euphorbiaceae	CSS
<i>Chamaesyce serpens</i> *	-	Euphorbiaceae	PAS
<i>Cheilanthes newberryi</i>	California cottonfern	Pteridaceae	CSS
<i>Chenopodium californicum</i>	California goosefoot	[Polypodiaceae] Chenopodiaceae	CLO, CSS
<i>Chorizanthe procumbens</i>	prostrate spineflower	Polygonaceae	CSS
<i>Chorizanthe sp.</i>	spineflower	Polygonaceae	CSS
<i>Chrysanthemum coronarium</i> *	garland/crown daisy	Asteraceae	SRF
<i>Cirsium sp. *</i>	thistle	Asteraceae	PAS, SRF
<i>Cirsium vulgare</i> *	bull thistle	Asteraceae	DIS, NNG, SRF
<i>Cistus creticus</i> *	Purple rock-rose	Cistaceae	CSS
<i>Clarkia purpurea ssp. quadrivulnera</i>	four-spot Clarkia	Onagraceae	CSS
<i>Clarkia sp.</i>	Clarkia	Onagraceae	CSS
<i>Claytonia perfoliata ssp. perfoliata</i>	miner's lettuce	Portulacaceae	CLO, CSS
<i>Clematis pauciflora</i>	ropvine, small-leaf virgin's bower	Ranunculaceae	CSS
<i>Cneoridium dumosum</i>	coast spice bush, bush-rue	Rutaceae	CSS

Species	Common Name	Family	Habitat
<i>Conium maculatum</i> *	common poison hemlock	Apiaceae	CBS, SRF, SWS
<i>Convolvulus arvensis</i> *	bindweed, orchard morning-glory	Convolvulaceae	NNG
<i>Conyza</i> sp.*	horseweed, fleabane	Asteraceae	CSS
<i>Coronopus didymus</i> *	lesser wart-cress	Brassicaceae	CBS, SRF
<i>Cortaderia</i> sp.*	pampas grass	Poaceae	CBS, SRF
<i>Cortaderia seloana</i> *	Selloa pampas grass	Poaceae	SWS, FW
<i>Cryptantha intermedia</i>	Nievtas Cryptantha	Boraginaceae	CSS
<i>Cuscuta californica</i> var. <i>californica</i>	dodder	Cuscutaceae	CSS
<i>Cuscuta</i> sp.	dodder	Cuscutaceae	CSS
<i>Cylindropuntia californica</i> var. <i>parkeri</i>	cane cholla, valley cholla	Cactaceae	CSS
<i>Cylindropuntia prolifera</i>	coast cholla	Cactaceae	NNG
<i>Cynara cardunculus</i> *	artichoke thistle, cardoon	Asteraceae	PAS
<i>Cynodon dactylon</i> *	Bermuda grass	Poaceae	PAS, FW, NNG
<i>Cyperus</i> sp.	nutsedge	Cyperaceae	SRF
<i>Cyperus</i> sp.	umbrella sedge	Cyperaceae	SRF
<i>Cytisus striatus</i> *	-	Fabaceae	CSS
<i>Datura stramonium</i> *	Jimson weed	Solanaceae	CSS
<i>Datura wrightii</i>	Datura	Solanaceae	CSS, PAS, SRF
<i>Daucus pusillus</i>	rattlesnake weed	Apiaceae	NNG, CSS
<i>Deinandra fasciculata</i>	fascicled tarweed	Asteraceae	NNG, PAS, CSS
<i>Delphinium</i> sp.	larkspur	Ranunculaceae	CSS
<i>Dichelostemma capitatum</i> ssp. <i>capitatum</i>	blue dicks	Themidaceae	CSS, NNG
		[Liliaceae]	
<i>Distichlis spicata</i>	saltgrass	Poaceae	SWS, FW, SRF
<i>Dodecatheon clevelandii</i> spp. <i>clevelandii</i>	Padre's shooting star	Primulaceae	CSS
<i>Dryopteris arguta</i>	coastal wood fern	Dryopteridaceae	CSS
		[Polypodiaceae]	
<i>Dudleya lanceolata</i>	Dudleya	Crassulaceae	CSS
<i>Dudleya</i> sp.	Dudleya	Crassulaceae	DCSS
<i>Eleocharis macrostachya</i>	pale spike-sedge	Cyperaceae	FW, SRF
<i>Emmenanthe penduliflora</i>	whispering bells	Hydrophyllaceae	CSS
<i>Epilobium canum</i> ssp. <i>canum</i>	California fuschia, zauschneria	Onagraceae	CSS
<i>Eremocarpus setigerus</i>	doveweed	Euphorbiaceae	CSS
<i>Eriastrum sapphirinum</i> ssp. <i>sapphirinum</i>	woolly-star	Polemoniaceae	CSS
<i>Eriogonum fasciculatum</i> var. <i>fasciculatum</i>	California buckwheat	Polygonaceae	DCSS, CSS, NNG, CLO
<i>Eriastrum sapphirinum</i> ssp. <i>sapphirinum</i>	woolly-star	Polemoniaceae	CSS
<i>Eriophyllum confertiflorum</i> var. <i>confertiflorum</i>	long-stem golden-yarrow	Asteraceae	CSS
<i>Erodium cicutarium</i> *	red-stem filaree, red-stem storksbill	Geraniaceae	CBS, CSS, NNG, SRF

Species	Common Name	Family	Habitat
<i>Erodium</i> sp.	storksbill	Geraniaceae	NNG, FW
<i>Eschscholzia californica</i>	California poppy	Papaveraceae	CSS
<i>Eucalyptus</i> sp. *	Eucalyptus sp.	Myrtaceae	DCSS, EUC, ORN
<i>Eucripta chrysanthemifolia</i> var. <i>chrysanthemifolia</i>	Eucripta	Hydrophyllaceae	CLO, CSS
<i>Euphorbia peplus</i> *	petty spurge	Euphorbiaceae	SRF
<i>Ficus carica</i> *	edible fig	Moraceae	SRF
<i>Filago californica</i>	California Filago	Asteraceae	CSS
<i>Filago gallica</i> *	narrow-leaf Filago	Asteraceae	CSS, NNG
<i>Foeniculum vulgare</i> *	sweet fennel	Apiaceae	DCSS, NNG, PAS, SWS, FW, CBS, SRF, CSS
<i>Galium angustifolium</i> ssp. <i>angustifolium</i>	narrow-leaf bedstraw	Rubiaceae	CSS
<i>Galium aparine</i> *	common bedstraw, goose grass	Rubiaceae	CLO, CSS, SRF
<i>Gastridium ventricosum</i> *	nit grass	Poaceae	CSS
<i>Gnaphalium californicum</i>	California everlasting	Asteraceae	CSS
<i>Gnaphalium</i> sp.	cudweed, everlasting	Asteraceae	NNG, PAS, SRF
<i>Gutierrezia californica</i>	California matchweed	Asteraceae	CSS, DCSS
<i>Gutierrezia sarothrae</i>	broom matchweed, snakeweed	Asteraceae	CSS
<i>Harpagonella palmeri</i> !	Palmer's grappling-hook	Boraginaceae	CSS
<i>Hazardia squarrosa</i> var. <i>grindelioides</i>	sawtooth goldenbush	Asteraceae	CSS
<i>Hedynois cretica</i> *	Crete Hedynois	Asteraceae	CSS, NNG
<i>Helianthus annuus</i>	western sunflower	Asteraceae	CSS
<i>Helianthus</i> sp.	sunflower	Asteraceae	CSS
<i>Heliotropium curassavicum</i>	salt heliotrope	Boraginaceae	FW, SRF, DIS
<i>Hemerocallis</i> sp. *	day lily	Hemerocallidaceae	SRF
<i>Heteromeles arbutifolia</i>	toyon, Christmas berry	Rosaceae	CSS, FW, CLO
<i>Heterotheca grandiflora</i>	telegraph weed	Asteraceae	DCSS, NNG, CSS
<i>Hirschfeldia incana</i> *	short-pod mustard	Brassicaceae	PAS, CSS, NNG
<i>Hordeum</i> sp.	barley	Poaceae	CBS, DIS
<i>Hordeum murinum</i> ssp. <i>leporinum</i> *	hare barley	Poaceae	NNG
<i>Iris pseudacorus</i> *	yellow flag iris	Iridaceae	SRF
<i>Isocoma menziesii</i> var. <i>menziesii</i>	spreading goldenbush	Asteraceae	PAS, FW, CBD, NNG
<i>Jacaranda</i> sp. *	Jacaranda	Bignoniaceae	NNG
<i>Jepsonia parryi</i>	coast Jepsonia	Saxifragaceae	CSS
<i>Juncus mexicanus</i>	Mexican rush	Juncaceae	SWS
<i>Juncus</i> sp.	rush	Juncaceae	SRF

Species	Common Name	Family	Habitat
<i>Keckiella antirrhinoides</i> var. <i>antirrhinoides</i>	yellow bush penstemon	Scrophulariaceae	CSS
<i>Lactuca serriola</i> *	prickly lettuce	Asteraceae	CSS, SRF
<i>Lantana</i> sp. *	lantana	Verbenaceae	SRF
<i>Lasthenia coronaria</i>	southern goldfields	Asteraceae	CSS
<i>Lemna</i> sp.	duckweed	Lemnaceae	DCSS
<i>Lepidium</i> sp.	peppergrass	Brassicaceae	CSS, NNG
<i>Lessingia filaginifolia</i> var. <i>filaginifolia</i>	-	Asteraceae	CSS, NNG
<i>Leymus condensatus</i>	giant wild rye	Poaceae	CSS
<i>Leymus triticoides</i>	beardless wild ryegrass	Poaceae	CSS, FW
<i>Lonicera subspicata</i> var. <i>denudata</i>	southern honeysuckle	Caprifoliaceae	DCSS, NNG, CSS
<i>Lotus scoparius</i> var. <i>scoparius</i>	coast deerweed	Fabaceae	CLO, CSS, DCSS
<i>Lotus</i> sp.	-	Fabaceae	CSS
<i>Ludwigia</i> spp.	-	Onagraceae	CBS
<i>Lupinus bicolor</i>	miniature lupine	Fabaceae	CSS, NNG
<i>Lythrum hyssopifolium</i> *	grass poly	Lythraceae	SRF
<i>Malacothamnus fasciculatus</i>	chaparral bushmallow	Malvaceae	CSS, DCSS
<i>Malosma laurina</i>	laurel sumac	Anacardiaceae	CSS, DCSS, NNG
<i>Malva parviflora</i> *	cheeseweed	Malvaceae	CBS, NNG
<i>Malvella leprosa</i>	alkali mallow	Malvaceae	FW
<i>Marah macrocarpus</i> var. <i>macrocarpus</i>	wild cucumber, man-root	Cucurbitaceae	CLO, CSS, NNG
<i>Marrubium vulgare</i> *	horehound	Lamiaceae	CSS, DCSS, NNG
<i>Medicago</i> sp. *	burclover	Fabaceae	CBS, NNG
<i>Melica imperfecta</i>	coast range melic	Poaceae	CSS
<i>Melilotus indica</i> *	Indian sweetclover	Fabaceae	SRF
<i>Melilotus</i> sp. *	sweetclover	Fabaceae	SRF
<i>Mentha spicata</i> var. <i>spicata</i> *	spearmint	Lamiaceae	SRF
<i>Mimulus aurantiacus</i>	coast monkey flower	Scrophulariaceae	CSS
<i>Mimulus</i> spp.	monkey-flower	Scrophulariaceae	CSS
<i>Mirabilis laevis</i> var. <i>crassifolia</i>	coastal wishbone bush	Nyctaginaceae	CSS, NNG
<i>Muilla maritima</i>	common Muilla	Themidaceae	CSS
<i>Myoporum laetum</i> *	ngaio	Myoporaceae	PAS, FW
<i>Nassella lepida</i>	foothill needlegrass	Poaceae	CSS
<i>Nassella</i> sp.	needlegrass	Poaceae	NNG
<i>Navarretia hamata</i> ssp. <i>hamata</i>	hooked skunkweed	Polemoniaceae	CSS
<i>Nerium oleander</i> *	oleander	Apocynaceae	NNG

Species	Common Name	Family	Habitat
<i>Nicotiana glauca</i> *	tree tobacco	Solanaceae	NNG, PAS, FW, SRF, CSS
<i>Oenothera elata</i> ssp. <i>hookeri</i>	great marsh evening-primrose	Onagraceae	SWS, FW, SRF
<i>Olea europaea</i> *	olive	Oleaceae	NNG, OW
<i>Opuntia littoralis</i>	coast prickly-pear	Cactaceae	DCSS, NNG
<i>Opuntia</i> sp.	prickly-pear	Cactaceae	GBS, CLO, CSS, NNG
<i>Oxalis albicans</i> ssp. <i>pilosa</i>	California wood-sorrel	Oxalidaceae	CSS
<i>Oxalis pes-caprae</i> *	Bermuda buttercup	Oxalidaceae	NNG
<i>Paeonia californica</i>	California peony	Paeoniaceae	CSS
<i>Parietaria hespera</i> var. <i>californica</i>	western pellitory	Urticaceae	CSS
<i>Paspalum dilatatum</i> *	dallis grass	Poaceae	PAS
<i>Pelargonium</i> sp. *	geranium	Geraniaceae	CLO
<i>Penstemon centranthifolius</i>	scarlet bugler	Scrophulariaceae	CSS
<i>Pentagramma triangularis</i> ssp. <i>viscosa</i>	silverback fern	Pteridaceae	CSS
<i>Phacelia cicutaria</i> var. <i>hispida</i>	caterpillar Phacelia	[Polypodiaceae]	CLO, SRF, CSS
<i>Phacelia distans</i>	wild-heliotope	Hydrophyllaceae	CSS
<i>Phacelia parryi</i>	-	Hydrophyllaceae	CSS
<i>Phacelia</i> sp.	Phacelia	Hydrophyllaceae	NNG
<i>Phalaris paradoxa</i> *	paradox canary grass	Poaceae	CSS
<i>Phalaris</i> sp.	canary grass	Poaceae	CSS
<i>Pholistoma</i> sp.	-	Hydrophyllaceae	CSS
<i>Phoradendron macrophyllum</i>	big-leaf mistletoe	Viscaceae	SRF
<i>Phyla nodiflora</i> var. <i>nodiflora</i> *	garden lippia	Verbenaceae	SRF
<i>Picris echioides</i> *	bristly ox-tongue	Asteraceae	FW, SRF, SWS, PAS, FW
<i>Pinus</i> sp.	pine (ornamental)	Pinaceae	ORN, NNG
<i>Piptatherum miliaceum</i> *	smilo grass	Poaceae	SRF
<i>Plantago erecta</i>	plantain	Plantaginaceae	CSS, NNG, DEV
<i>Plantago major</i> *	common plantain	Plantaginaceae	SRF
<i>Platanus racemosa</i>	western sycamore	Platanaceae	SRF, FW, SWS, CSS
<i>Pluchea odorata</i>	salt marsh fleabane	Asteraceae	FW, SRF
<i>Poaceae</i>	grass	Poaceae	SRF
<i>Polygonum</i> sp.	smartweed	Polygonaceae	SRF
<i>Polypogon monspeliensis</i> *	annual beard grass	Poaceae	SRF
<i>Populus fremontii</i> ssp. <i>fremontii</i>	western cottonwood	Salicaceae	SRF
<i>Populus</i> sp.	Cottonwood	Salicaceae	FW
<i>Porophyllum gracile</i>	odora	Asteraceae	CSS

Species	Common Name	Family	Habitat
<i>Prunus ilicifolia</i> ssp. <i>ilicifolia</i>	holly-leaf cherry, islay	Rosaceae	CSS
<i>Pterostegia drymarioides</i>	granny's hairnet	Polygonaceae	CSS
<i>Pyracantha</i> sp.	firethorn	Rosaceae	PAS
<i>Quercus agrifolia</i> var. <i>agrifolia</i>	coast live oak	Fagaceae	CLO, CSS
<i>Quercus berberidifolia</i>	scrub oak	Fagaceae	CSS, DCSS, OW
<i>Rafinesquia californica</i>	California chicory	Asteraceae	CSS
<i>Raphanus sativus</i> *	wild radish	Brassicaceae	DIS, NNG, SRF
<i>Rhamnus ilicifolia</i>	holly-leaf redberry	Rhamnaceae	NNG
<i>Rhus integrifolia</i>	lemonadeberry	Anacardiaceae	CSS, NNG
<i>Rhus ovata</i>	sugar bush	Anacardiaceae	DCSS, CSS, NNG
<i>Ricinus communis</i> *	castor bean	Euphorbiaceae	CBS, CSS
<i>Rorippa nasturtium-aquaticum</i>	water-cress	Brassicaceae	DIS, SRF
<i>Rubus ursinus</i>	California blackberry	Rosaceae	SRF
<i>Rumex conglomeratus</i> *	whorled dock	Polygonaceae	SRF
<i>Rumex crispus</i> *	curly dock	Polygonaceae	CSS, DIS
<i>Rumex pulcher</i> *	fiddle dock	Polygonaceae	SRF
<i>Salix exigua</i>	narrow-leaf willow	Salicaceae	SRF, DIS
<i>Salix gooddingii</i>	Goodding's black willow	Salicaceae	FW, SWS, SRF
<i>Salix laevigata</i>	red willow	Salicaceae	SRF
<i>Salix lasiolepis</i>	arroyo willow	Salicaceae	FW, SWS, SRF
<i>Salsola tragus</i> *	Russian thistle, tumbleweed	Chenopodiaceae	PAS
<i>Salvia apiana</i>	white sage	Lamiaceae	CSS, PAS, SRF
<i>Salvia columbariae</i>	chia	Lamiaceae	CSS
<i>Salvia mellifera</i>	black sage	Lamiaceae	CBS, CSS, NNG, DCSS
<i>Sambucus mexicana</i>	blue elderberry	Caprifoliaceae	DCSS, NNG, CSS, CLO
<i>Sanicula arguta</i>	sharp-tooth sanicle	Apiaceae	CSS
<i>Sarcostemma cynanchoides</i> ssp. <i>hartwegii</i>	climbing milkweed	Asclepiadaceae	CSS
<i>Schinus molle</i> *	Peruvian pepper tree	Anacardiaceae	DCSS, NNG, ORN, CLO
<i>Scirpus</i> sp.	bulrush	Cyperaceae	FW, SRF
<i>Selaginella bigelovii</i>	Bigelow's spike-moss	Selaginellaceae	CSS
<i>Selaginella cinerascens</i>	Mesa spike-moss	Selaginellaceae	CSS
<i>Senecio mikanioides</i> *	German ivy	Asteraceae	SRF
<i>Silene gallica</i> *	common catchfly	Caryophyllaceae	CSS
<i>Silybum marianum</i> *	milk thistle	Asteraceae	CBS, CSS, DIS, NNG
<i>Sisymbrium</i> sp. *	-	Brassicaceae	CLO

Species	Common Name	Family	Habitat
<i>Sisyrinchium bellum</i>	blue-eyed-grass	Iridaceae	NNG
<i>Solanum douglasii</i>	Douglas' nightshade	Solanaceae	CLO
<i>Solanum xanti</i>	nightshade	Solanaceae	CSS
<i>Sonchus asper</i> ssp. <i>asper</i> *	prickly sow-thistle	Asteraceae	CSS
<i>Spartium junceum</i> *	Spanish broom	Fabaceae	CSS
<i>Stachys ajugoides</i> var. <i>rigida</i>	hedge-nettle	Lamiaceae	SRF
<i>Stachys</i> sp.	nettle	Lamiaceae	SRF
<i>Stellaria media</i> *	common chickweed	Caryophyllaceae	CSS
<i>Stylocline gnaphaloides</i>	everlasting nest straw	Asteraceae	CSS
<i>Stylocline gnaphaloides</i>	everlasting nest straw	Asteraceae	CSS
<i>Tamarix</i> sp. *	tamarisk, salt-cedar	Tamaricaceae	FW, SRF
<i>Tetracoccus dioicus</i> !	Parry's Tetracoccus	Euphorbiaceae	CSS
<i>Thysanocarpus laciniatus</i>	notch fringed	Brassicaceae	CSS
<i>Toxicodendron diversilobum</i>	western poison-oak	Anacardiaceae	CLO, SRF, CSS
<i>Trifolium willdenovii</i>	valley clover	Fabaceae	CSS
<i>Typha</i> sp.	cattail	Typhaceae	SWS, FW
<i>Uropappus lindleyi</i>	silver puffs	Asteraceae	CSS
<i>Urtica dioica</i> ssp. <i>holosericea</i>	hoary nettle	Urticaceae	SWS, PAS, CLO, SRF
<i>Vinca major</i> *	greater periwinkle	Apocynaceae	SRF
<i>Vitis girdiana</i>	desert wild grape	Vitaceae	FW, SRF
<i>Vulpia myuros</i> var. <i>myuros</i> *	-	Poaceae	CBS, CSS, NNG, SRF
<i>Washingtonia filifera</i>	Californica fan palm	Arecaceae	ORN, NNG
<i>Washingtonia robusta</i> *	Mexican fan palm	Arecaceae	NNG
<i>Xanthium strumarium</i>	cocklebur	Asteraceae	FW
<i>Xylococcus bicolor</i>	mission manzanita	Ericaceae	CSS, OW, CLO
<i>Yucca schidigera</i>	Mohave yucca	Agavaceae [Liliaceae]	CSS, OW
<i>Yucca whipplei</i>	our lord's candle	Agavaceae [Liliaceae]	PAS, CSS, NNG
<i>Zantedeschia aethiopica</i> *	calla-lily	Araceae	SRF

* =Non-Native Species

! =Sensitive Species

SRF = Southern Riparian Forest

SWS =Southern Willow Scrub

FW = Fresh-water Marsh

CBS =Coyote Brush Scrub

ORN = Ornamental

NNG =Non-Native Grassland

PAS =Pastureland

DIS = Disturbed

Species	Common Name	Family	Habitat
CSS =Coastal Sage Scrub	DEV=Developed		
DCSS =Disturbed Coastal Sage Scrub	EUC = Eucalyptus		
OW =Oak Woodland			

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95814
Fax: (916) 324-0475
<http://www.dfg.ca.gov/whdab/natspec.pdf>

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work: _____ - 1999 - 2004

California Native Species Field Survey Form

Scientific Name: Tetracoccus dioicus

Common Name: Parry's Tetracoccus

Species Found? ☒ Yes ☐ No If not, why? _____

Total No. Individuals 1688 Subsequent Visit? ☐ yes ☐ no
Is this an existing NDBB occurrence? ☐ no ☐ unk.

Collection? If yes: _____
Number _____ Museum / Herbarium _____

Reporter: C. MacGregor

Address: 2442 2nd Ave
San Diego CA 92101

E-mail Address: catherine@recenv.com

Phone: (619) 232-9200

Plant Information

Phenology: _____ % vegetative _____ % flowering _____ % fruiting

Animal Information

adults ☐ breeding # juveniles ☐ wintering # larvae ☐ burrow site # egg masses ☐ rookery # unknown ☐ nesting ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

County: San Diego - see map

Landowner / Mgr.: _____

Quad Name: Bonsall

Elevation: _____

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: ☐ H ☐ M ☐ S

Source of Coordinates (GPS, topo. map & type): _____

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: ☐ H ☐ M ☐ S

GPS Make & Model _____

Datum: NAD27 ☐ NAD83 ☐ WGS84 ☐

Horizontal Accuracy _____ meters/feet

Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☒ OR

Geographic (Latitude & Longitude) ☐

Coordinates: Easting/Longitude _____

Northing/Latitude _____

Habitat Description (plant communities, dominants, associates, substrates/soils, aspects/slope):

South-facing and flat coastal sage scrub with salvia mellifera, Artemisia californica, on Las Posas stony fine sandy loam 30-65% slopes, and Las Posas fine sandy loam 9-15% slopes or Wyman loam 5-9% slopes

Other rare species? Palmer's grappling-hook, Palmer's sagewort (off site), orange-throated whiptail, northern red rattlesnake, Cooper's hawk, southern CA rooks-crowned sparrow, yellow warbler, yellow-breasted chat, CA gnatcatcher, least Bell's Vireo

Site Information Overall site quality: ☐ Excellent ☐ Good ☒ Fair ☐ Poor

Current / surrounding land use: undeveloped to north and east, pasture to south, 1-15 to west

Visible disturbances: _____

Threats: development

Comments: _____

Determination: (check one or more, and fill in blanks)

- ☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☒ Other: personal knowledge

Photographs: (check one or more)

Plant / animal ☐ Slide ☐ Print
Habitat ☐ ☐
Diagnostic feature ☐ ☐

May we obtain duplicates at our expense? ☐ yes ☐ no

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95814
Fax: (916) 324-0475
<http://www.dfg.ca.gov/whdab/natspec.pdf>

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Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work: _____ - _____ - 2004

California Native Species Field Survey Form

Scientific Name: Harpagonella palmeri

Common Name: Palmer's grappling-hook

Species Found? ☒ Yes ☐ No If not, why? _____

Total No. Individuals 1 Subsequent Visit? ☐ yes ☐ no
Is this an existing NDDDB occurrence? ☐ no ☐ unk.

Collection? If yes: _____
Number _____ Museum / Herbarium _____

Reporter: C. MacGregor - REC Consultants

Address: 2442 2nd Avenue

San Diego CA 92101

E-mail Address: catherine@recenv.com

Phone: (619) 232-9200

Plant Information

Phenology: _____ % vegetative _____ % flowering 100 % fruiting

Animal Information

adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown _____
☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

County: San Diego - see map

Landowner / Mgr.: _____

Quad Name: Bonsall

Elevation: _____

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐

Source of Coordinates (GPS, topo. map & type): _____

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐

GPS Make & Model _____

Datum: NAD27 ☐ NAD83 ☐ WGS84 ☐

Horizontal Accuracy _____ meters/feet

Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ OR Geographic (Latitude & Longitude) ☐

Coordinates: Easting/Longitude _____ Northing/Latitude _____

Habitat Description (plant communities, dominants, associates, substrates/soils, aspects/slope):

Coastal sage scrub - south facing
Tetradlea dioica, Salvia mellifera, Artemisia californica

Soil: Las Posas stony fine sandy loam 30-65% slopes

occurred on dirt trail, not detected off trail

Other rare species? Parry's Tetradlea, Palmer's sagewort, orange-throated whiptail, northern red rattlesnake, Coopers hawk, southern CA rufous-crowned sparrow, yellow warbler, yellow-breasted chat, CA gnat catcher, least Bell's vireo

Site Information Overall site quality: ☐ Excellent ☐ Good ☒ Fair ☐ Poor

Current / surrounding land use: undeveloped to north and east, pasture to south, 1-15 to west

Visible disturbances: trail

Threats:

Comments:

Determination: (check one or more, and fill in blanks)

- ☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☒ Other: personal knowledge

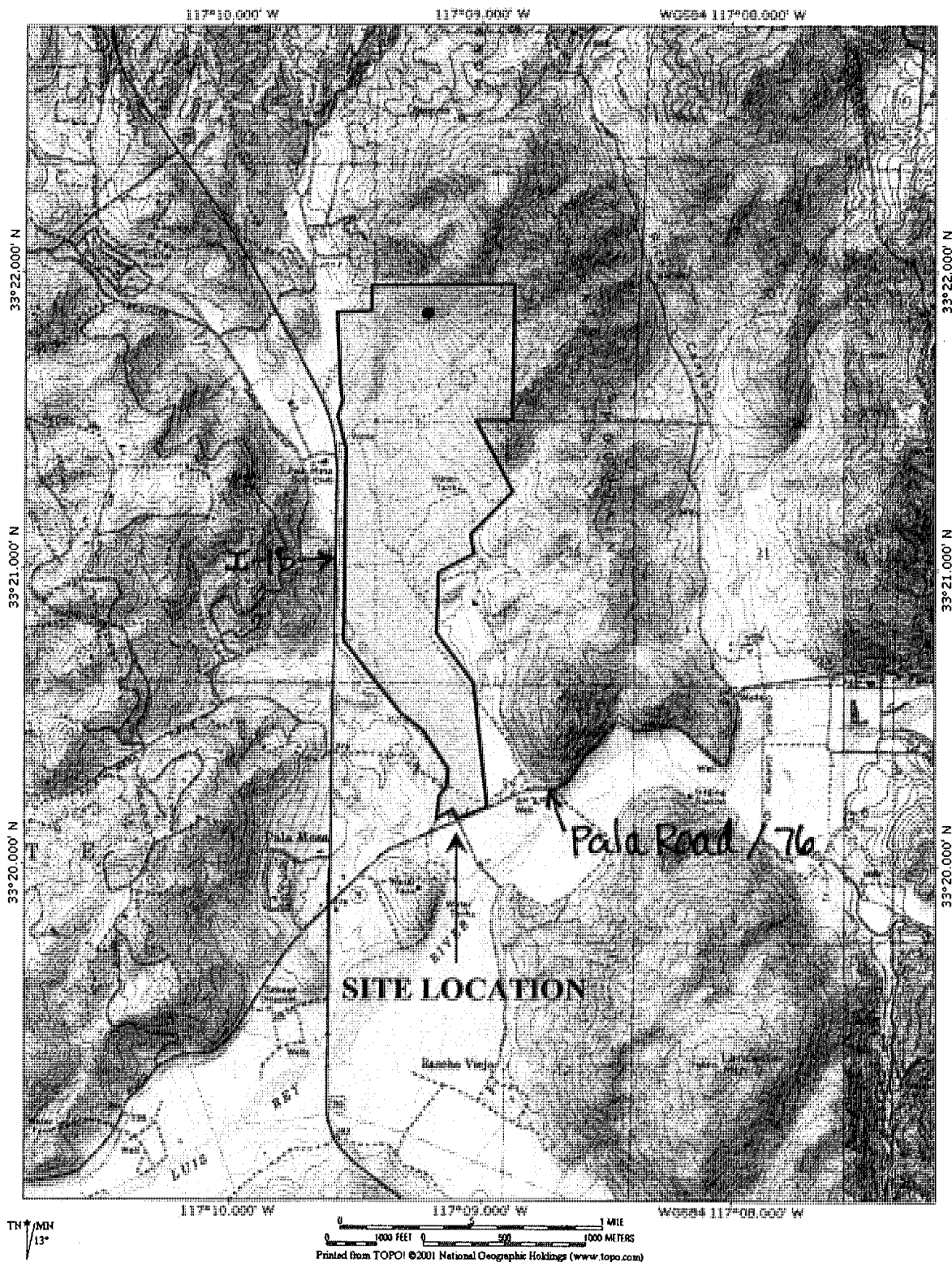
Photographs: (check one or more) Slide Print

Plant / animal ☐ ☐

Habitat ☐ ☐

Diagnostic feature ☐ ☐

May we obtain duplicates
at our expense? ☐ yes ☐ no



APPENDIX B

Wildlife Species Observed on the Campus Park Project

APPENDIX B WILDLIFE SPECIES OBSERVED ON THE CAMPUS PARK PROPERTY			
Common Name	Scientific Name	Habitat Observed	# Observed (estimate)
Invertebrate			
Anise swallowtail	<i>Papilio zelicaon</i>	NNG	1
Ant	Family Formicidae	SRF, CSS	Many
Bee	Family Apidae	CSS, PAS, SRF	Many
Beefly	Family Bombyliidae	CSS	several
Behr's metalmark	<i>Apodemia mormo virgulti</i>	CSS, SRF	1
Blue butterfly	Subfamily Polyommatae	CSS	1
Buckeye butterfly	<i>Junonia coenia</i>	SRF	1
Bumble bee	<i>Bombus fervidus</i>	CSS	20+
Cabbage white	<i>Artogeia rapae</i>	SRF	12
California green hairstreak	<i>Callophrys affinis perPASexa</i>	SRF	2
California ringlet	<i>Coenonympha californica californica</i>	SRF	2
Carpenter bee	<i>Xylocopa</i> sp.	CSS	1
Cicada	Family Cicadidae	NNG, PAS	5
Common white	<i>Pontia protodice</i>	SRF	5
Cricket	Family Gryllidae	SRF	Many
Dragonfly	Suborder Anisoptera	CSS	1
fiery skipper	<i>Hylephila phyleus</i>	PAS	1
Fly	Family Muscidae	SRF, CSS, NNG	Many
Funereal duskywing	<i>Erynnis funeralis</i>	SRF	2
Funnel web weaver spider	Family Agelenidae	CSS	6
Grasshopper	Family Acrididae	PAS	10+
Honey bee	<i>Apis mellifera</i>	SRF, CSS	10+, many
Jerusalem cricket	<i>Stenopelmatus</i> sp.	CSS	1
Ladybug	Family Coccinellidae	SRF	10
Lorquin's admiral	<i>Basilarchia lorquini</i>	SRF	4
Monarch butterfly	<i>Danaus plexippus</i>	PAS	2
Orb weaver spider	Family Araneidae	SRF	5+
Pacific sara orangetip	<i>Anthocharis sara</i>	CSS	2
Painted lady	<i>Vanessa cardui</i>	SRF	1
Red ant	<i>Solenopsis</i> sp.	SRF	100+
Sara orangetip	<i>Anthocharis sara</i>	CSS, SRF	3, 3
Southern blue	<i>Glaucopsyche lygdamus australis</i>	SRF	9
Spider sp.	Order Araneae	CSS	3

Common Name	Scientific Name	Habitat Observed	# Observed (estimate)
Tarantula hawk	<i>Hemipepsis spp.</i>	CSS	1
Tick	Order Acarina	CSS	4
Tiger moth	Family Arctiidae	CSS	1
Wasp	Order Hymenoptera	CSS	1
Western tiger swallowtail	<i>Papilio rutulus</i>	SRF	10+
White butterfly	Subfamily Pierinae	SRF	1
Amphibians			
Bullfrog	<i>Rana catesbeiana</i>	SRF	1
California toad	<i>Bufo boreas halophilus</i>	PAS	1
California treefrog	<i>Hyla cadaverina</i>	SRF	several
Pacific treefrog	<i>Hyla regilla</i>	SRF	several
Reptiles			
California kingsnake	<i>Lampropeltis getula</i>	SRF	1
Chaparral whipsnake	<i>Masticophis lateralis</i>	CSS	1
Coastal whiptail	<i>Cnemidophorus tigris</i>	SRF	1
Common kingsnake	<i>Lampropeltis getulus</i>	CSS	1
Common side-blotched lizard	<i>Uta stansburiana</i>	CSS, GBS	3, 1
Northern red rattlesnake*	<i>Crotalus ruber ruber</i>	CSS	1
Orange-throated whiptail*	<i>Cnemidophorus hyperythrus</i>	CSS	5
Side-blotched lizard	<i>Uta stansburiana</i>	CSS, NNG	1, 2
Southwestern speckled rattlesnake	<i>Crotalus mitchellii</i>	CSS	1
Western fence lizard	<i>Sceloporus occidentalis</i>	CSS, SRF	2, 6
Western rattlesnake	<i>Crotalus viridis</i>	CSS	2
Birds			
American crow	<i>Corvus brachyrhynchos</i>	SRF	2 flyover
American goldfinch	<i>Carduelis tristis</i>	SRF, CSS	13, 3
American kestrel	<i>Falco sparverius</i>	SRF	4
Anna's hummingbird	<i>Calypte anna</i>	SRF, CSS, NNG	11+ nest, 7, 4
Ash-throated flycatcher	<i>Myiarchus cinerascens</i>	SRF, CSS, PAS	1, 1, 1
Audubon's warbler	<i>Dendroica coronata</i>	CSS, SRF	1, 7
Barn owl	<i>Tyto alba</i>	SRF	overhead
Bewick's wren	<i>Thryomanes bewickii</i>	SRF, CSS	2, 3
Black phoebe	<i>Sayornis nigricans</i>	SRF	7
Black-headed grosbeak	<i>Phoebastria melanochephalus</i>	SRF	10
Blue grosbeak	<i>Guiraca caerulea</i>	SRF, CSS	2, 1
Blue-gray gnatcatcher	<i>Polioptila caerulea amoenissima</i>	CSS	8
Blue-headed vireo	<i>Vireo solitarius</i>	SRF	1

Common Name	Scientific Name	Habitat Observed	# Observed (estimate)
Brewer's blackbird	<i>Euphagus cyanocephalus</i>	CSS	10+
Brown-headed cowbird	<i>Molothrus ater</i>	SRF	10+
Bullock's oriole	<i>Icterus bullockii</i>	SRF	7
Bushtit	<i>Psaltiriparus minimus</i>	SRF, CSS	28, 22+nest
California gnatcatcher*	<i>Polioptila californica</i>	CSS	10
California quail	<i>CallipePASA californica</i>	SRF, CSS, CBS	2, 7, 7
California thrasher	<i>Toxostoma redivivum</i>	CSS	2
California towhee	<i>Pipilo crissalis</i>	SRF, CSS	8, 12
Cassin's kingbird	<i>Tyrannus vociferans</i>	SRF, PAS	2
Cedar Waxwing	<i>Bombycilla cedrorum</i>	SRF	2
Chipping sparrow	<i>Spizella passerina</i>	SRF	4
Cliff swallow	<i>Petrochelidon pyrrhonota</i>	CSS	4
Common raven	<i>Corvus corax</i>	SRF, CSS, PAS	10+, 2, 10+ flyover
Common yellowthroat	<i>Geothlypis trichas</i>	SRF, PAS	9, 1
Cooper's hawk*	<i>Accipiter cooperii</i>	SRF, CSS	1, 1
European starling	<i>Sturnus vulgaris</i>	SRF	2
Great blue heron	<i>Ardea herodias</i>	flyover	1
Greater roadrunner	<i>Geococcyx californianus</i>	SRF, CSS	1, 1
Hooded oriole	<i>Icterus cucullatus</i>	SRF	3
House finch	<i>Carpodacus mexicanus</i>	SRF, CSS, PAS	20+, 5, 3
House wren	<i>Troglodytes aedon</i>	SRF	2
Killdeer	<i>Charadrius vociferus</i>	SRF	4
Lazuli bunting	<i>Passerina amoena</i>	CSS	2
Least Bell's Vireo*	<i>Vireo bellii pusillus</i>	SRF	9
Lesser goldfinch	<i>Carduelis psaltria</i>	SRF, CSS, PAS	10+, 6, 1
Mallard	<i>Anas PASatyrhynchos</i>	flyover, SRF	2, 6
Marsh wren	<i>Cistothorus palustris</i>	SRF	1
Mourning dove	<i>Zenaida macroura</i>	CSS, PAS, SRF	5, 3, 14
Northern flicker	<i>Colaptes auratus</i>	SRF	10
Northern mockingbird	<i>Mimus polyglottos</i>	CSS, SRF	1, 2
Nuttall's woodpecker	<i>Picoides nuttallii</i>	SRF	4
Ostrich (domestic)**	<i>Struthio camelus</i>	PAS	2
PhainopePASA	<i>PhainopePASA nitens</i>	SRF, CSS	4, 1
Red-shouldered hawk	<i>Buteo lineatus</i>	SRF	1 flyover
Red-tailed hawk	<i>Buteo jamaicensis</i>	SRF, CSS, PAS	3 in nest, 2 flyover, 2
Red-winged blackbird	<i>Agelaius phoeniceus</i>	SRF	20
Sage sparrow	<i>Amphispiza belli</i>	CSS	1

Common Name	Scientific Name	Habitat Observed	# Observed (estimate)
Say's phoebe	<i>Sayornis saya</i>	SRF	2
Snowy egret	<i>Egretta thula</i>	flyover	1
Song sparrow	<i>Melospiza melodia</i>	PAS, SRF	1, 17
Southern California rufous-crowned sparrow*	<i>Aimophila ruficeps canescens</i>	CSS	2
Sparrow (unidentified)	Family Emberizidae	SRF	5
Spotted towhee	<i>Pipilo erythrophthalmus</i>	SRF, CSS	7, 10
Tree swallow	<i>Tachycineta bicolor</i>	SRF	20+
Turkey vulture	<i>Cathartes aura</i>	SRF, CSS, NNG	flyover
Western bluebird	<i>Sialia mexicana</i>	NNG	1
Western kingbird	<i>Tyrannus verticalis</i>	SRF, PAS	3, 1
Western meadowlark	<i>Sturnella neglecta</i>	CSS	10+
Western or pacific-slope flycatcher	<i>Empidonax difficilis</i>	SRF	2
Western scrub jay	<i>Apelocoma californica</i>	CSS, SRF	2, 6
Western tanager	<i>Piranga ludoviciana</i>	SRF	1
White-crowned sparrow	<i>Zonotrichia leucophrys</i>	CSS	4
White-tailed kite	<i>Elanus leucurus</i>	SRF, CSS	2, 3 flyover
Wren	<i>Chamaea fasciata</i>	CSS, SRF	7, 3
Yellow-breasted chat*	<i>Icteria virens</i>	SRF	4
Yellow warbler*	<i>Dendroica petechia</i>	SRF	1
Yellow-rumped warbler	<i>Dendroica coronata</i>	SRF, CSS	20+
Mammals			
Bat sp.	Order Chiroptera	SRF	overhead
Bobcat	<i>Lynx rufus</i>	NNG	1 dead
Botta's pocket gopher	<i>Thomomys bottae</i>	NNG	mounds
California ground squirrel	<i>Spermophilus beecheyi nudipes</i>	CSS	3
Coyote	<i>Canis latrans</i>	SRF	Tracks
Deer	Family Cervidae	SRF	1
Desert cottontail	<i>Sylvilagus audubonii</i>	CSS, SRF, NNG	4, 6, 1
Domestic cow	<i>Bos taurus</i>	SRF, PAS	Many
Domestic dog	<i>Canis domestica</i>	CSS	Scat
Domestic donkey	<i>Equus asinus asinus</i>	PAS	1
Domestic goat	<i>Capra capra</i>	SRF, PAS	100's
Domestic horse	<i>Equus caballus</i>	SRF	Many
Domestic llama	<i>Lama glama</i>	PAS	1
Dusky-footed woodrat	<i>Neotoma fuscipes</i>	CSS, SRF	1 nest, 3 nests
Gopher	<i>Thomomys bottae</i>	SRF, CSS	1, 1

Common Name	Scientific Name	Habitat Observed	# Observed (estimate)
Ground squirrel	<i>Spermophilus beecheyi</i>	SRF, NNG, CSS	1, 1, 1
Raccoon	<i>Procyon lotor</i>	SRF	tracks

SRF = Southern Arroyo Willow Riparian Forest

CSS= Coastal Sage Scrub

NNG= Non-native Grassland

PAS=Pastureland

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

** Non-native species

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Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work: _____ - _____ - 2004

California Native Species Field Survey Form

Scientific Name: *Cnemidophorus hyperythrus*

Common Name: orange-throated whiptail

Species Found? ☒ Yes ☐ No If not, why? _____

Total No. Individuals 5 Subsequent Visit? ☐ yes ☐ no
Is this an existing NDDDB occurrence? ☐ no ☐ unk.

Collection? If yes: _____
Number _____ Museum / Herbarium _____

Reporter: C. MacGregor - REC

Address: 2442 2nd Avenue
San Diego CA 92101

E-mail Address: catherine@recenv.com

Phone: (619) 232-9200

Plant Information

Phenology: _____ % vegetative _____ % flowering _____ % fruiting

Animal Information

5
adults # juveniles # larvae # egg masses # unknown
☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

County: San Diego - see map Landowner / Mgr.: _____
Quad Name: Bonsall Elevation: _____
T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: ☐ H ☐ M ☐ S ☐ Source of Coordinates (GPS, topo. map & type): _____
T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: ☐ H ☐ M ☐ S ☐ GPS Make & Model _____
Datum: NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy _____ meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☒ OR Geographic (Latitude & Longitude) ☐
Coordinates: Easting/Longitude _____ Northing/Latitude _____

Habitat Description (plant communities, dominants, associates, substrates/soils, aspects/slope):

Coastal sage scrub - *Tetradlea dioica*, *Artemisia californica*,
Salvia mellifera; observed on trail

Other rare species? Parry's *Tetradlea*, Palmer's grappling-hook, Palmer's sagewort (off site), orange-throated whiptail, northern red rattlesnake, Cooper's hawk, southern CA rufous-crowned sparrow, yellow warbler, yellow-breasted chat, CA gnatcatcher, least Bell's vireo

Site Information Overall site quality: ☐ Excellent ☐ Good ☒ Fair ☐ Poor

Current / surrounding land use: undeveloped to north and east, pasture to south, 1-15 to west

Visible disturbances: trail

Threats: development

Comments:

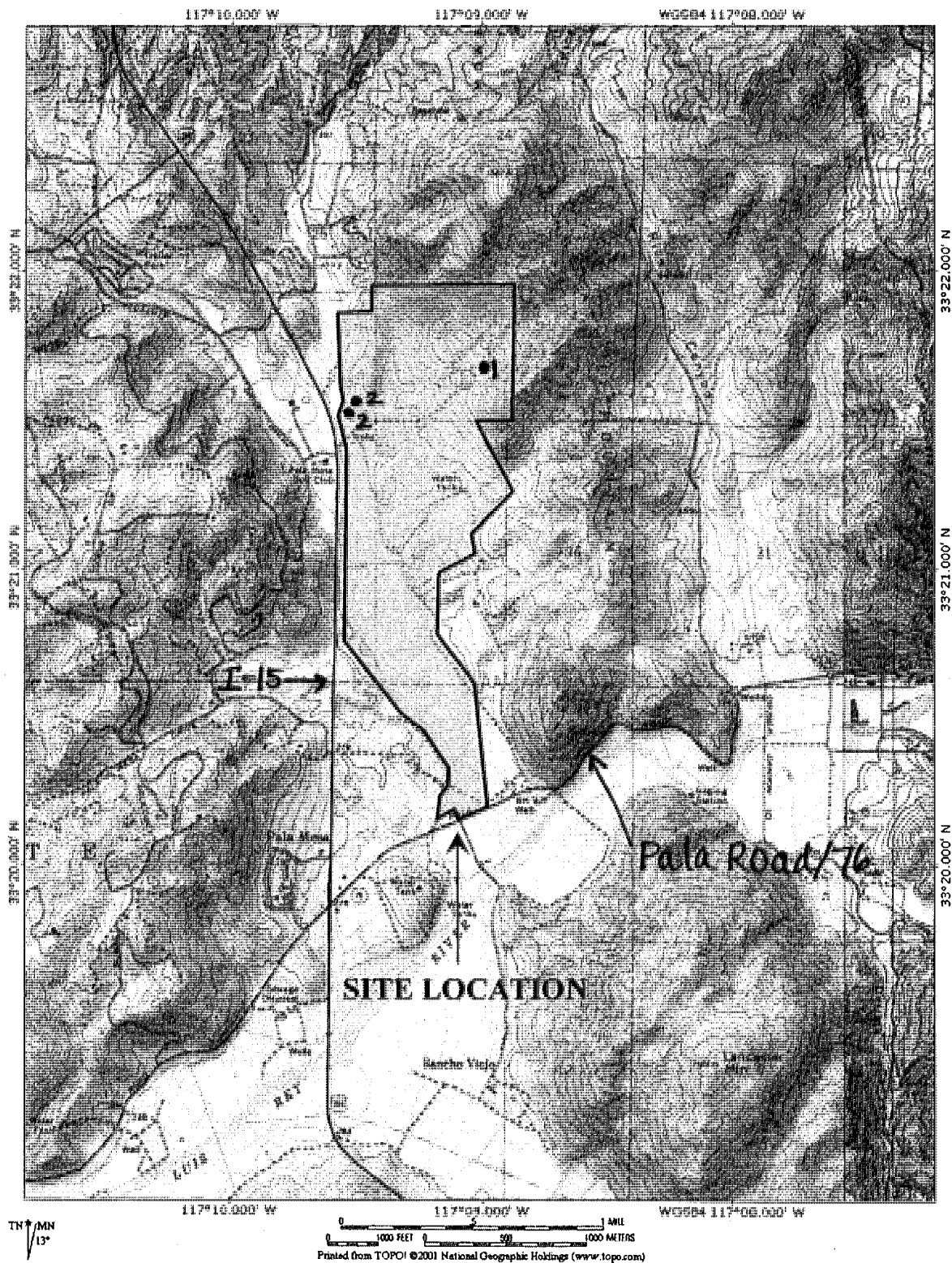
Determination: (check one or more, and fill in blanks)

- ☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☒ Other: personal knowledge

Photographs: (check one or more)

Slide Print
Plant / animal ☐ ☐
Habitat ☐ ☐
Diagnostic feature ☐ ☐

May we obtain duplicates at our expense? ☐ yes ☐ no



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Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work: _____ - _____ - 2004

California Native Species Field Survey Form

Scientific Name: *Crotalus ruber ruber*

Common Name: northern red rattlesnake

Species Found? ☒ Yes ☐ No If not, why? _____

Total No. Individuals 1 Subsequent Visit? ☐ yes ☐ no
Is this an existing NDDDB occurrence? ☐ no ☐ unk.

Collection? If yes: _____
Number _____ Museum / Herbarium _____

Reporter: C. MacGregor - REC

Address: 2442 2nd Ave
San Diego CA 92101

E-mail Address: catherine@recenv.com

Phone: (619) 232-9200

Plant Information

Phenology: _____ % vegetative _____ % flowering _____ % fruiting

Animal Information

adults ☐ # juveniles ☐ # larvae ☐ # egg masses ☐ # unknown ☐
breeding wintering burrow site rookery nesting other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

County: San Diego - see map

Landowner / Mgr.: _____

Quad Name: Bonsai

Elevation: _____

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐

Source of Coordinates (GPS, topo. map & type): _____

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐

GPS Make & Model _____

Datum: NAD27 ☐ NAD83 ☐ WGS84 ☐

Horizontal Accuracy _____ meters/feet

Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ OR Geographic (Latitude & Longitude) ☐

Coordinates: Easting/Longitude _____ Northing/Latitude _____

Habitat Description (plant communities, dominants, associates, substrates/soils, aspects/slope):

coastal sage scrub - south facing
Tetradlea dioica, Salvia mellifera, Artemisia californica

Other rare species? Parry's Tetradlea, Palmer's grapplinghook, Palmer's sagewort (offsite), orange-throated whiptail, Cooper's hawk, southern CA rufous crowned sparrow, yellow warbler, yellow-breasted chat, CA gnatcatcher, least bell's vireo

Site Information Overall site quality: ☐ Excellent ☐ Good ☒ Fair ☐ Poor

Current / surrounding land use: undeveloped to north and east, pasture to south, 1-15 to west

Visible disturbances: _____

Threats: _____

Comments: _____

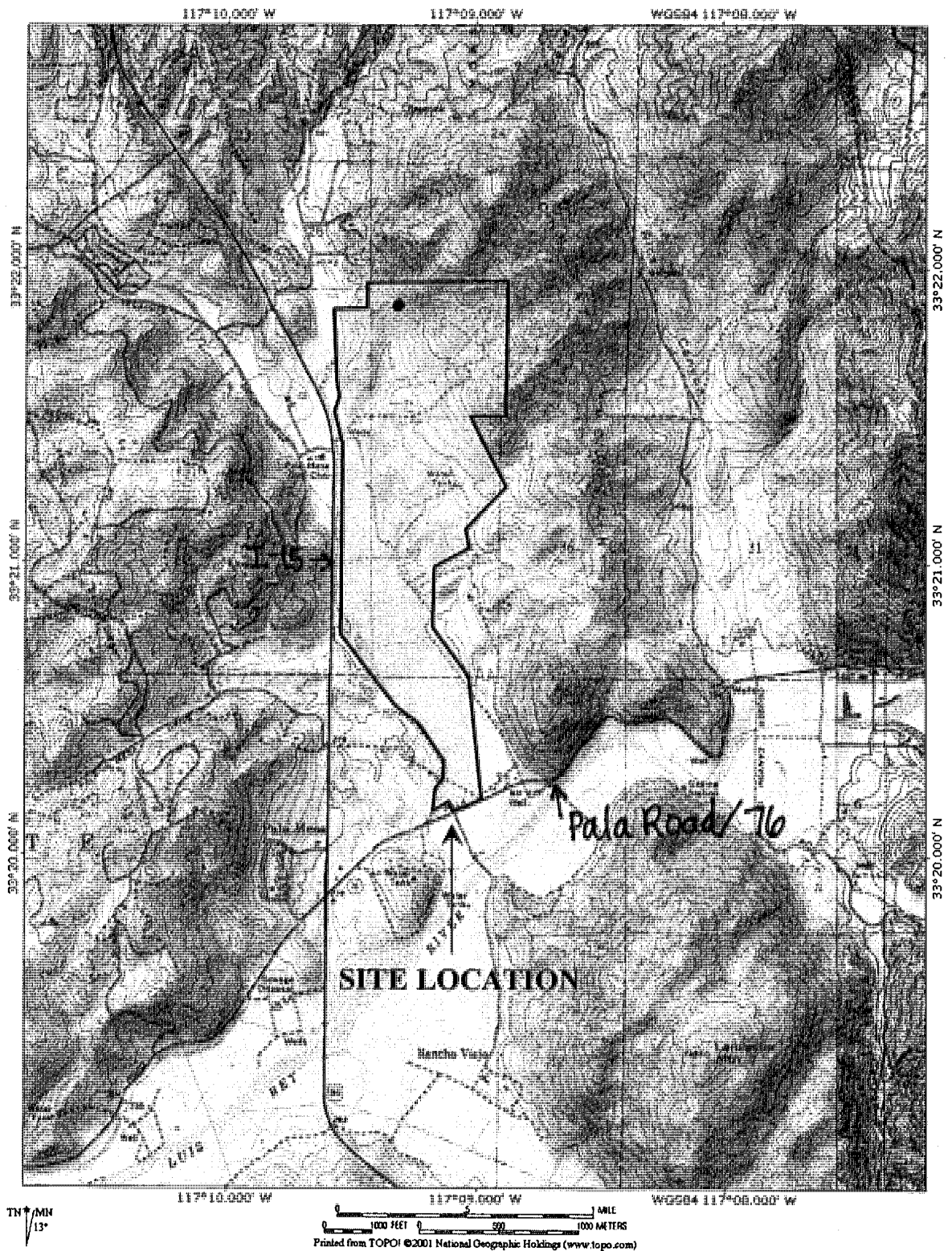
Determination: (check one or more, and fill in blanks)

- ☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☒ Other: personal knowledge

Photographs: (check one or more)

Plant / animal ☐ Slide ☐ Print ☐
Habitat ☐ ☐
Diagnostic feature ☐ ☐

May we obtain duplicates at our expense? ☐ yes ☐ no



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Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work: _____ - _____ - 1999

California Native Species Field Survey Form

Scientific Name: Accipiter cooperii

Common Name: Cooper's hawk

Species Found? ☐ Yes ☐ No If not, why? _____

Total No. Individuals 1 Subsequent Visit? ☐ yes ☐ no
Is this an existing NDDDB occurrence? ☐ no ☐ unk.

Collection? If yes: _____
Number _____ Museum / Herbarium _____

Reporter: C. MacGregor - REC

Address: 2442 2nd Ave

Coronado CA 92118

E-mail Address: catherine@recenv.com

Phone: (619) 232-9200

Plant Information

Phenology: _____ % vegetative _____ % flowering _____ % fruiting

Animal Information

adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown _____
☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

County: San Diego - see map

Landowner / Mgr.: _____

Quad Name: Bonsall

Elevation: _____

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: ☐ H ☐ M ☐ S ☐ W

Source of Coordinates (GPS, topo. map & type): _____

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: ☐ H ☐ M ☐ S ☐ W

GPS Make & Model _____

Datum: NAD27 ☐ NAD83 ☐ WGS84 ☐

Horizontal Accuracy _____ meters/feet

Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ OR Geographic (Latitude & Longitude) ☐

Coordinates: Easting/Longitude _____ Northing/Latitude _____

Habitat Description (plant communities, dominants, associates, substrates/soils, aspects/slope):

observed flying over site, which supports a variety of habitats

Other rare species? Parry's Tetracoccus, Palmer's grappling-hook, Palmer's sagewort (offsite), orange-throated whiptail, northern red rattlesnake, southern CA rufous crowned sparrow, yellow warbler, yellow-breasted chat, CA gnatcatcher, least Bell's vireo

Site Information Overall site quality: ☐ Excellent ☐ Good ☒ Fair ☐ Poor

Current / surrounding land use: undeveloped to north, undeveloped and agriculture to east, Pala road to south, 15 to west

Visible disturbances: _____

Threats: development

Comments: _____

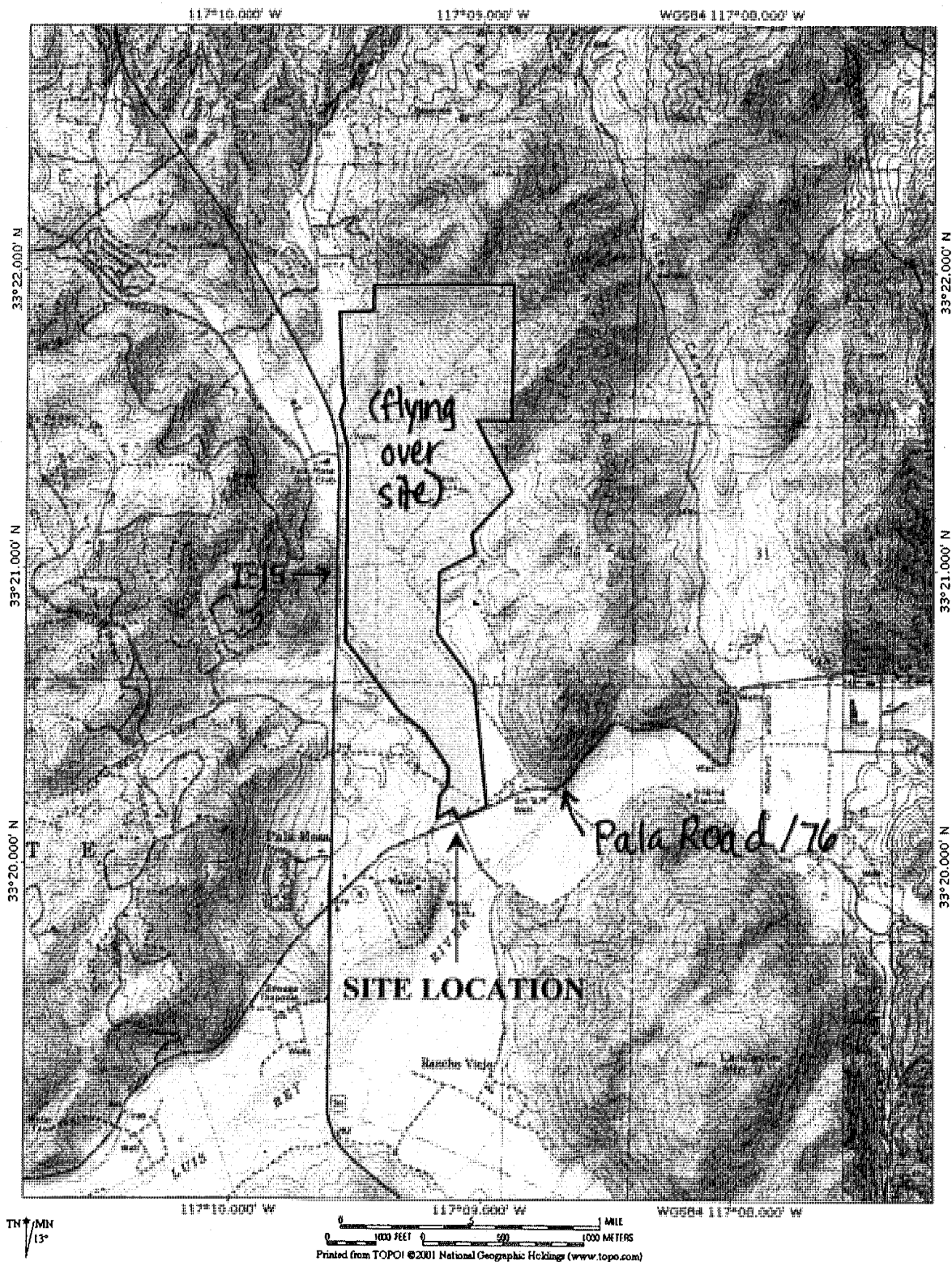
Determination: (check one or more, and fill in blanks)

- ☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

Photographs: (check one or more)

Plant / animal ☐ Slide ☐ Print
Habitat ☐ ☐
Diagnostic feature ☐ ☐

May we obtain duplicates at our expense? ☐ yes ☐ no



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Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work: _____ - _____ - 1999

California Native Species Field Survey Form

Scientific Name: *Aimophila ruficeps canescens*

Common Name: southern California rufous-crowned sparrow

Species Found? ☒ Yes ☐ No If not, why? _____

Total No. Individuals 2 Subsequent Visit? ☐ yes ☐ no
Is this an existing NDBB occurrence? ☐ no ☐ unk.

Collection? If yes: _____
Number _____ Museum / Herbarium _____

Reporter: C. MacGregor

Address: 2442 2nd Avenue
San Diego CA 92101

E-mail Address: catherine@recenv.com

Phone: (619) 232-9200

Plant Information

Phenology: _____ % vegetative _____ % flowering _____ % fruiting

Animal Information

adults ☐ breeding # juveniles ☐ wintering # larvae ☐ burrow site # egg masses ☐ rookery # unknown ☐ nesting ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

County: San Diego - see map Landowner / Mgr.: _____
Quad Name: Bonsall Elevation: _____
T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐ Source of Coordinates (GPS, topo. map & type): _____
T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐ GPS Make & Model _____
Datum: NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy _____ meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ OR Geographic (Latitude & Longitude) ☐
Coordinates: Easting/Longitude _____ Northing/Latitude _____

Habitat Description (plant communities, dominants, associates, substrates/soils, aspects/slope):

Observed in coastal sage scrub at north end of site.

Other rare species? Parry's Tetracoccus, Palmer's sagewort, Palmer's grappling-hook (offsite), orange-throated whiptail, northern red rattlesnake, cooper's hawk, yellow warbler, yellow-breasted chat, CA gnatcatcher, least Bell's Vireo

Site Information Overall site quality: ☐ Excellent ☐ Good ☒ Fair ☐ Poor
Current / surrounding land use: undeveloped to north and east, pasture to south, 1-15 to west

Visible disturbances:

Threats: development

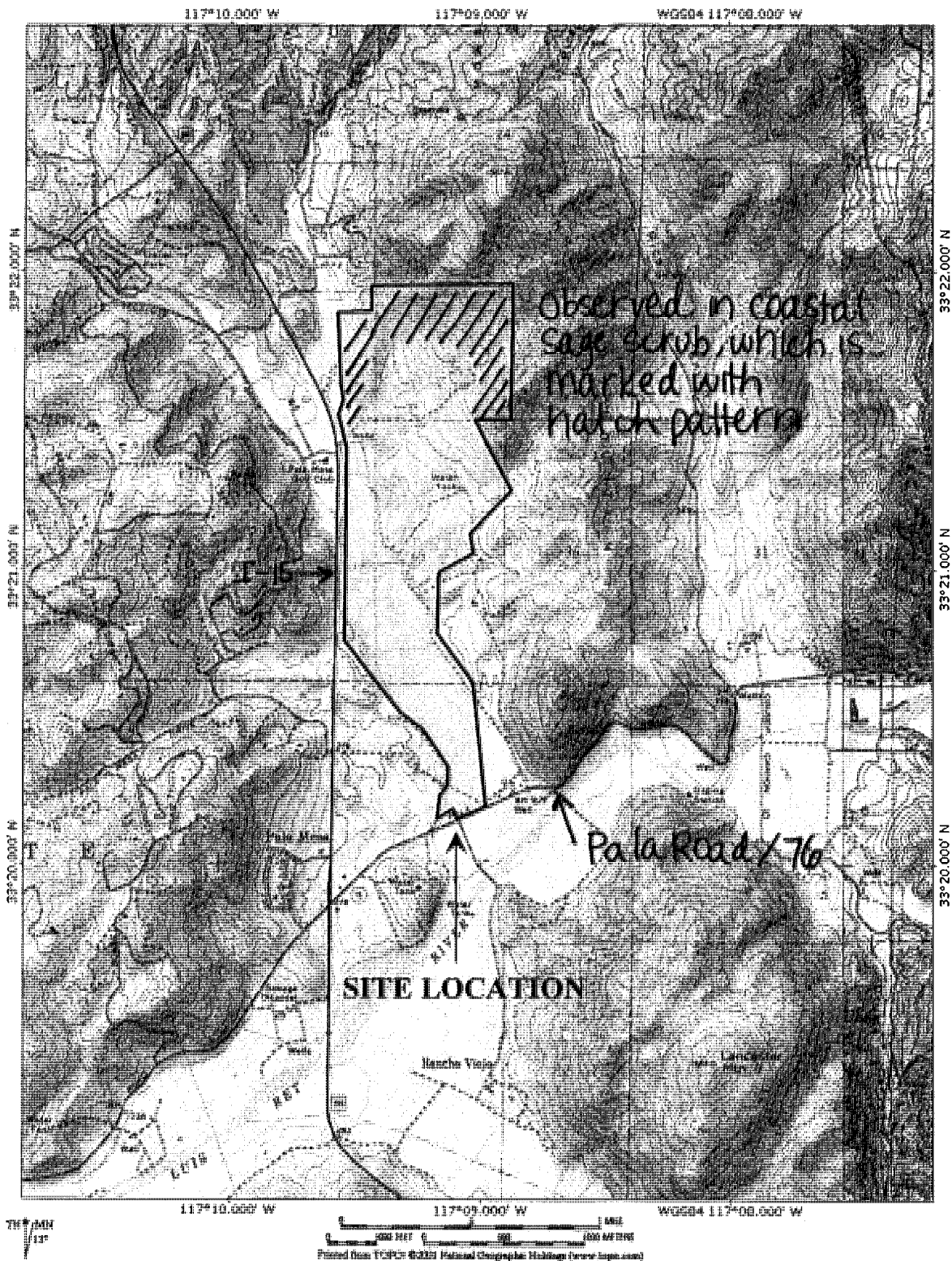
Comments:

Determination: (check one or more, and fill in blanks)

- ☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

Photographs: (check one or more) Slide Print
Plant / animal ☐ ☐
Habitat ☐ ☐
Diagnostic feature ☐ ☐

May we obtain duplicates at our expense? ☐ yes ☐ no



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Sacramento, CA 95814
Fax: (916) 324-0475
<http://www.dfg.ca.gov/whdab/natspec.pdf>

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work: _____ - _____ - 1999

California Native Species Field Survey Form

Scientific Name: Dendroica petechia

Common Name: yellow warbler

Species Found? ☒ Yes ☐ No If not, why? _____

Total No. Individuals 1 Subsequent Visit? ☐ yes ☐ no
Is this an existing NDDDB occurrence? ☐ no ☐ unk.

Collection? If yes: _____
Number _____ Museum / Herbarium _____

Reporter: C. MacGregor

Address: 2442 2nd Avenue
San Diego CA 92101

E-mail Address: catherine@recenv.com

Phone: (619) 232-9200

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown _____
☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

County: San Diego - see map Landowner / Mgr.: _____
Quad Name: Bonsall Elevation: _____
T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: ☐ H ☐ M ☐ S ☐ Source of Coordinates (GPS, topo. map & type): _____
T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: ☐ H ☐ M ☐ S ☐ GPS Make & Model _____
Datum: NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy _____ meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ OR Geographic (Latitude & Longitude) ☐
Coordinates: Easting/Longitude _____ Northing/Latitude _____

Habitat Description (plant communities, dominants, associates, substrates/soils, aspects/slope):

Observed in southern riparian forest dominated by Salix spp.,
Populus fremontii and Platanus racemosa, on substrate of
Grangeville fine sandy loam 0-27% slopes.

Other rare species? Parry's Tetracoccus, Palmer's grappling hook, Palmer's sagewort (offsite), orange-throated
whiptail, northern red rattlesnake, Coopers hawk, southern CA rufous-crowned sparrow, yellow-breasted
chat, CA gnatcatcher, least Bell's vireo

Site Information Overall site quality: ☐ Excellent ☐ Good ☒ Fair ☐ Poor

Current / surrounding land use:

Visible disturbances: cattle damage to wetlands

Threats: development

Comments:

Determination: (check one or more, and fill in blanks)

- ☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

Photographs: (check one or more)

Plant / animal ☐ Slide ☐ Print
Habitat ☐ ☐
Diagnostic feature ☐ ☐

May we obtain duplicates
at our expense? ☐ yes ☐ no

Mail to:
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Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95814
Fax: (916) 324-0475
<http://www.dfg.ca.gov/whdab/natspec.pdf>

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Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work: _____ - _____ - 1999

California Native Species Field Survey Form

Scientific Name: *Icteria virens*

Common Name: yellow-breasted chat

Species Found? ☒ Yes ☐ No If not, why? _____

Total No. Individuals ~4 Subsequent Visit? ☐ yes ☐ no
Is this an existing NDDDB occurrence? ☐ no ☐ unk.

Collection? If yes: _____
Number _____ Museum / Herbarium _____

Reporter: C. MacGregor

Address: 2442 2nd Avenue
San Diego CA 92101

E-mail Address: catherine@recenv.com

Phone: (619) 232-9200

Plant Information

Phenology: _____ % vegetative _____ % flowering _____ % fruiting

Animal Information

adults # juveniles # larvae # egg masses # unknown
☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

County: San Diego - see map Landowner / Mgr.: _____
Quad Name: Bonsai Elevation: _____
T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: ☐ H ☐ M ☐ S ☐ Source of Coordinates (GPS, topo. map & type): _____
T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: ☐ H ☐ M ☐ S ☐ GPS Make & Model _____
Datum: NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy _____ meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☒ OR Geographic (Latitude & Longitude) ☐
Coordinates: Easting/Longitude _____ Northing/Latitude _____

Habitat Description (plant communities, dominants, associates, substrates/soils, aspects/slope):

Southern riparian forest dominated by *Salix* spp., *Populus fremontii*, and *Platanus racemosa*, on substrate of Grangeville fine sandy loam 0-2% slopes

Other rare species? Parry's Tetracoccus, Palmer's grappling-hook, Palmer's sagewort (offsite), orange-throated whiptail, northern red rattlesnake, Cooper's hawk, southern CA rufous-crowned sparrow, yellow warbler, CA gnatcatcher, least Bell's Vireo.

Site Information Overall site quality: ☐ Excellent ☐ Good ☒ Fair ☐ Poor

Current / surrounding land use:

Visible disturbances:

Threats: development

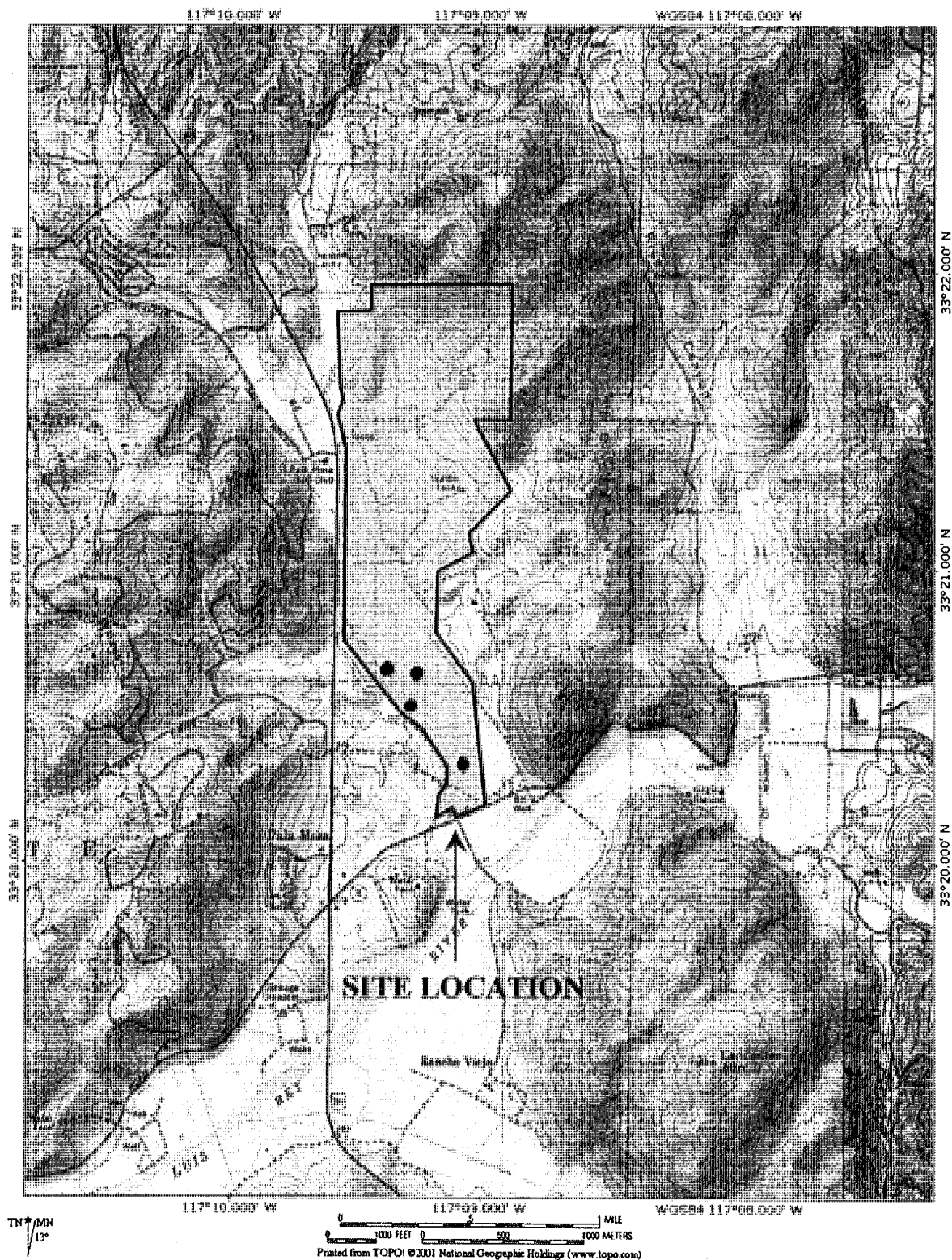
Comments:

Determination: (check one or more, and fill in blanks)

- ☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

Photographs: (check one or more) Slide Print
Plant / animal ☐ ☐
Habitat ☐ ☐
Diagnostic feature ☐ ☐

May we obtain duplicates at our expense? ☐ yes ☐ no



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Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work: April - May - 1999

California Native Species Field Survey Form

Scientific Name: Poliophtila californica californica

Common Name: California gnatcatcher

Species Found? ☒ Yes ☐ No If not, why? _____

Total No. Individuals 10 Subsequent Visit? ☐ yes ☐ no
Is this an existing NDDDB occurrence? ☐ no ☐ unk.

Collection? If yes: _____
Number _____ Museum / Herbarium _____

Reporter: C. MacGregor - REC

Address: 2442 2nd Avenue
San Diego CA 92101

E-mail Address: catherine@recenv.com

Phone: (619) 232-9200

Plant Information

Phenology: _____ % vegetative _____ % flowering _____ % fruiting

Animal Information

10 pairs
adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown _____
☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

County: San Diego see map Landowner / Mgr.: _____
Quad Name: Bonsall Elevation: _____
T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: ☐ H ☐ M ☐ S ☐ C Source of Coordinates (GPS, topo. map & type): _____
T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: ☐ H ☐ M ☐ S ☐ C GPS Make & Model _____
Datum: NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy _____ meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ OR Geographic (Latitude & Longitude) ☐
Coordinates: Easting/Longitude _____ Northing/Latitude _____

Habitat Description (plant communities, dominants, associates, substrates/soils, aspects/slope):

4 pairs observed in good quality coastal sage scrub on east and south-facing slopes, 1 pair observed in relatively flat highly disturbed coastal sage scrub.

Other rare species? Palm's Tetralococcus, Palmer's grappling-hook, Palmer's sagewort (offsite), orange-throated whiptail, northern red rattlesnake, Cooper's hawk, southern carolus-crowned sparrow, yellow warbler, yellow-breasted chat, least Bell's Vireo

Site Information Overall site quality: ☐ Excellent ☐ Good ☒ Fair ☐ Poor

Current / surrounding land use: undeveloped to north and east, pasture to south, I-15 to east

Visible disturbances: _____

Threats: development

Comments: _____

Determination: (check one or more, and fill in blanks)

- ☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

Photographs: (check one or more) Slide Print
Plant / animal ☐ ☐
Habitat ☐ ☐
Diagnostic feature ☐ ☐

May we obtain duplicates at our expense? ☐ yes ☐ no

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Fax: (916) 324-0475
<http://www.dfg.ca.gov/whdab/natspec.pdf>

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work: April - July - 2004

California Native Species Field Survey Form

Scientific Name: <u>Vireo bellii pusillus</u>	
Common Name: <u>least Bell's Vireo</u>	
Species Found? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If not, why? _____	Reporter: <u>C. MacGregor</u>
Total No. Individuals <u>≥ 9</u> Subsequent Visit? <input type="checkbox"/> yes <input type="checkbox"/> no Is this an existing NDDDB occurrence? <input type="checkbox"/> no <input type="checkbox"/> unk.	Address: <u>2442 2nd Avenue</u> <u>San Diego CA 92101</u>
Collection? If yes: _____ Number _____ Museum / Herbarium _____	E-mail Address: <u>catherine@recenv.com</u>
	Phone: (619) <u>232-9200</u>

Plant Information Phenology: _____ % vegetative _____ % flowering _____ % fruiting	Animal Information # adults <u>8</u> # juveniles <u>1</u> # larvae _____ # egg masses _____ # unknown _____ <input type="checkbox"/> breeding <input type="checkbox"/> wintering <input type="checkbox"/> burrow site <input type="checkbox"/> rookery <input type="checkbox"/> nesting <input type="checkbox"/> other
--	---

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

County: San Diego - see map Landowner / Mgr.: _____
Quad Name: Bonsall Elevation: _____
T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: ☐ H ☐ M ☐ S ☐ Source of Coordinates (GPS, topo. map & type): _____
T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: ☐ H ☐ M ☐ S ☐ GPS Make & Model _____
Datum: NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy _____ meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ OR Geographic (Latitude & Longitude) ☐
Coordinates: Easting/Longitude _____ Northing/Latitude _____

Habitat Description (plant communities, dominants, associates, substrates/soils, aspects/slope):
Southern riparian forest dominated by Salix spp., Populus fremontii, and Platanus racemosa, on substrate of Grangeville fine sandy loam 0-27. slopes

Other rare species? Parry's Tetracoccus, Palmer's grappling hook, Palmer's sagewort (off site), orange-throated whiptail, northern red rattlesnake, Cooper's hawk, southern CA rufous-crowned sparrow, yellow warbler, yellow-breasted chat, CA gnatcatcher

Site Information Overall site quality: ☐ Excellent ☐ Good ☒ Fair ☐ Poor

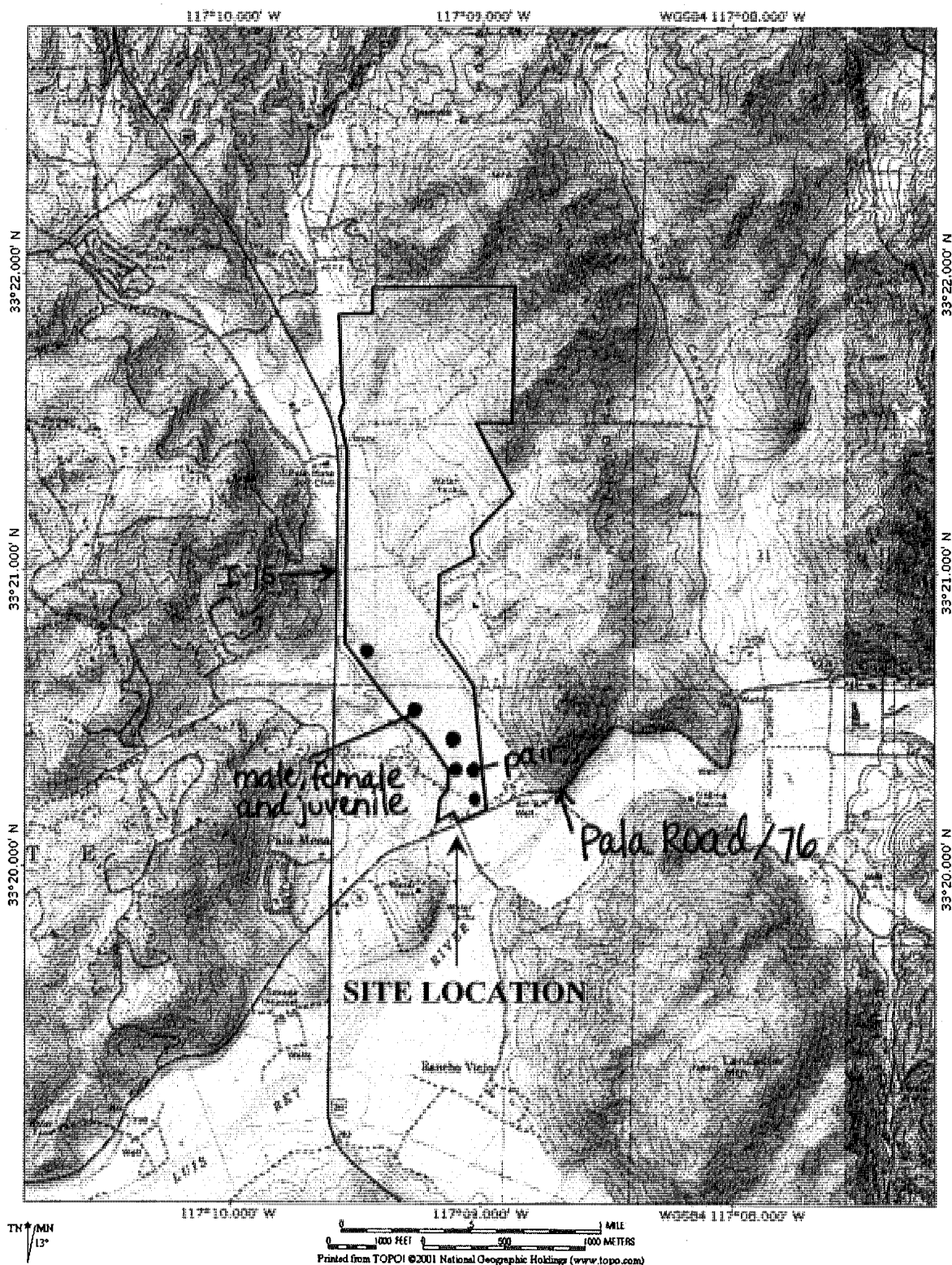
Current / surrounding land use: _____

Visible disturbances: _____

Threats: _____

Comments: _____

Determination: (check one or more, and fill in blanks) <input type="checkbox"/> Keyed (cite reference): _____ <input type="checkbox"/> Compared with specimen housed at: _____ <input type="checkbox"/> Compared with photo / drawing in: _____ <input type="checkbox"/> By another person (name): _____ <input checked="" type="checkbox"/> Other: <u>personal knowledge</u>	Photographs: (check one or more) Plant / animal <input type="checkbox"/> Slide <input type="checkbox"/> Print Habitat <input type="checkbox"/> <input type="checkbox"/> Diagnostic feature <input type="checkbox"/> <input type="checkbox"/> May we obtain duplicates at our expense? <input type="checkbox"/> yes <input type="checkbox"/> no
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APPENDIX C

Potential Sensitive Plant Species Onsite

APPENDIX C
SENSITIVE PLANTS WITH THE POTENTIAL TO OCCUR ON THE CAMPUS PARK PROPERTY
(USGS BONSAILL QUAD, 79 - 223 METERS)

Species Name	Common Name	Family	CNPS	R-E-D	CA/US	MS CP	Growth form, bloom time	Habitat	Potential to Occur Onsite
<i>Abronia villosa</i> var. <i>aurita</i>	chaparral sand-verbena	Nyctaginaceae	1b	2-3-3	-		Annual herb, Jan-Aug	Chaparral, coastal scrub/sandy; 80-1600 m	Low appropriate habitat occurs onsite however, this species has not been documented in the Bonsall Quad.
<i>Acanthomintha ilicifolia</i>	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 appropriate habitat occurs onsite however, this species prefers vernal pools and has not been documented in the Bonsall Quad.
<i>Achnatherum diegoensis</i>	San Diego needlegrass	Poaceae	4	1-2-1	-		Perennial herb, Feb-Jun	Chaparral, coastal scrub/rocky, often mesic; 10-700 m	Low appropriate habitat occurs onsite however, none were observed during field surveys.
<i>Adolphia californica</i>	spineshrub	Rhamnaceae	2	1-3-1	-		Shrub (deciduous), Dec-May	Chaparral, coastal scrub, valley & foothill grassland/clay; 45-300 m	Low appropriate habitat occurs onsite however, this species prefers clay soils and has not been documented in the Bonsall Quad.
<i>Ambrosia pumila</i>	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 appropriate habitat occurs onsite however, this species prefers vernal pools.
<i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i>	Del Mar manzanita	Ericaceae	1b	3-3-2	FE	Y	Shrub (evergreen), Dec-Apr	Chaparral (maritime, sandy); 0-365 m	Low appropriate habitat does not occur onsite, this conspicuous plant would have been observed onsite, and this species has not been documented in the Bonsall Quad.
<i>Artemisia palmeri</i>	Palmer's sagewort	Asteraceae	4	1-2-1	-		Shrub (deciduous), May-Sep	Chaparral, coastal scrub, riparian scrub, riparian woodland/sandy, mesic; 15-915 m	Moderate, appropriate habitat occurs onsite however and was observed offsite in the Diegan coastal sage scrub, however none were observed during intensive site surveys.
<i>Asplenium vesperinum</i>	western spleenwort	Asplenaceae	4	1-2-2	-		Perennial herb (rhizomatous), Feb-Jun	Chaparral, cismontane woodland, coastal scrub/rocky; 180-1000 m	Low appropriate habitat occurs onsite however, none were observed during site surveys.
<i>Brodiaea filifolia</i>	thread-leaf Brodiaea	Themidaceae [Liliaceae]	1b	3-3-3	CE/FT	Y	Perennial herb (bulbiferous), Mar-Jun	Chaparral (openings), cismontane woodland, coastal scrub, plays, valley & foothill grassland, vernal pools/ often clay; 40-1220 m	Low appropriate habitat occurs onsite however, this species prefers vernal pools and has not been documented in the Bonsall Quad.
<i>Brodiaea orecutii</i>	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 serpentine; 30-1615 m	Low appropriate habitat does not occur onsite, this species prefers vernal pools, and has not been documented in the Bonsall Quad.
<i>Calandrinia breweri</i>	Brewer's Calandrinia	Portulacaceae	4	1-2-2	-		Annual herb, Mar-Jun	Chaparral, coastal scrub/ sandy or foamy, disturbed sites and burns; 10-1220 m	Low appropriate habitat occurs onsite however, none were observed during site surveys.
<i>Calandrinia maritima</i>	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 appropriate habitat occurs onsite however, none were observed during site surveys.
<i>Calochortus catalinae</i>	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 appropriate habitat occurs onsite however, none were observed during site surveys.
<i>Camissonia lewisii</i>	Lewis's evening-primrose	Onagraceae	3	2-2-2	-		Annual herb, Mar-Jun	Coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub, valley & foothill grassland/ sandy or clay; 0-300 m	Low appropriate habitat does occur onsite however, this species has not been documented in the Bonsall Quad.
<i>Caulanthus simulans</i>	Payson's Caulanthus	Brassicaceae	4	1-2-3	-		Annual herb, Mar-Jun	Chaparral, coastal scrub/ sandy, granitic; 90-2200 m	Low appropriate habitat occurs onsite however, none were observed during site surveys.
<i>Ceanothus verrucosus</i>	wart-stem-illac	Rhamnaceae	2	2-2-1	-	Y	Shrub (evergreen), Dec-Apr	Chaparral; 1-380 m	Low appropriate habitat does not occur onsite and this species has not been documented in the Bonsall Quad.

Species Name	Common Name	Family	CNPS	R-E-D	CAJUS	MS CP	Growth form, bloom time	Habitat	Potential to Occur Onsite
<i>Centromadia parryi</i> ssp. <i>australis</i>	southern tarplant	Asteraceae	1b	3-3-2	-		Annual herb, May-Nov	Marshes and swamps (margins), valley & foothill grassland (vernally mesic), vernal pools; 0-425 m	Low; this species prefers vernal pools, and has not been documented in the Bonsall Quad.
<i>Centromadia pungens</i> ssp. <i>laevis</i>	smooth tarplant	Asteraceae	1b	2-3-3	-		Annual herb, Apr-Sep	Chenopod scrub, meadows and seeps, playas; riparian woodland, valley & foothill grassland/ alkaline; 0-480 m	Low; appropriate habitat does occur onsite however, this species has not been documented in the Bonsall Quad.
<i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i>	Orcutt's pincushion	Asteraceae	1b	2-3-2	-		Annual herb, Jan-Aug	Coastal bluff scrub (sandy), coastal dunes; 3-100 m	Low; appropriate habitat does not occur onsite and this species has not been documented in the Bonsall Quad.
<i>Chorizanthe polygonoides</i> var. <i>longispina</i>	knottweed spineflower	Polygonaceae	1b	2-2-2	-		Annual herb, Apr-Jul	Chaparral, coastal scrub, meadows & seeps, valley & foothill grassland/ often clay; 30-1450 m	Low; appropriate habitat does occur onsite however, this species has not been documented in the Bonsall Quad.
<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i>	summer-holly	Ericaceae	1b	2-2-2	-		Shrub (evergreen), Apr-Jun	Chaparral; 30-550 m	Low; appropriate habitat does not occur onsite, would have been observed during field surveys, and this species has not been documented in the Bonsall Quad.
<i>Convolvulus simulans</i>	bindweed	Convolvulaceae	4	1-2-2	-		Annual herb, Mar-Jul	Chaparral (openings), coastal scrub, valley & foothill grassland/clay, serpentine seeps; 30-700 m	Low; appropriate habitat occurs onsite however, none were observed during site surveys.
<i>Coreopsis maritima</i>	San Diego sea-dahlia	Asteraceae	2	2-2-1	-		Perennial herb, Mar-May	Coastal bluff scrub, coastal scrub; 5-150 m	Low; appropriate habitat does occur onsite however, this species has not been documented in the Bonsall Quad.
<i>Deinandra paniculata</i>	San Diego tarplant	Asteraceae	4	1-2-2	-		Annual herb, Apr-Nov	Coastal scrub, valley & foothill grassland/ usually vernally mesic; 25-940 m	Low; appropriate habitat occurs onsite however, none were observed during site surveys.
<i>Dichondra occidentalis</i>	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; appropriate habitat occurs onsite however, none were observed during site surveys.
<i>Dudleya blochmaniae</i>	Blochman's Dudleya	Crassulaceae	1b	2-3-2	-		Perennial herb, Apr-Jun	Coastal bluff scrub, chaparral, coastal scrub, valley and foothill grassland/rocky, often clay or serpentine; 5-450 m	Low; appropriate habitat does occur onsite however, this species prefers clay soils and has not been documented in the Bonsall Quad.
<i>Dudleya variegata</i>	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; appropriate habitat does occur onsite however, this species prefers clay soils and has not been documented in the Bonsall Quad.
<i>Dudleya viscidula</i>	sticky Dudleya	Crassulaceae	1b	2-2-3	-	Y	Perennial herb, May-Jun	Coastal bluff scrub, chaparral, coastal scrub/rocky; 10-550 m	Low; appropriate habitat does occur onsite however, this species has not been documented in the Bonsall Quad.
<i>Eryngium aristulatum</i> var. <i>parishii</i>	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; appropriate habitat does occur onsite however, this species prefers vernal pools and has not been documented in the Bonsall Quad.
<i>Euphorbia misera</i>	cliff spurge	Euphorbiaceae	2	2-2-1	-		Shrub, Dec-Aug	Coastal bluff scrub, coastal scrub/ rocky; 10-500 m	Low; this conspicuous shrub would have been observed during field surveys, associate plant species not onsite.
<i>Harpagonella palmeri</i>	Palmer's grappling-hook	Boraginaceae	4	1-2-1	-		Annual herb, Mar-May	Chaparral, coastal scrub, valley & foothill grassland/ clay; 20-830 m	Onsite; observed in the northern section of the site.
<i>Hespererax caulescens</i>	hogwallow starfish	Asteraceae	4	1-2-3	-		Annual herb, Mar-Jun	Valley and foothill grassland (mesic, clay); 0-505 m	Low; appropriate habitat occurs onsite however, this species prefers clay soils.
<i>Holocarpha virgata</i> ssp. <i>elongata</i>	graceful tarplant	Asteraceae	4	1-2-3	-		Annual herb, Jul-Nov	Chaparral?, cismontane woodland, coastal scrub, valley & foothill grassland; 60-1100 m	Low; appropriate habitat occurs onsite however none were observed during field surveys.
<i>Horkelia cuneata</i> ssp. <i>puberula</i>	mesa Horkelia	Rosaceae	1b	2-3-3	-		Perennial herb, Feb-Sep	Chaparral, cismontane woodland, coastal scrub/sandy or gravelly; 70-810 m	Low; appropriate habitat does occur onsite however, this species has not been documented in the Bonsall Quad.
<i>Isocoma menziesii</i> var. <i>decumbens</i> (synonym of <i>I. menziesii</i> in Jepson)	decumbent goldenbush	Asteraceae	1b	2-2-2-1	-		Shrub, Apr-Nov	Chaparral, coastal scrub (sandy, often in disturbed areas), 10-135 m	Low; appropriate habitat does occur onsite however, this species has not been documented in the Bonsall Quad.
<i>Juglans californica</i> var. <i>californica</i>	Southern Californica black walnut	Juglandaceae	4	1-2-3	-		Tree (deciduous), Mar-May	Chaparral, cismontane woodland, coastal scrub/ alluvial; 50-900 m	Low; appropriate habitat occurs onsite however none were observed during field surveys.

Species Name	Common Name	Family	CNPS	R-E-D	CA/US	MS CP	Growth form, bloom time	Habitat	Potential to Occur Onsite
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	Coulter's salt-marsh daisy	Asteraceae	1b	2-3-2	-		Annual herb, Feb-Jun	Marshes & swamps (coastal salt), plays, vernal pools; 1-1220 m	Low, appropriate habitat does occur onsite however, this species prefers vernal pools and has not been documented in the Bonsall Quad.
<i>Lilium humboldtii</i> ssp. <i>ocellatum</i>	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, appropriate habitat occurs onsite however none were observed during field surveys.
<i>Lycium californicum</i>	California desert thorn	Solanaceae	4	1-2-1	-		Shrub, Mar-Aug	Coastal bluff scrub, coastal scrub, 5-150 m	Low, appropriate habitat occurs onsite however none were observed during field surveys.
<i>Microseris douglasii</i> ssp. <i>platycarpa</i>	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, appropriate habitat occurs onsite however none were observed during field surveys.
<i>Mucronella californica</i>	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, appropriate habitat occurs onsite however none were observed during field surveys.
<i>Nama stenocarpum</i>	inud Nama	Hydrophyllaceae	2	3-2-1	-		Annual/perennial herb, Jan-Jul	Marshes & swamps (lake margins, riverbanks); 5-500 m	Low, appropriate habitat does not occur onsite and this species has not been documented in the Bonsall Quad.
<i>Navarretia fossalis</i>	-	Polemoniaceae	1b	2-3-2	FT	Y	Annual herb, Apr-Jun	Chenopod scrub, marshes & swamps (assorted shallow freshwater), plays, vernal pools; 30-1300 m	Low, appropriate habitat does not occur onsite, this species prefers vernal pools and has not been documented in the Bonsall Quad.
<i>Nemacaulis denudata</i> var. <i>denudata</i>	coast woolly-heads	Polygonaceae	1b	2-2-2	-		Annual herb, Apr-Sep	Coastal dunes, 0-100 m	Low, appropriate habitat does not occur onsite and this species has not been documented in the Bonsall Quad.
<i>Nolina cismontana</i>	chaparral Nolina	Nolinaceae [Liliaceae in J]	1b	3-2-3	-		Shrub (evergreen), May-Jul	Chaparral, coastal scrub/sandstone or gabbro; 140-1275 m	Low, appropriate habitat does occur onsite however, this species prefers gabbro soils.
<i>Ophioglossum californicum</i>	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, appropriate habitat does occur onsite however, this species prefers vernal pools.
<i>Orobanche parishii</i> ssp. <i>brachyloba</i>	beach broom-rape, short-lobe broom-rape	Orobanchaceae	4	1-2-2	-		Perennial herb, parasitic, Apr-Oct	Coastal bluff scrub, coastal dunes, coastal scrub/sandy; 3-305 m	Low, appropriate habitat does occur onsite however, none were observed during field surveys.
<i>Pentstemon aurea</i>	golden rayed Pentstemon	Asteraceae	4	1-2-2	-		Annual herb, Mar-Jul	Cismontane woodland, coastal scrub, lower montane coniferous forest, valley & foothill grassland; 80-1850 m	Low, appropriate habitat does occur onsite however, none were observed during field surveys.
<i>Penstemon gairdneri</i> ssp. <i>gairdneri</i>	Gardner'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 does occur onsite however, this species prefers vernal pools.
<i>Piperia cooperi</i>	chaparral rein orchid	Orchidaceae	4	1-2-2	-		Perennial herb, Mar-Jun	Chaparral, cismontane woodland, valley & foothill grassland; 15-1585 m	Low, appropriate habitat does occur onsite however, none were observed during field surveys.
<i>Polygala cornuta</i> var. <i>fishiae</i>	Fish's milkwort	Polygalaceae	4	1-1-2	-		Shrub (deciduous), May-Aug	Chaparral, cismontane woodland, riparian woodland; 100-1100 m	Low, appropriate habitat does occur onsite however, none were observed during field surveys.
<i>Quercus dumosa</i>	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, appropriate habitat does occur onsite however, none were observed during field surveys.
<i>Quercus engelmannii</i>	Engelmann's mesa blue oak	Fagaceae	4	1-2-2	-		Tree (deciduous), Mar-May	Chaparral, cismontane woodland, riparian woodland, valley & foothill grassland; 120-1300 m	Low, appropriate habitat does occur onsite however, none were observed during field surveys.
<i>Romneya coulteri</i>	Coulter's Matilija poppy	Papaveraceae	4	1-2-3	-		Perennial herb (rhizomatous), Mar-Jul	Chaparral, coastal scrub/ often in burns; 20-1200 m	Low, appropriate habitat does occur onsite however, none were observed during field surveys.
<i>Satureja chamelieri</i>	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, appropriate habitat does occur onsite however, this species has not been documented in the Bonsall Quad.
<i>Tetradlea dioica</i>	Parry's Tetradlea	Euphorbiaceae	1b	3-2-2	-		Shrub (deciduous), Apr-May	Chaparral, coastal scrub, 165-1000 m	Onsite; observed in the coastal sage scrub habitat.

Species Name	Common Name	Family	CNPS	R-E-D	CAUS	MS CP	Growth form, bloom time	Habitat	Potential to Occur Onsite
<i>Viguiera tinctoria</i>	San Diego sunflower	Asteraceae	4	1-2-1	-		Shrub, Feb-Jun	Chaparral, coastal scrub, 60-750 m	Low; this species would have been observed onsite, appropriate habitat does occur onsite however, none were observed during field surveys.

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
- 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)

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

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
- CC California candidate for listing

APPENDIX D

Potential Sensitive Wildlife Species Onsite

APPENDIX D SENSITIVE ANIMALS WITH THE POTENTIAL TO OCCUR ON THE CAMPUS PARK PROPERTY				
Common Name	Species Name	CA/US	MSCP	Habitat
Potential to Occur Onsite				
INVERTEBRATES				
Hermes copper	<i>Lycaena hermes</i>	-	(Co)	Coastal sage scrub, mixed chaparral and chamise chaparral; 0-3000ft. Host plant is <i>Rhamnus crocea</i> .
Quino checkerspot	<i>Euphydryas editha quino</i>	FE		Open grassy areas, interior foothills, host-plant is <i>Plantago erecta</i> , <i>Plantago ovata</i> , <i>Castilleja exserta</i> ; 0-1000ft.
AMPHIBIANS				
Arroyo toad	<i>Bufo californicus</i>	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.
Western spadefoot	<i>Spea hammondi</i>	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.
REPTILES				
California red-sided garter snake (south coast garter snake)	<i>Thamnophis sirtalis infernalis</i>	CSSC		Riparian and freshwater marsh; 0-1000ft.
Coast horned lizard	<i>Phrynosoma coronatum</i>	CSSC	X	Coastal sage scrub with harvester ants (<i>Pogonomyrmex</i> spp.).
Coast patch-nosed snake	<i>Salvadora hexalepis virgulata</i>	CSSC		Grass, chaparral, woodland, desert and coastal sage scrub. Found near rock outcrops with adjacent seasonal drainages; 0-3000ft.
Coastal rosy boa	<i>Charina trivirgata roseofusca</i>	(FSC)	(Co)	Coastal sage scrub, mixed chaparral, oak woodlands and chamise chaparral. Often found in association with rock outcrops; 0-3000ft.
Coronado skink	<i>Eumeces skiltonianus interparietalis</i>	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.

Common Name	Species Name	CA/US	MSCP	Habitat	Potential to Occur Onsite
Northern red rattlesnake	<i>Crotalus ruber ruber</i>	CSSC		Coastal sage scrub, mixed chaparral, open grassy areas and agricultural areas, chamise chaparral, pinon juniper and desert scrub; 0-3000ft.	Onsite; one observed onsite in the northwest section of coastal sage scrub habitat.
Orange-throated whiptail	<i>Cnemidophorus hyperythrus</i>	CSSC	X	Coastal sage scrub, mixed chaparral, grassland, riparian, and chamise chaparral habitats. Open hillsides with brush and rock, well drained soils; 1-1000ft	Onsite; five were observed in the coastal sage scrub onsite.
San Diego banded gecko	<i>Coleonyx variegatus abbotti</i>	-	(Co)	Cresote bush flats, sagebrush desert, pinon-juniper, catclaw-cedar-grama grass, chaparral; often associated with rocks; can be found under rocks, boards and other objects during the day.	Low; appropriate habitat is found onsite however, none were observed during site visits.
Silvery legless lizard	<i>Anniella pulchra pulchra</i>	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; appropriate habitat is found onsite however, none were observed during site visits.
Southwestern pond turtle	<i>Clemmys marmorata pallida</i>	CSSC	X	Major rivers and streams, especially in headwater areas; 0-1000ft.	Low; unlikely to occur onsite habitats, however in 1987 a good population was spotted offsite in Temecula Canyon.
Two-striped garter snake	<i>Thamnophis hammondi</i>	CSSC		In or near permanent fresh water, often along streams with rocky beds bordered by willows or other streamside growth. Sometimes near vernal pools; 0-1000ft.	Low; appropriate habitat is found onsite however, none were observed during site visits.
BIRDS					
Bank swallow	<i>Riparia riparia</i>	CT		Coastal sage scrub, riparian and freshwater marsh; 0-500ft.	Low; appropriate habitat is found onsite however, none were observed during site visits.
Belding's savannah sparrow	<i>Passerculus sandwichensis beldingi</i>	CE	X	Grasslands and salt or alkali marsh; 0-500ft.	Low; appropriate habitat is found onsite however, none were observed during site visits.
Bell's sage sparrow	<i>Amphispiza belli belli</i>	CSSC Ad		Coastal sage scrub, mixed and chamise chaparral. Nests well hidden in sagebrush or other scrub; 0-3000ft.	Low; appropriate habitat is found onsite however, none were observed during site visits.
Burrowing owl	<i>Athene cunicularia</i>	CSSC 2nd	X	Open, dry grasslands agricultural and range lands, and desert habitats of low growing vegetation (associated with burrowing animals); 0-1000ft.	Low; habitat suitable, though not observed during intensive field surveys.

Common Name	Species Name	CA/US	MSCP	Habitat	Potential to Occur Onsite
California gnatcatcher	<i>Poliotptila californica californica</i>	CSSC Ad/FT	X	Coastal sagebrush scrub especially where California sage (<i>Artemisia californica</i>) is the dominant plant; 0-3000 ft.	Onsite; ten (Five pair) were observed in the coastal sage scrub habitat onsite. Low; appropriate habitat is found onsite however, none were observed during site visits.
California horned lark	<i>Eremophila alpestris actia</i>	CSSC Ad		Open patches of bare land alternating with low vegetation in grasslands, montane meadows, and sagebrush plains; 0 to over 3000ft.	Low; appropriate habitat is found onsite however, none were observed during site visits.
Cooper's hawk	<i>Accipiter cooperii</i>	CSSC 3rd	X	Riparian and oak woodlands, eucalyptus groves and other forested areas; 500-3000ft.	Onsite; two were observed onsite.
Ferruginous hawk	<i>Buteo regalis</i>	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; appropriate habitat is found onsite however, none were observed during site visits.
Golden eagle	<i>Aquila chrysaetos</i>	CSSC 3rd	X	Mountains, foothills, and adjacent grassland, open areas and canyons; 0-3000ft. (nesting/wintering)	Low; habitat suitable, though not observed during intensive field surveys.
Least Bell's vireo	<i>Vireo bellii pusillus</i>	CE/FE	X	Rivers and larger creeks. Nests in willows, mule fat, and riparian species; 0-1000ft.	Onsite; at least nine were observed and heard within the southern riparian forest habitat.
Loggerhead shrike	<i>Lanius ludovicianus</i>	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; appropriate habitat is found onsite however, none were observed during site visits.
Merlin	<i>Falco columbarius</i>	CSSC 1st		Grassland and salt or alkali marsh (winter); 0-500ft.	Low; appropriate habitat is found onsite however, none were observed during site visits.
Mountain plover	<i>Charadrius montanus</i>	CSSC Ad/ FPT	X	Grasslands (winter); 0-500ft.	Low; habitat suitable, though not observed during intensive field surveys.
Northern harrier	<i>Circus cyaneus</i>	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; appropriate habitat is found onsite however, none were observed during site visits.
Prairie falcon	<i>Falco mexicanus</i>	CSSC 3rd		Mountainous grasslands, open hills, open plains; 0 to over 3000ft.	Low; appropriate habitat is found onsite however, none were observed during site visits.

Common Name	Species Name	CA/US	MSCP	Habitat	Potential to Occur Onsite
Purple martin	<i>Progne subis</i>	CSSC 2nd		Riparian, oak woodlands and mixed conifers; 0-1000ft. and over 3000ft.	Low; habitat suitable, though not observed during intensive field surveys.
San Diego cactus wren	<i>Campylorhynchus brunneicapillus sandiegensis</i>	CSSC Ad	X	Coastal sage scrub; 0-500ft.	Low; appropriate habitat is found onsite however, none were observed during site visits.
Sharp-shinned hawk	<i>Accipiter striatus</i>	CSSC 3rd		Open woodlands, residential, larger trees for nesting; 0 to over 3000ft.	Low; habitat suitable, though not observed during intensive field surveys.
Short-eared owl	<i>Asio flammeus</i>	CSSC 2nd		Grassland and freshwater marsh (winter); 0-500ft	Low; habitat suitable, though not observed during intensive field surveys.
Southern California rufous-crowned sparrow	<i>Aimophila ruficeps canescens</i>	CSSC Ad	X	Sparse, mixed chaparral and coastal scrub habitats (especially coastal sage). Frequents relatively steep, often rocky hillsides with grass and forb patches; 0-3000ft.	Onsite; Two southern California rufous-crowned sparrows were observed within the coastal sage scrub habitat in the northern section of the site
Southwestern willow flycatcher	<i>Empidonax traillii eximius</i>	FE	X	Dense willows along streams and rivers. Nests over standing or running waters; 0-1000ft.	Low; habitat suitable, though not observed during intensive field surveys.
Summer tanager	<i>Piranga rubra</i>	CSSC 2nd		Riparian; 0-500ft.	Low; appropriate habitat is found onsite however, none were observed during site visits.
Tricolored blackbird	<i>Agelaius tricolor</i>	CSSC Ad	X	Fresh water, preferably in emergent wetland with tall, dense cattails or tules, but also in thickets of willow, blackberry, wild rose, tall herbs (Breeds). Feeds in grassland and cropland habitats; 0-500ft and 1000-3000ft.	Low; habitat suitable, though not observed during intensive field surveys.
Turkey Vulture	<i>Cathartes aura</i>	-	(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.	Onsite; this species was observed flying over the site.
Vermilion flycatcher	<i>Pyrocephalus rubinus</i>	CSSC 1st		Riparian; 0-500ft.	Low; appropriate habitat is found onsite however, none were observed during site visits.

Common Name	Species Name	CA/US	MSCP	Habitat	Potential to Occur Onsite
Yellow warbler	<i>Dendroica petechia brewsteri</i>	CSSC 2nd		Riparian; 0-500ft.	Onsite; one species was observed in the southern riparian forest habitat.
Yellow-breasted chat	<i>Icteria virens</i>	CSSC 2nd		Dense thickets and brushy areas in riparian habitats; 0-3000ft	Onsite; four species were observed in the southern riparian forest habitat.
MAMMALS					
Badger	<i>Taxidea taxus neglecta</i>		X	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats; 0 to over 3000ft.	Low; appropriate habitat is found onsite however, none were observed during site visits.
Black-tailed jackrabbit	<i>Lepus californicus bennettii</i>	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.	Low; habitat suitable, though not observed during intensive field surveys.
California leaf-nosed bat	<i>Macrotus californicus</i>	CSSC 2nd		Coastal sage scrub, mixed chaparral, riparian, desert scrub and wash. Roosts in buildings and mines; 0-1000ft.	Low; appropriate habitat is found onsite however, none were observed during site visits.
California pocket mouse (Dulzura pocket mouse)	<i>Chaetodipus californicus femoralis</i>	CSSC Ad		Coastal sage scrub, mixed chaparral, oak woodland, chamise chaparral, and mixed conifer habitats; 0 to over 3000ft.	Low; habitat suitable, though not observed during intensive field surveys.
Mountain lion	<i>Puma concolor californicus</i>		X	Forested and bushy regions, avoids open areas.	Low; habitat suitable, though not observed during intensive field surveys.
Mule deer	<i>Odocoileus hemionus fuliginata</i>		X	Forests, brushfields, and meadows.	Low; habitat suitable, though not observed during intensive field surveys.
Pallid bat	<i>Antrozous pallidus pacificus</i>	CSSC Ad		Coastal sage scrub, mixed chaparral, oak woodlands, chamise chaparral, desert wash and desert scrub. Prefers rocky outcrops, cliffs and crevices with access to open habitats for foraging; 0-1000ft.	Low; habitat suitable, though not observed during intensive field surveys.
Desert woodrat	<i>Neotoma lepida intermedia</i>	CSSC Ad		Coastal sage scrub, oak woodlands and chamise chaparral and rocky outcrops. Nocturnal. Typically associated with cacti; 500-3000ft.	Low; appropriate habitat is found onsite however, none were observed during site visits.
Little pocket mouse (Pacific pocket mouse) (coastal)	<i>Perognathus longimembris pacificus</i>	CSSC 1st/FE		Coastal sage scrub and grasslands; 0-500ft.	Low; appropriate habitat is found onsite however, none were observed during site visits.

Common Name	Species Name	CA/US	MSCP	Habitat	Potential to Occur Onsite
San Diego pocket mouse (high desert zone)	<i>Chaetodipus fallax fallax</i>	CSSC Ad		Coastal sage scrub and mixed and chamise chaparral. Nocturnal. Seeks cover in rocky/gravelly areas with a yucca overstory; 500-3000ft	Low; habitat suitable, though not observed during intensive field surveys.
Southern grasshopper mouse	<i>Onychomys torridus ramona</i>	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; appropriate habitat is found onsite however, none were observed during site visits.
Spotted bat	<i>Euderma maculatum</i>	CSSC Ad		Primarily cave dwelling but also found in mixed chaparral and oak woodlands; 0-1000ft.	Low; appropriate habitat is found onsite however, none were observed during site visits.
Stephens' kangaroo rat	<i>Dipodomys stephensi</i>	CT/FE		Coastal sage scrub and grasslands; 500-3000ft.	Low; habitat suitable, though not observed during intensive field surveys.
Townsend's big-eared bat	<i>Plecotus townsendii pallascens</i>	CSSC 2nd		All but subalpine and alpine habitats. Requires caves, mines, tunnels, buildings, or other human-made structures for night, day, hibernation or maternity roosts; 500-3000ft.	Low; habitat suitable, though not observed during intensive field surveys.
Western mastiff bat	<i>Eumops perotis californicus</i>	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; appropriate habitat is found onsite however, none were observed during site visits.
Yuma Myotis	<i>Myotis yumanensis saturatus</i>	(FSC)	(Co)	Roosts in caves, mines, buildings, bridges, and tree cavities; forages over open water in forested areas.	Low; habitat suitable, though not observed during intensive field surveys.

***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

(Co) - of interest to County biologists

APPENDIX E

RPO Exemption Findings from County of San Diego Planning Commission

GARY L. PRYOR
DIRECTOR



County of San Diego

DEPARTMENT OF PLANNING AND LAND USE

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EL CAJON OFFICE
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EL CAJON, CA 92020-3912
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July 23, 2004

David Davis
402 West Broadway
Suite 2175
San Diego, California 92101


Dear Mr. Davis:

On July 23, 2004, the San Diego County Planning Commission considered your request for a Resource Protection Ordinance (RPO) Exemption for two adjacent subdivision projects. These projects must still process several discretionary applications and comply with the California Environmental Quality Act (CEQA) to mitigate for the loss of wetlands. The projects are located at the Campus Park/ Hewlett Packard Specific Plan that was approved in 1983, but never constructed. These wetlands have grown on the property from runoff from the westerly golf course and the easterly agricultural activities. A previously approved road (Pankey Road) could be improved to cross directly through the middle of the wetlands. This proposal will move the roads to the outer boundaries of the wetlands, disturbing far less than the originally approved project, yet still providing adequate access.

By a vote 5-0, with Commissioners Beck and Woods absent, the Commission recommended approval of your request. This decision of the Commission becomes final on August 2, 2004 at 4:00 p.m. unless prior to that you or a protestant files a written appeal to the Board of Supervisors accompanied by a fee of \$500. Filing an appeal will stay the decision of the Commission until a new hearing on your application is held and action is taken by the Board of Supervisors. If you have any questions, please contact David Sibbet at (858) 694-3680.

SAN DIEGO COUNTY PLANNING COMMISSION

Gary L. Pryor, Secretary

By: 
David Hulse, Chief

DLP:DH:mo

cc's cont'd next page

cc: Fallbrook Community Planning Group, 205 Calle Linda, Fallbrook, CA 92028
Glenn Russell, CEQA Regulatory Manager, DPLU, M.S. 0650
David Sibbet, Project Manager, DPLU, M.S. 0650
Susie Vaughn, GPA Coordinator, DPLU, M.S. 0650
Nael Areigat, Project Manager, DPLU, M.S. 0650
Ivan Holler, Deputy Director, DPLU, M.S. 0650
Dixie Switzer, GP2020 Planner, DPLU, M.S. 0650
Carl Hebert, Case Tracking System, DPLU, M.S. 0650
Leslie Richter, DPLU, MS 0650
Deepika Jagtiani, DPLU, MS 0650
File

SAN DIEGO COUNTY PLANNING COMMISSION

5201 Ruffin Road

San Diego, CA 92123

July 23, 2004

Decision of the Planning Commission
On the Application of Passerelle and Pappas
RPO Exemption

GRANT, a specific exemption pursuant to Article V.2. of the Resource Protection Ordinance to disturb of wetlands for the Passerelle and Pappas Projects, as shown in substantial conformance to the two (2) sheet plans dated July 12, 2004.

CONDITIONS

The following conditions are imposed with the granting of this Exemption:

1. Property owners shall agree to preserve and save harmless the County of San Diego and each officer and employee thereof from any liability or responsibility for any accident, loss, or damage to persons or property happening or occurring as the proximate result of any of the work undertaken to complete this work, and that all of said liabilities are hereby assumed by the property owner.
2. DEFENSE OF LAWSUITS AND INDEMNITY: The applicant shall: (1) defend, indemnify and hold harmless the County, its agents, officers and employees from any claim, action or proceeding against the County, its agents, officers and employees to attack, set aside, void or annul this approval or any of the proceedings, acts or determinations taken, done or made prior to this approval; and (2) reimburse the County, its agents, officers or employees for any court costs and attorney's fees which the County, its agents, officers or employees may be required by a court to pay as a result of such approval. At its sole discretion, the County may participate at its own expense in the defense of any such action, but such participation shall not relieve the applicant of any obligation imposed by this condition. The County shall notify the applicant promptly of any claim or action and cooperate fully in the defense.

RESOURCE PROTECTION ORDINANCE EXEMPTION FINDINGS

2. All or any portion of a Specific Plan which has at least one Tentative Map or Tentative Parcel Map approved prior to August 10, 1988, provided that the Planning Commission or, on appeal, the Board of Supervisors, makes the following findings at a notice public hearing:

The proposed Tentative Maps (Passerelle and Pappas) are within the Campus Park/ Hewlett Packard Specific Plan, except the northernmost portion of Passerelle, which equals 176.38 acres. The Campus Park/ Hewlett Packard Specific Plan is 441.84 acres. The Passerelle Project is 501.76 acres. The Pappas Project is 116.46 acres. Tentative Parcel Map TPM 13703 was recorded on February 28, 1985.

- a. The applicant has, with regard to the portion sought to be exempted, prior to August 10, 1988, incurred substantial public facilities or infrastructure expenditures and performed substantial grading or construction of physical improvements to serve the portion outside the approved map in good faith.

The previous owner, the Hewlett-Packard Company, paid approximately \$3,761,498 to construct the water and sewer lines in this area in 1985. The Hewlett-Packard Company constructed an on-site and off-site main water transmission line, a force main sewer line, and a gravity main sewer line to serve both the project site and adjacent properties. Half of the sewer line and all of the water lines are outside the approved map. A bridge over Interstate 15 was also constructed to access this project.

- b. If there are located wetlands or floodplains or riparian habitat on the portion sought to be exempted, that (i) none of said lands is affected directly or substantially by the project, or (ii) that measures have been taken which avoid development on said lands.

A previously approved road (Pankey Road) could be improved to cross directly through the middle of the wetland. This road was approved as a part of the original Campus Park Specific Plan and is shown on the Department of Public Work's Circulation Element as a Small Collector. This proposal will move the roads to the outer boundaries of the wetlands, disturbing far less than the amount of the originally approved project, yet still providing adequate access. If the Campus Park/ Hewlett Packard Project were developed today approximately 99.2 acres of wetlands would be disturbed. If the Passerelle and Pappas Projects were developed, then approximately 29.7 acres of wetlands would be disturbed.

NOTICES:

The decision of the Planning Commission becomes final on the eleventh day following the date on this permit unless prior to that date, you or a protestant files a written appeal to the Board of Supervisors accompanied by a fee of \$500.00. Filing of an appeal will stay the decision of the Planning Commission until a hearing on your application is held and action is taken by the Board of Supervisors.

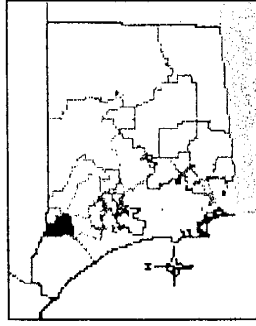
ITEM: 7

RPO Exemption for Passerelle & Pappas Projects

San Diego County Planning Commission

July 23, 2004

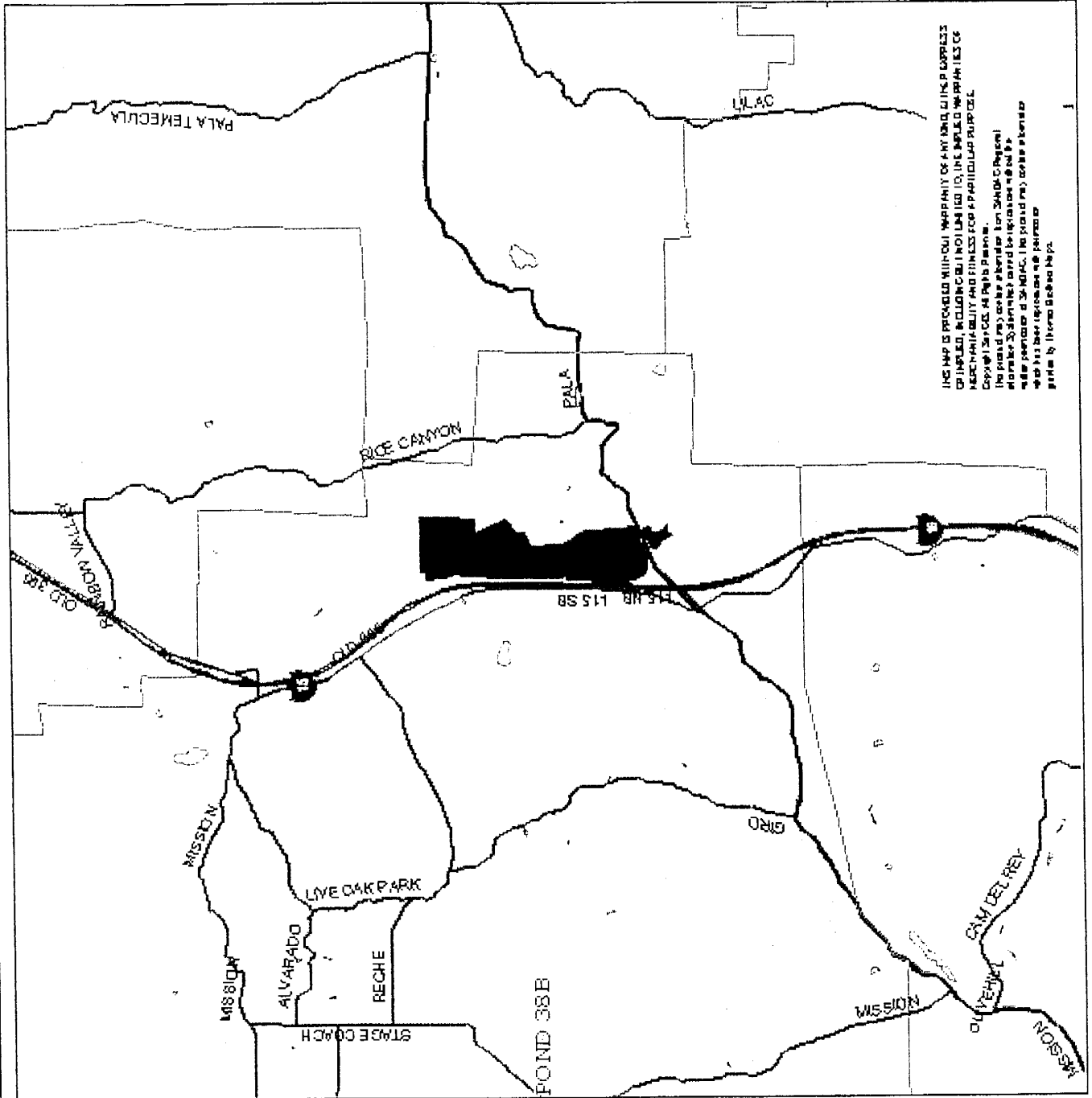


Fallbrook
Community Planning Area

12,500,000



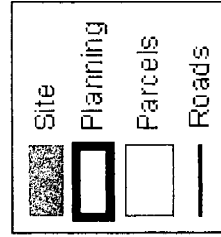
Code No. 07126004
Sd/- Dr. Jyoti Chavhan Page No. 13 of 18



Pappas Planning Map

Fallbrook
Community Planning Area

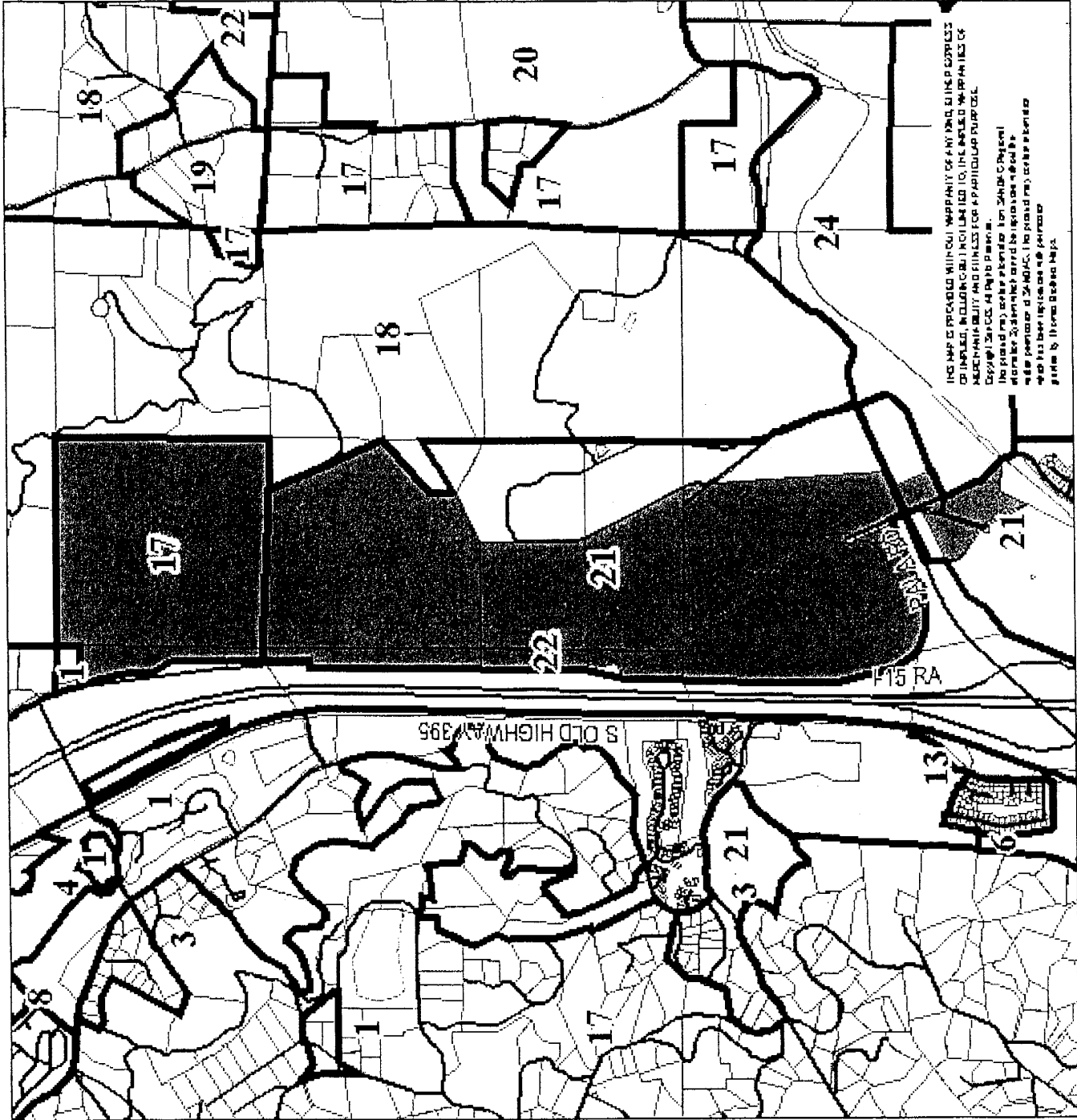
- (1) - Residential:
1 DU / 1, 2, 4 Acres
- (4) - Residential:
2.9 DU / Acre
- (8) - Residential:
14.5 DU / Acre
- (13) - General Commercial
- (17) - Estate Residential:
1 DU / 2, 4 Acres
- (18) - Multiple Rural Use
1 DU / 4, 8, 20 Acres
- (19) - Intensive Agriculture
1 DU / 4, 8 Acres
- (20) - General Agriculture
- (21) - Specific Plan Area
- (22) - Public/Semi-Public
- (24) - Impact Sensitive
1 DU / 20 Acres



0 500 1,000 2,000 3,000
Feet



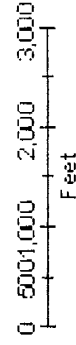
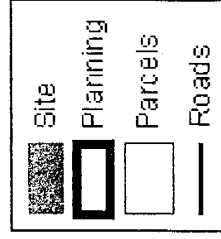
Date: 01/12/04
File: PappasPlanningMap.mxd



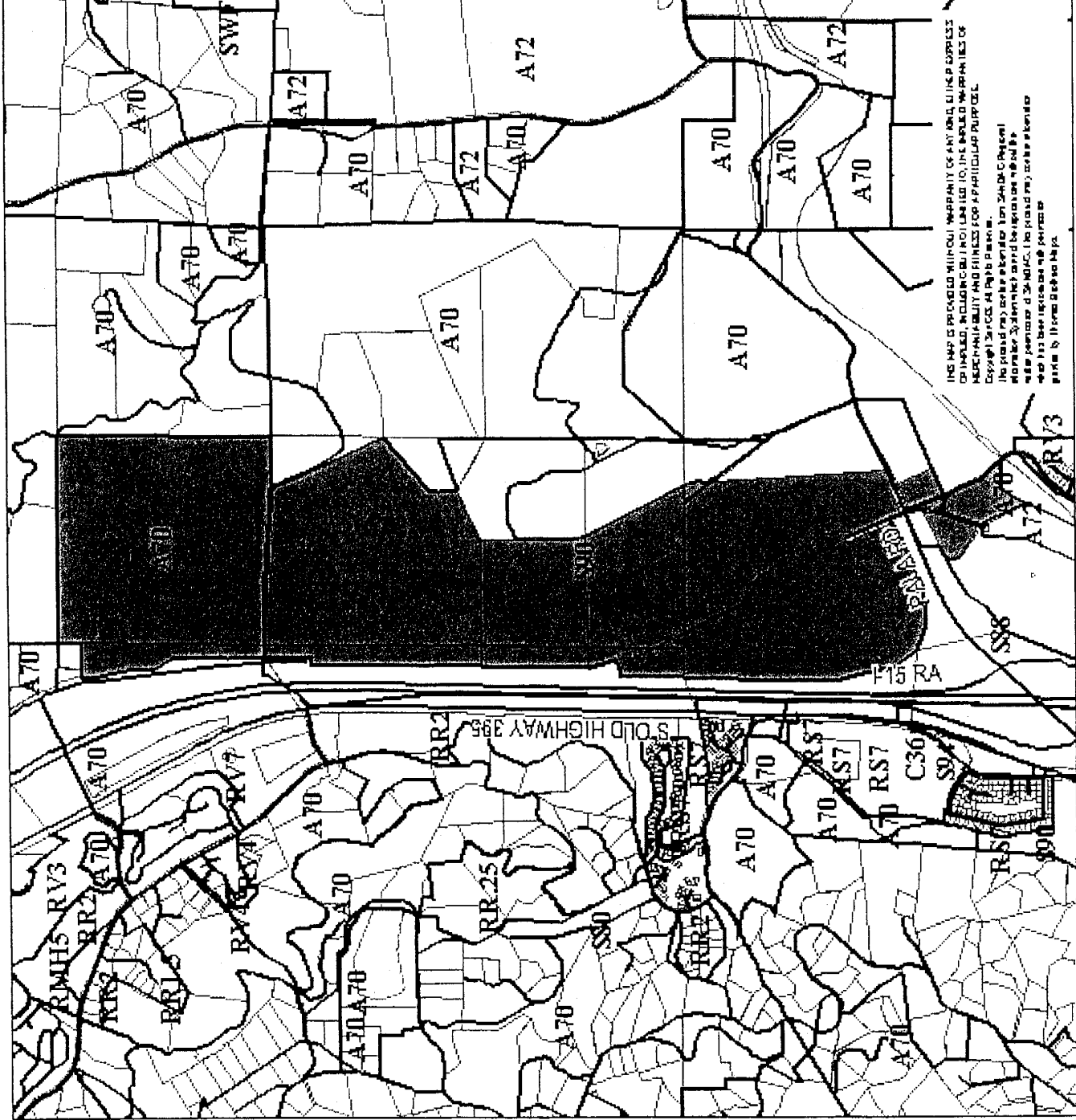
Pappas Zoning Map

Fallbrook
Community Planning Area

- A70 - Limited Agriculture
- A72 - General Agriculture
- C36 - General Commercial
- RMH - Residential Mobilehomes
- RR - Rural Residential
- RS, RV - Residential
- S80 - Open Space
- S88 - Specific Plan
- S90 - Holding Area
- S94 - Transportation and Utility Corridor



Date: 01/19/2004
File: pappas.dwg (as built) 14.14.04 10:00 AM



RPO Exemption #2

- Campus Park Specific Plan, SP83-01 was approved on 2/16/83
- TPM 13703 was approved on 2/28/85



RPO Exemption #2

- a. The applicant has incurred substantial public facilities or infrastructure expenditures and performed substantial grading or construction of physical improvements to serve the portion outside the approved map in good faith.



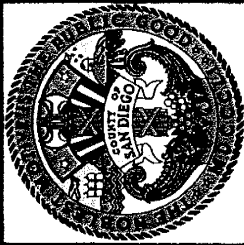
RPO Exemption #2

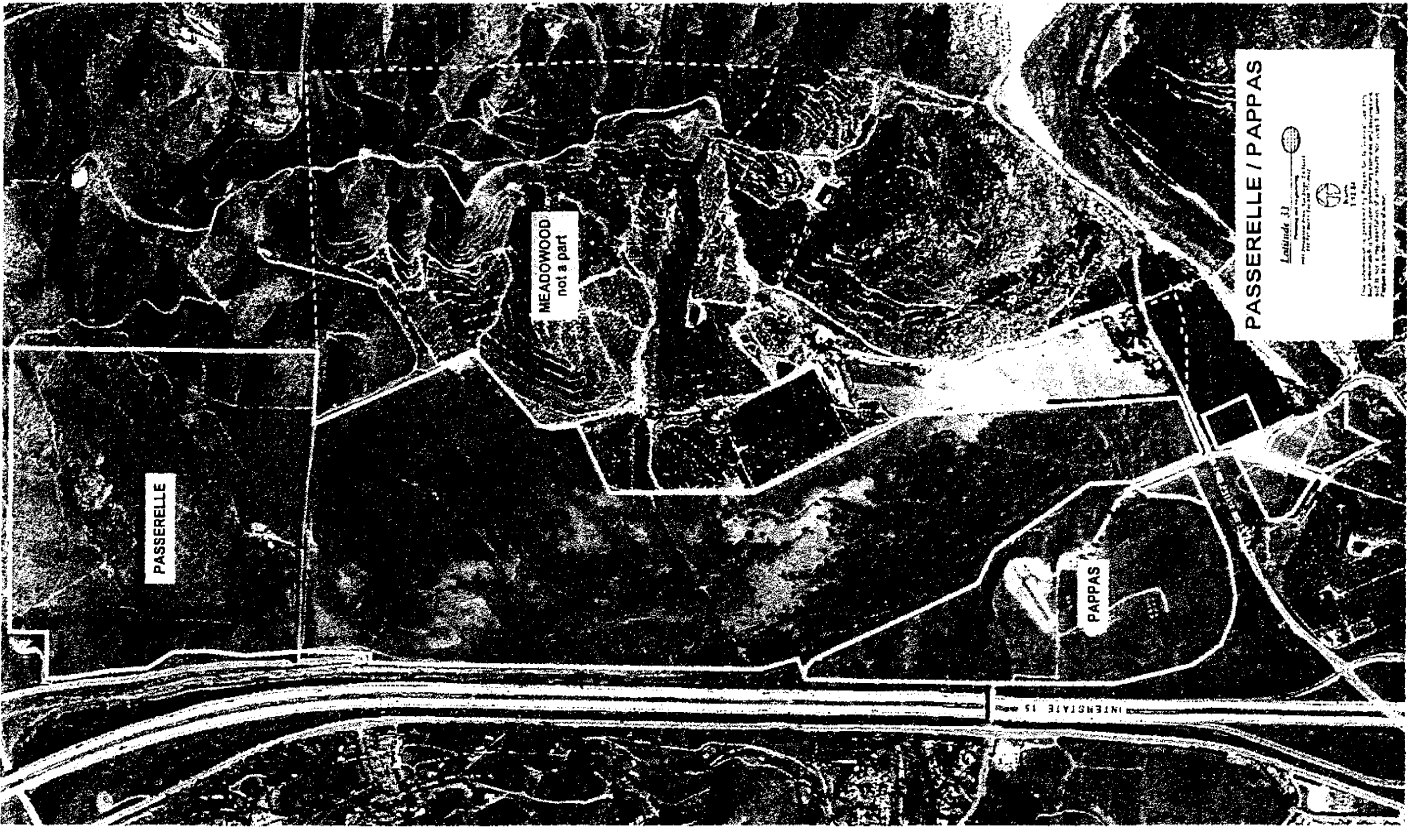
- \$3.7 million spent on the construction of water and sewer lines in 1985
- Both the sewer and water lines serve land outside the site

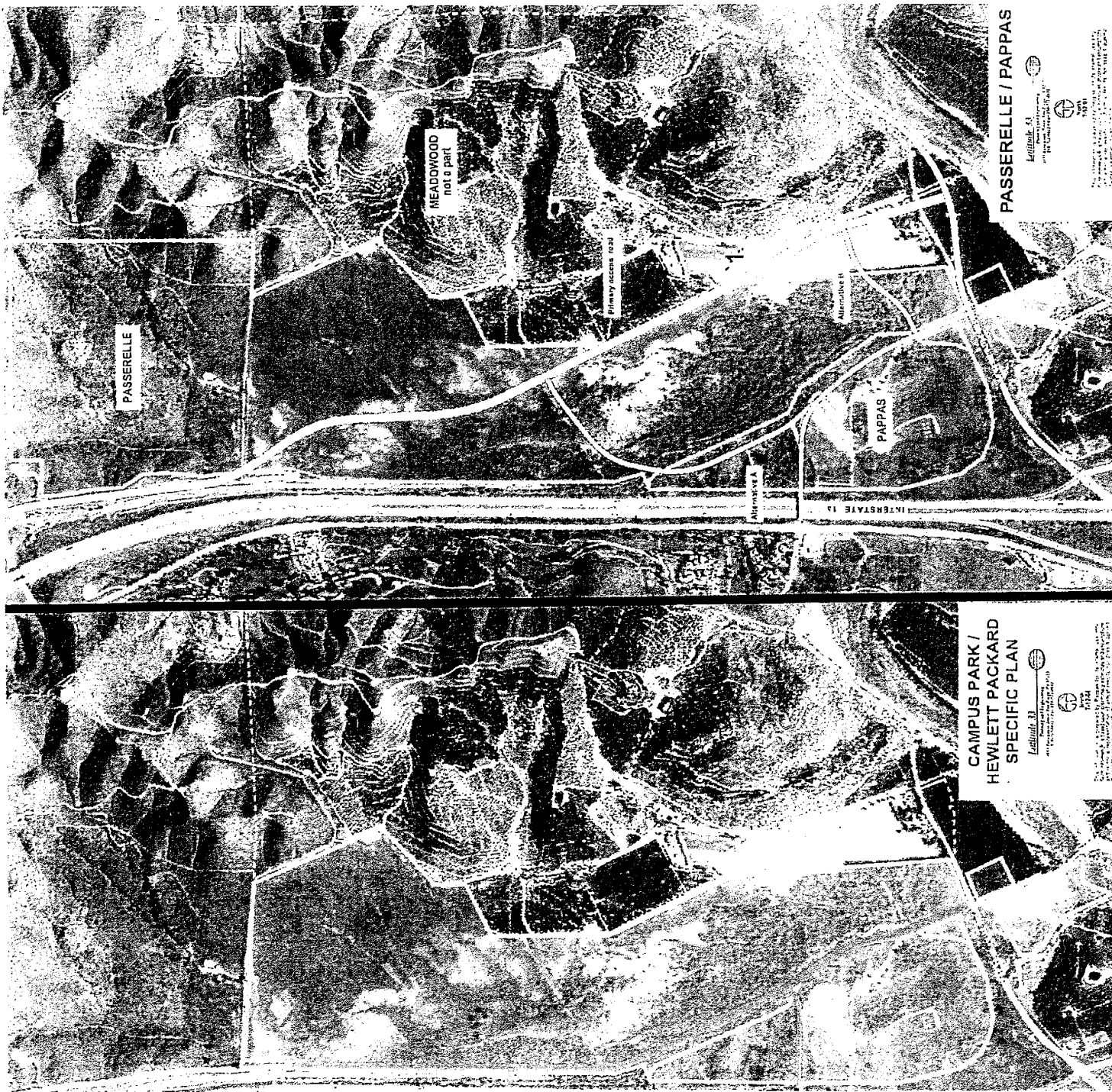


RPO Exemption #2

- b. (i) None of said wetlands is affected directly or substantially by the project or (ii) measures have been taken which avoid development on said lands?





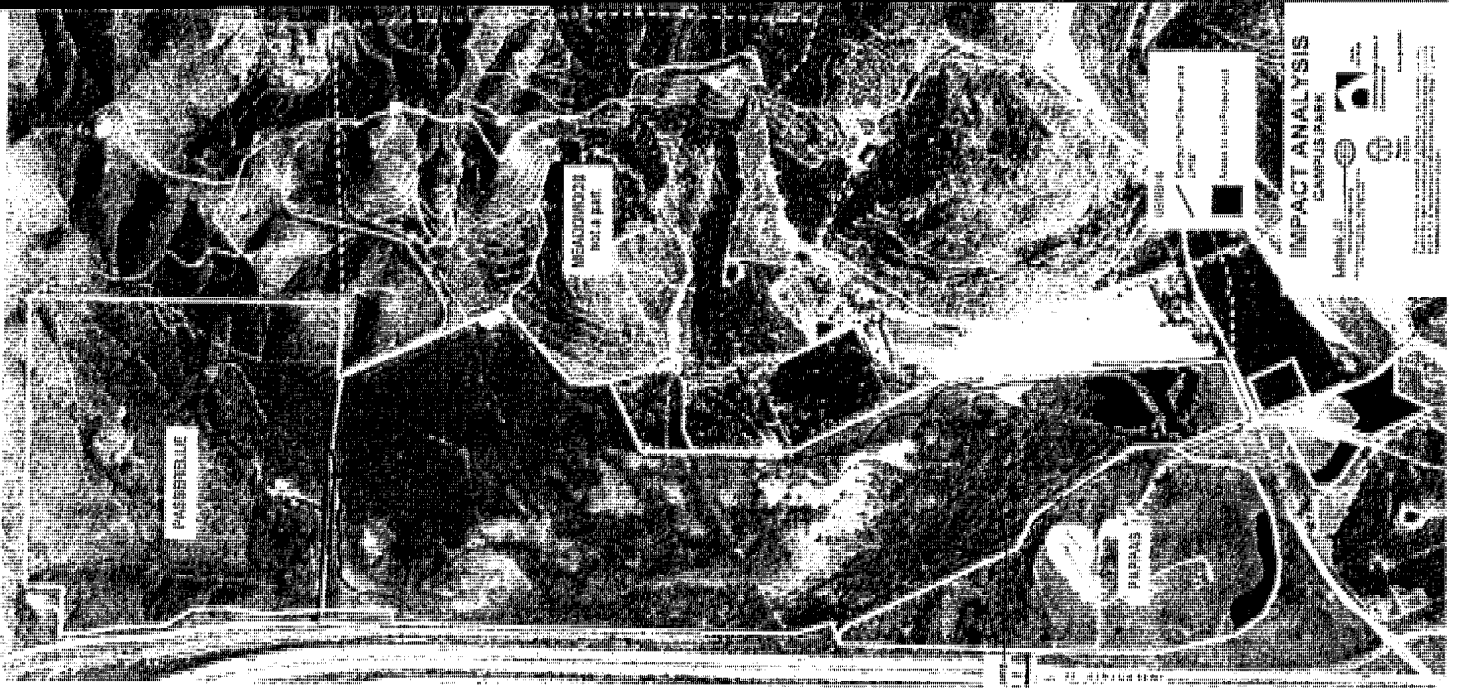


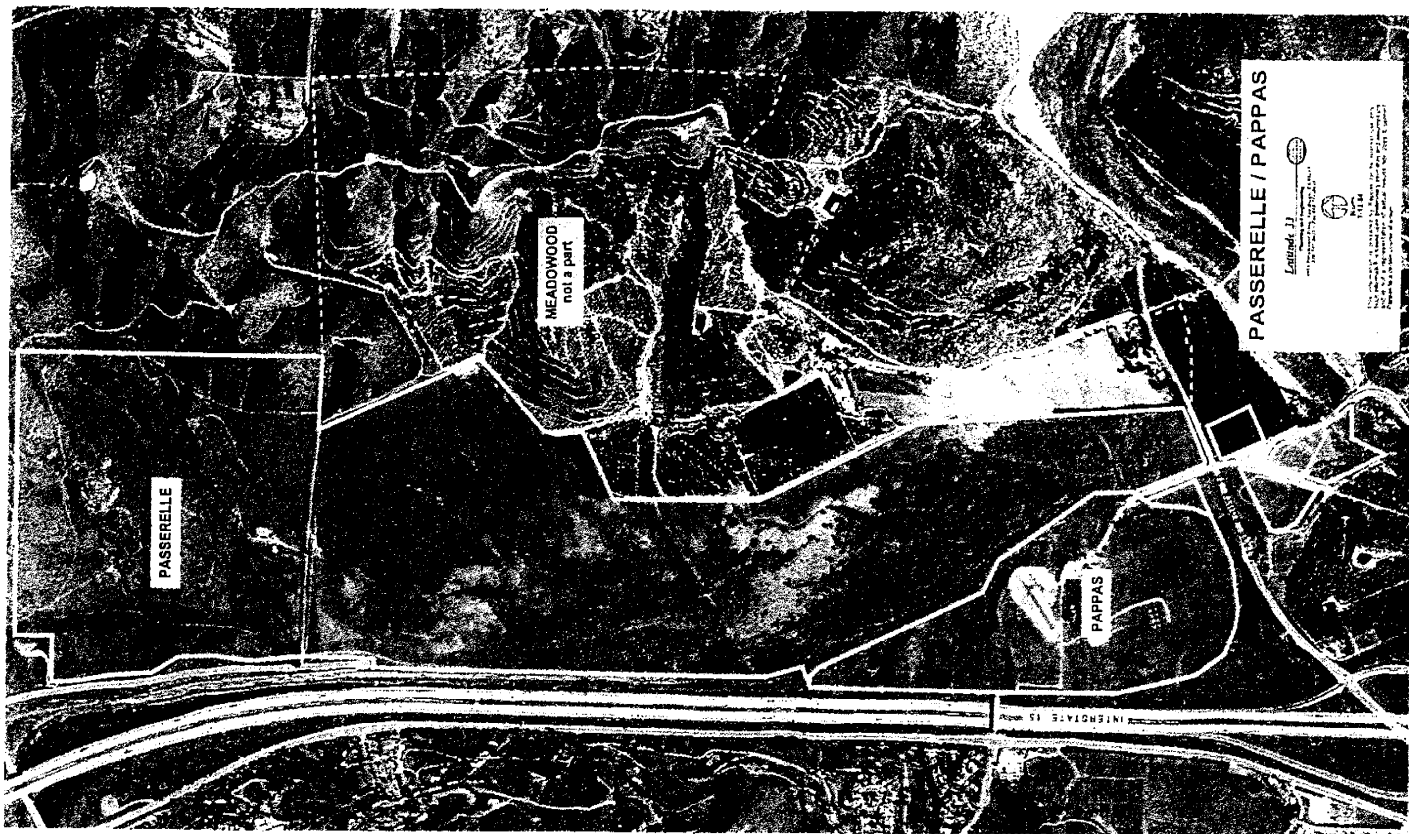
CAMPUS PARK /
HEWLETT PACKARD
SPECIFIC PLAN

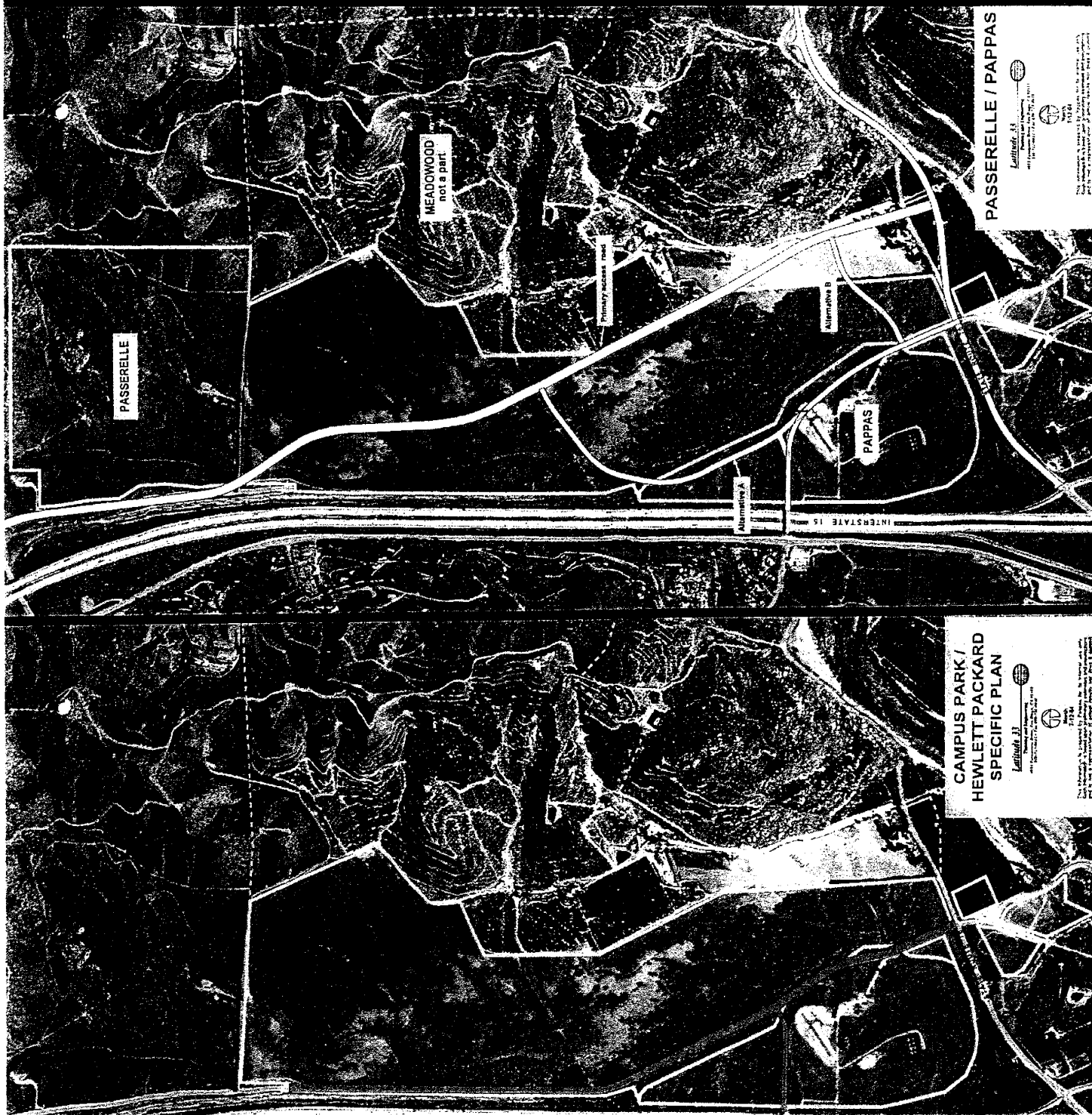
Latitude 33
Scale
1" = 100'

PASSERELLE / PAPPAS

Latitude 33
Scale
1" = 100'





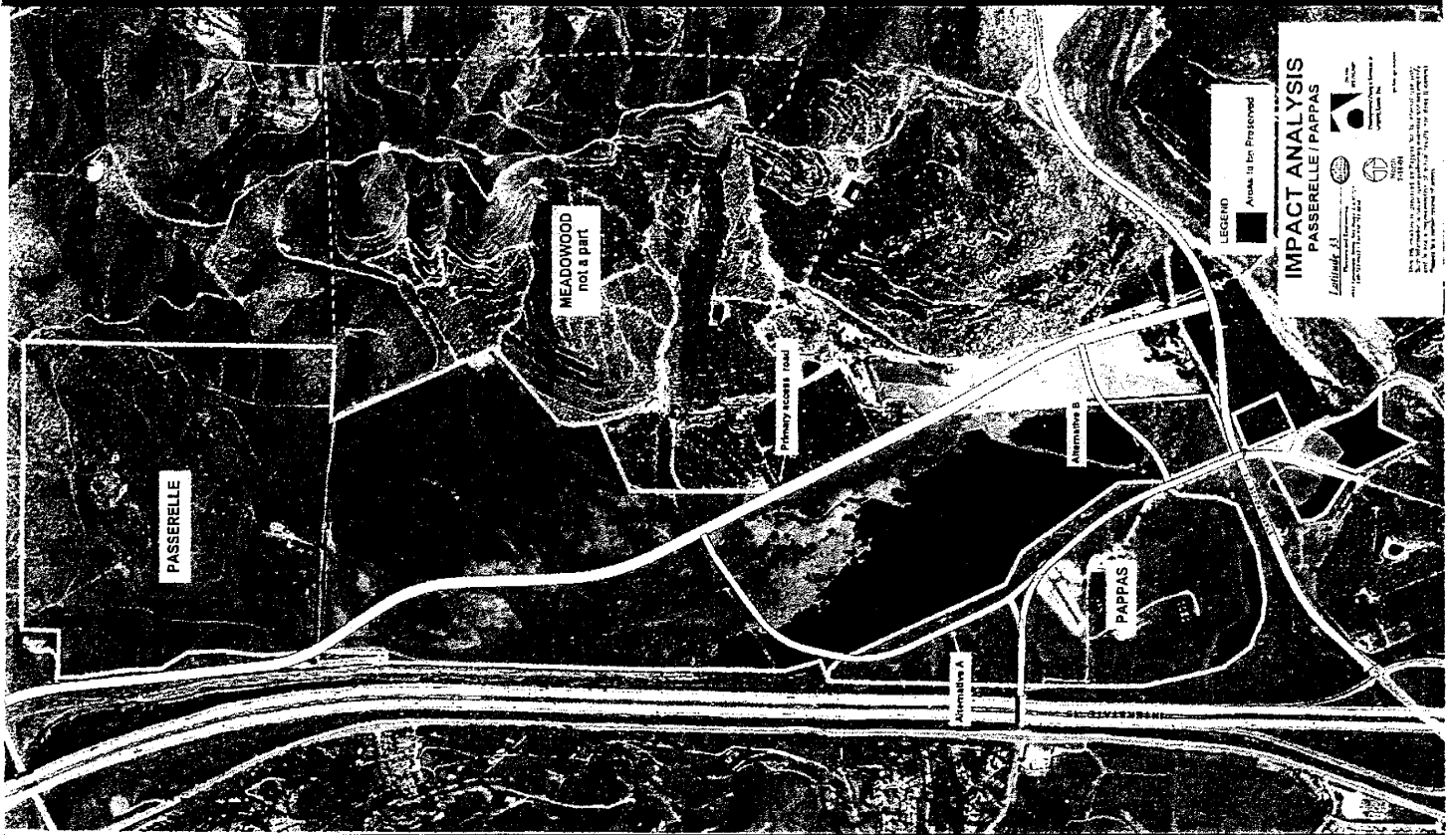


CAMPUS PARK /
HEWLETT PACKARD
SPECIFIC PLAN

Latitude 33
Longitude 117
Scale 1" = 1/4" Mile
Date 1/1/80

PASSERELLE / PAPPAS

Latitude 33
Longitude 117
Scale 1" = 1/4" Mile
Date 1/1/80



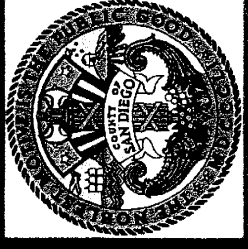
LEGEND
Areas to be Preserved

IMPACT ANALYSIS
PASSERELLE / PAPPAS

Latitude 43
Longitude 113
Scale 1:50,000
Date 10/1/2011
Author [illegible]
Reviewer [illegible]
Project Manager [illegible]
Client [illegible]
Contract No. [illegible]
Sheet No. [illegible]

Fallbrook Planning Group Recommendation

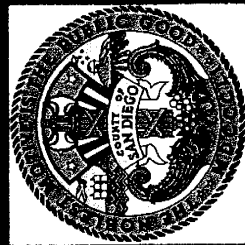
- On July 19, 2004 the Planning Group voted 12 to 0 to approve this exemption.

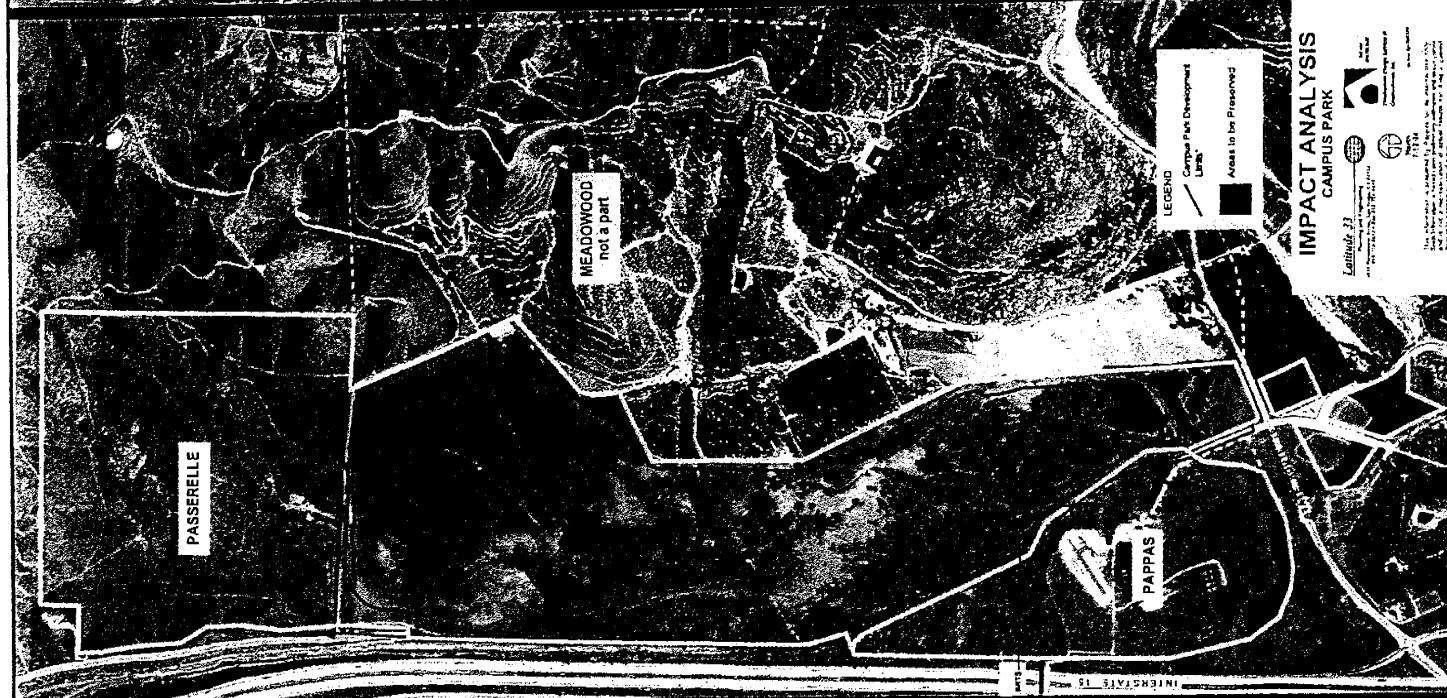


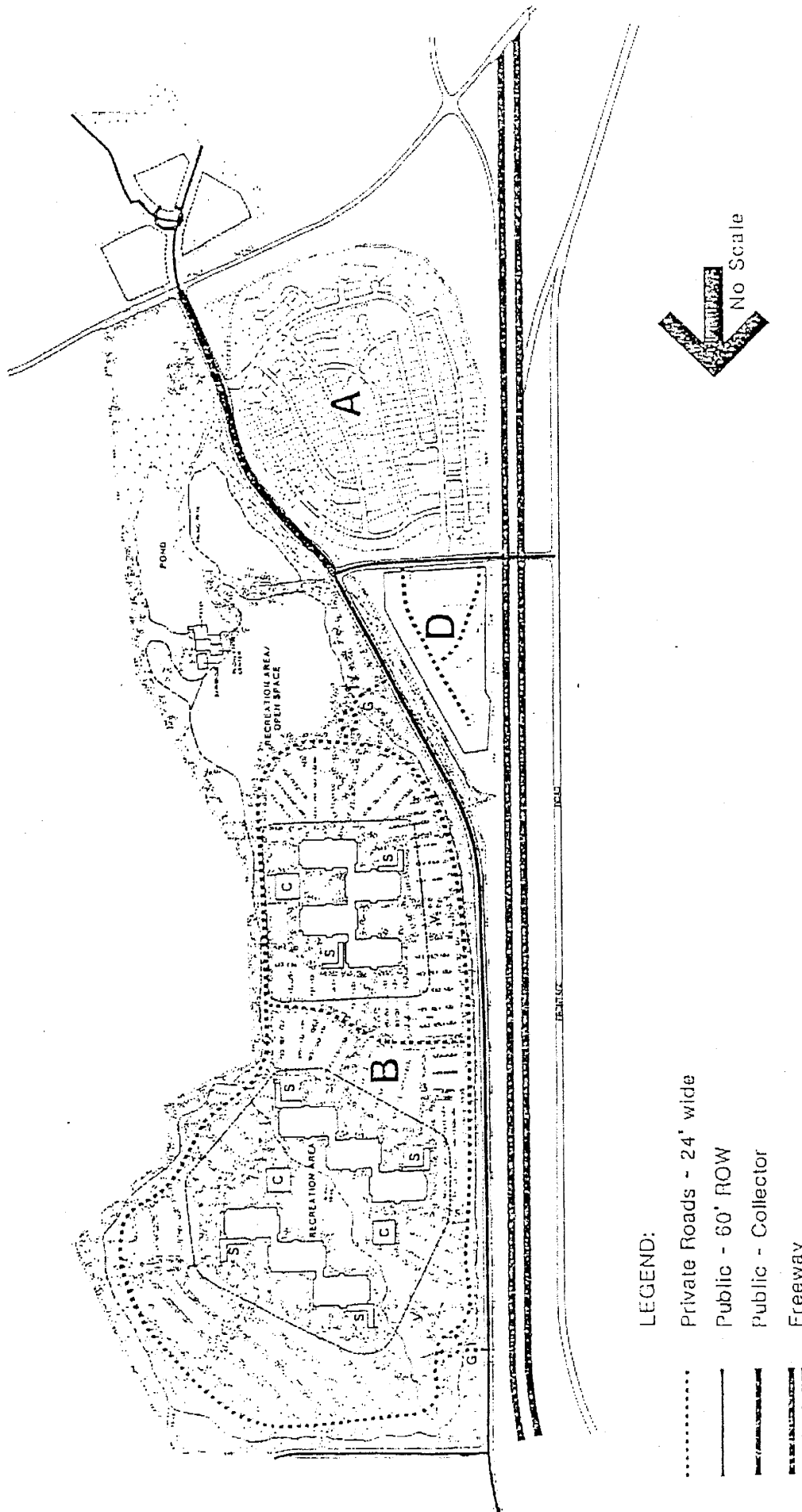
DPLU Recommendation

- Grant RPO Exemption #2 for the Passerelle and Pappas Projects



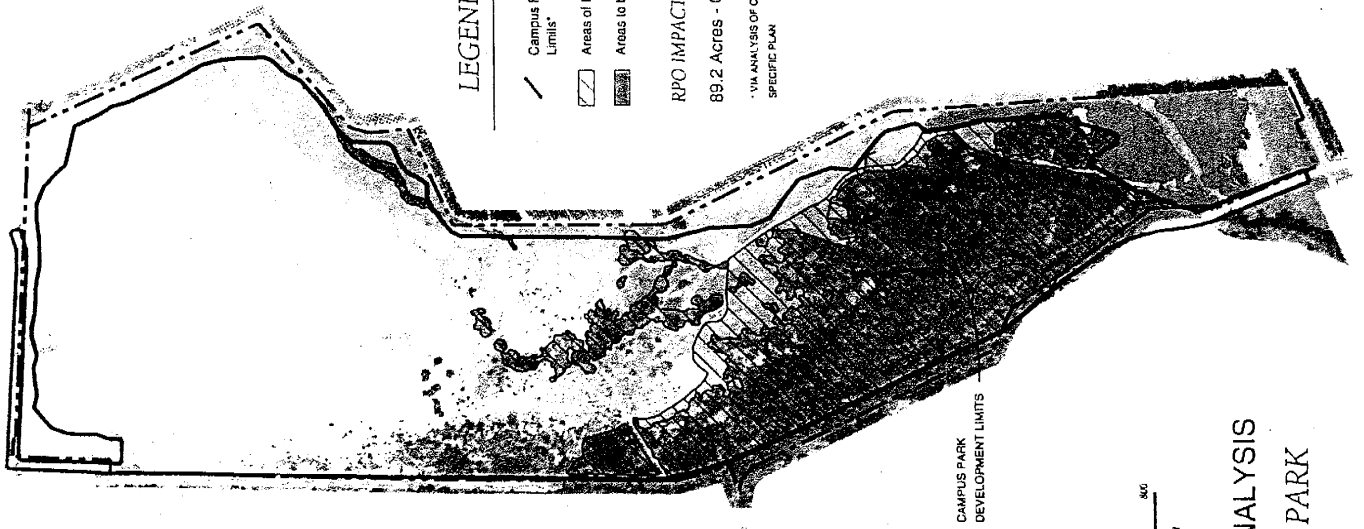






Internal Circulation
FIGURE 9

CAMPUS PARK SPECIFIC PLAN
HEWLETT-PACKARD



LEGEND

— Campus Park Development Limits*

▨ Areas of Impact

▩ Areas to be Preserved

RPO IMPACTS

89.2 Acres - CAMPUS PARK*

* VIA ANALYSIS OF CAMPUS PARK SPECIFIC PLAN

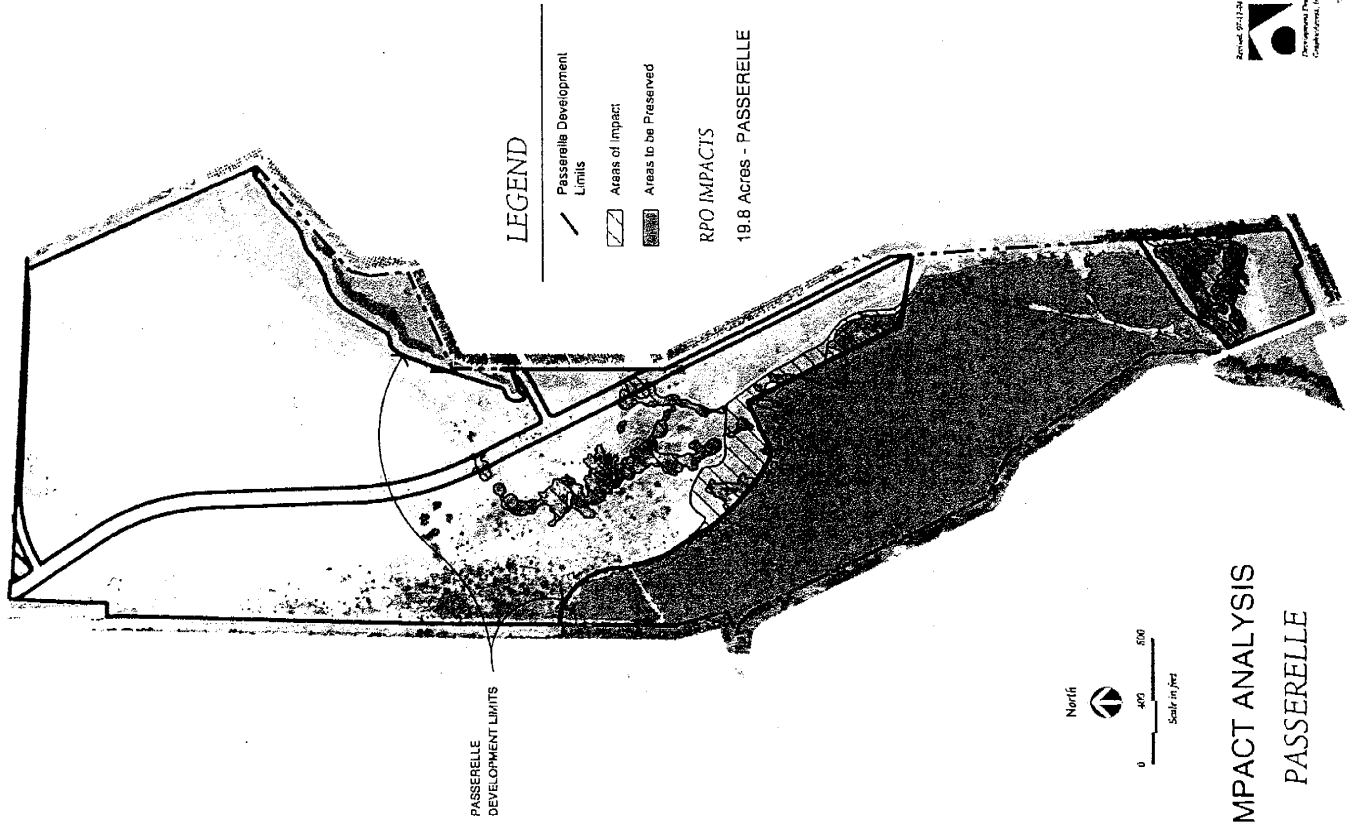
North



0 400 800
Scale in feet

IMPACT ANALYSIS

CAMPUS PARK



1978 AERIAL PHOTO



I-15

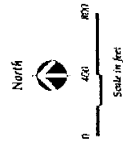
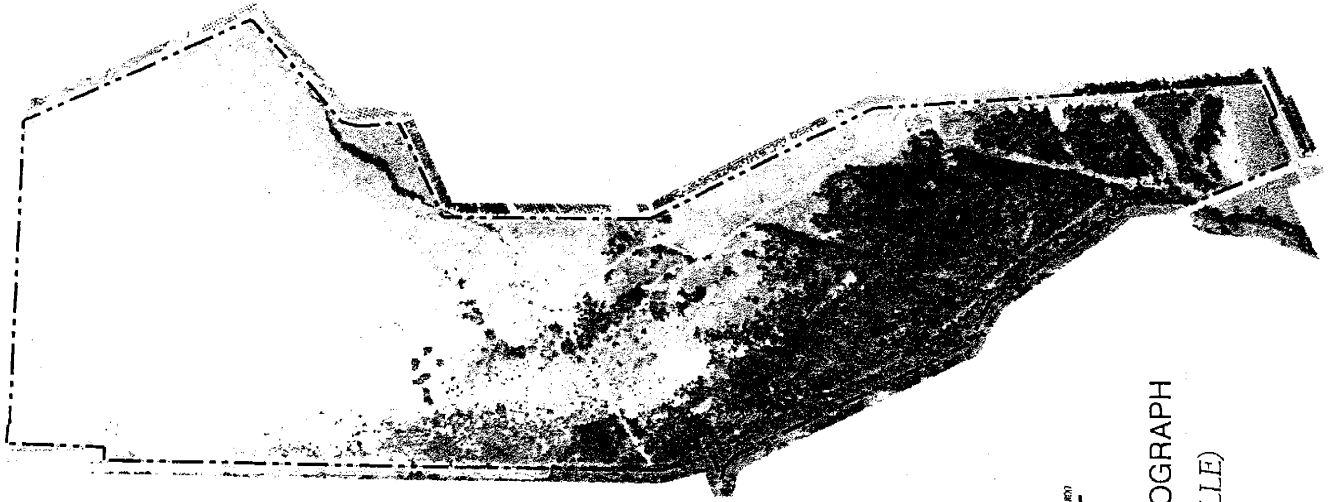
76

1973 AERIAL PHOTO

I-15

76



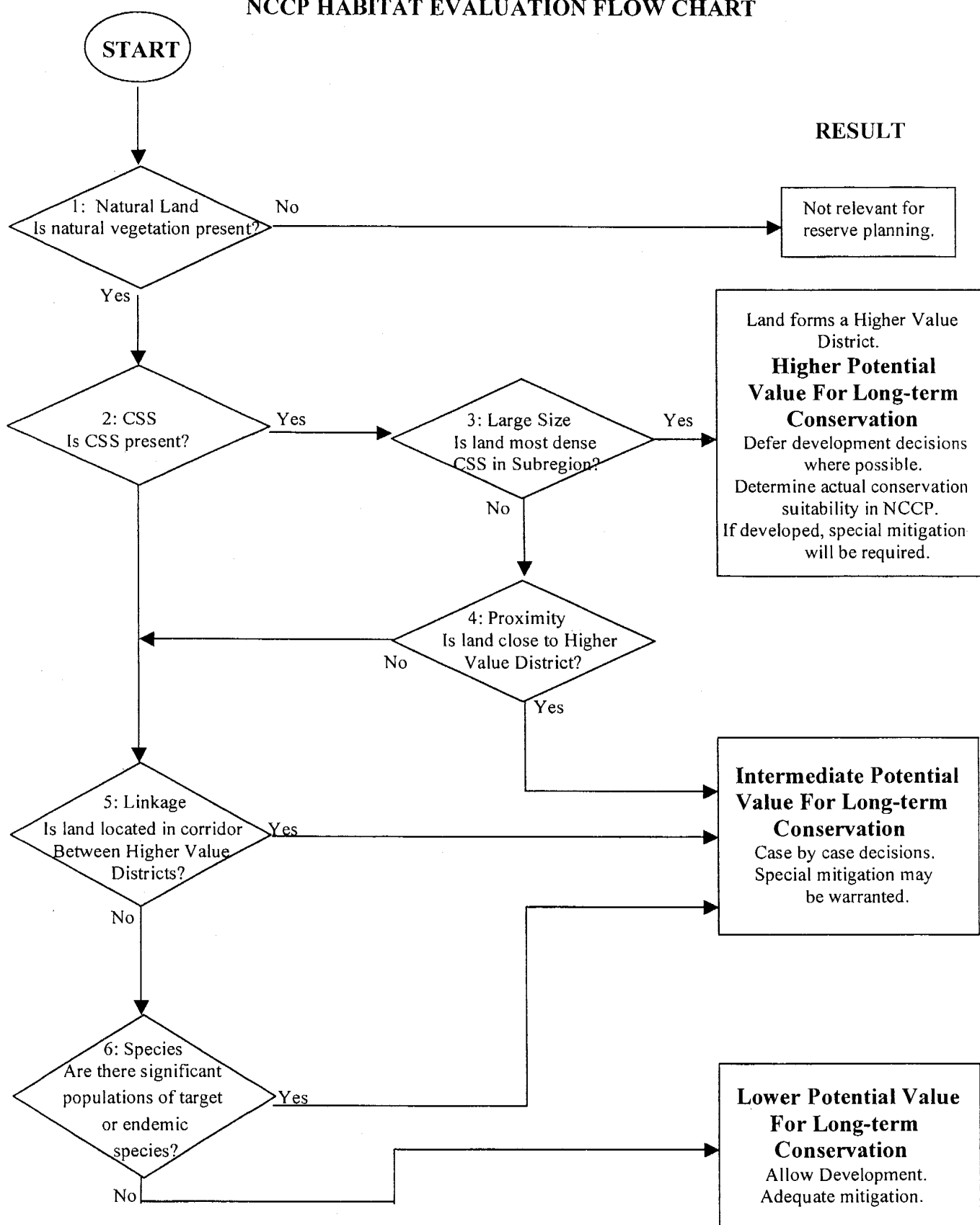


AERIAL PHOTOGRAPH
(PASSERELLE)

APPENDIX F

NCCP Flowchart

NCCP HABITAT EVALUATION FLOW CHART



APPENDIX H

Cumulative Projects

Sensitive Biological Resources Impacts Comparison

<u>Map Key</u>	<u>Project Name:</u>	<u>Year Processed</u>	<u>Coastal Sage scrub</u>	<u>Chaparral*</u>	<u>CSS/ Chap</u>	<u>Oak** Woodlands</u>	<u>Riparian habitats***</u>	<u>Other wetland</u>	<u>Non-native grasslands</u>	<u>Ag/pasture</u>	<u>Eucalyptus</u>	<u>Biological Impacts Not Specified</u>
	Campus Park		-	-	-	-	-	-	-	-	-	
1	Meadowood	<u>2004</u>	X	X					X			
2	Campus Park West	<u>2004</u>	X				X		X	X		
3	Pala Mesa Highlands	<u>2007</u>	X			X		X	X			
4	Tedder TM	<u>1992</u>				X		X				
5	Hukari Subdivision	<u>2007</u>		X		X				X		
6	Fulla Fallbrook Ranch	<u>2007</u>	X	X		X				X		
7	Los Willows Inn and Spa	<u>2004</u>				X						
10	Bridge Pac West 1 TPM	<u>2006</u>				X	X	X				X
11	Pala Mesa Resort	<u>2007</u>	X									
12	Lung TPM	<u>1999</u>										
13	Chipman TPM	<u>2000</u>				X						
14	Bierman TPM	<u>2000</u>					X					
16	Treister TPM	<u>2003</u>	X									
17	Mission Ridge Road TPM	<u>2008</u>	X	X		X			X			
20	Fernandez TPM	<u>2005</u>							X	X		
21	Rabuchin	<u>2005</u>						X				
23	Rosemary Mtn Aggregate	<u>1997</u>	X	X		X	X					

Map Key	Project Name:	Year Processed	Coastal Sage scrub	Chaparral*	CSS/ Chap	Oak** Woodlands	Riparian habitats***	Other wetland	Non-native grasslands	Ag/ pasture	Eucalyptus	Biological Impacts Not Specified
	Quarry											
25	Prominence at Pala	2006	X	X								
26	Palomar College	2007	X				X	X	X			
27	Caltrans SR 76	2007	X			X	X	X				
	Realignment											
28	San Luis Rey Municipal Water District	2006										X
30	West Lilac Farms	2006				X	X		X			
32	Marquart Ranch	2007	X							X		
34	Ridge Creek drive	2007	X			X					X	
35	Club Estates	2006										
47	De Jong/Pala Minor Subdivision	1999							X			
									X			
48	Crossroads Investors Minor Subdivision	2008					X					
49	Chaffin Red Mountain Ranch	2000										X
49	Chaffin TPM	2005	X				X	X				
50	John Collins TPM	2001	X									
51	Brannon Trust TPM	2007	X									
52	Dien N Do TPM	2005	X	X		X			X			
55	Atteberry	1999				X						

[illegible]

Map Key	Project Name:	Year Processed	Coastal Sage scrub	Chaparral*	CSS/ Chap	Oak** Woodlands	Riparian habitats***	Other wetland	Non-native grasslands	Ag/ pasture	Eucalyptus	Biological Impacts Not Specified
91	Monserate TM	<u>2006</u>										X
93	Madrigal TPM	<u>2006</u>										X
94	Orange Grove Power Plant	<u>2007</u>	X									X
95	Gregory Landfill	<u>2</u>	X	X		X		X	X			
100	Valentine Trust	<u>2006</u>				X					X	
104	Aguilar TPM	<u>1998</u>	X	X		X						
108	Bonsall Subdivision	<u>2005</u>	X						X			
110	Vande Vegte TM	<u>2005</u>										X
111	Brook Forest	<u>2001</u>	X			X	X	X	X	X		
112	Choi TM	<u>2001</u>	X				X		X			
113	Oak Glen	<u>2008</u>				X				X		
116	Rabbit Run	<u>2006</u>										X
117	Froehlich TM	<u>2006</u>	X							X		
118	White Fox Run TPM	<u>2005</u>	X			X		X	X			
119	Baldwin TPM	<u>2006</u>	X	X		X	X		X			
121	Orchard Vista TM	<u>2006</u>	X						X	X		
123	Pepper Tree Park	<u>2005</u>						X				
125	Uchimura TM	<u>2003</u>										X
126	Lash TM	<u>2002</u>							X			X
127	Heritage Homebuilders TM	<u>1993</u>				X	X					
128	Kesonovich TM	<u>1989</u>				X						
136	Hornmuth	<u>1999</u>				X						

Map Key	Project Name:	Year Processed	Coastal Sage scrub	Chaparral*	CSS/ Chap	Oak** Woodlands	Riparian habitats***	Other wetland	Non-native grasslands	Ag/ pasture	Eucalyptus	Biological Impacts Not Specified
	TPM											
137	Arkeder TPM	2002				X	X					
138	Amos Family Trust TPM	2001	X			X		X				
139	White TPM	2001	X					X				
140	Heritage Oaks TM	1999				X						
142	Zebu TPM	2001	X			X						
143	Compton TPM	2004	X			X	X					
149	Pacifica Estates	2006	X					X	X			
155	Ferraro TPM	2004					X		X			
156	Palomar Dr. Subdivision	2005	X				X	X	X			
157	Constant Creek TPM	2004						X		X		
159	Golf Green Estates	2006						X				
161	The Crest	2003	X					X	X			

*includes all types of chaparral including chamise chaparral, southern mixed chaparral, scrub oak chaparral and granitic chaparral

** includes live oak woodland, Engelmann oak woodland and Southern coast live oak riparian woodland

*** includes riparian scrub, willow scrub, mulefat scrub and southern willow riparian woodland

ATTACHMENT 2

Quino Checkerspot Butterfly Report

Report of a Directed Survey for the Quino Checkerspot Butterfly over the Pala Mesa Center Property San Diego County, California

Prepared For:

**R•E•C Environmental
2650 Jamacha Road
Suite 147/202
El Cajon CA 92109**

Prepared By:

**RBRiggin and Associates
11228 Zapata Avenue
San Diego, California 92126
619-233-5454**

**24 June 1999
RBR Job Number 1734.50C**

Report of a Directed Survey for the Quino Checkerspot Butterfly over the Pala Mesa Center Property, Otay Mesa San Diego, California

I. Introduction

A. Summary. The Pala Mesa Center Property is located in the north central part of the County of San Diego, adjacent to and east of Interstate-15, adjacent to and north of Pala Road, and generally east of the Pala Mesa community (see Figures 1 and 2). The site is situated on generally flat lying topography along a drainage contributory to the San Luis Rey River. The higher ground on the site is generally underlain by gabbroics of the southern California batholith (Weber, 1962). The lower slopes are developed from colluvium and the broad flat stream bed that crosses and dominates the southern part of the site is a Quaternary Alluvium. Two small populations of the Dot-seed Plantain were found along old abandoned roads in the northern part of the property. However, no other stands of *Plantago/Castilleja* were located on the property, nor were any stands of other Scrophulariaceae that could be utilized by the Quino. The one potential hilltopping site on the property proved to be simply a high point, no hilltopping behavior was observed. That ridge is apparently dominated by much higher ground just to the east.

Despite the limited area of *Plantago* that was located, it was certainly sufficient to warrant an adult survey of the property. Unfortunately, with the late start of the season in Riverside County, and with the time lost due to adverse weather, only three site visits consistent with the protocol requirements could be performed. Those three visits are the subject of this report.

The broad valley floor in the southern part of the site is occupied by what is best described as a riparian woodland, this woodland is extensive and occupies several tens of acres (see Figure 3). Much of the middle portion of the site is in active agriculture or is presently subject to intensive grazing pressure. The northern part of the site is more eclectic, consisting of a variety of Riversidian Sage Scrub, chaparral, non-native adventive and horticultural elements. It is within this northern area that the *Plantago* populations were found.

No springs, seeps, or other permanent sources of water were encountered in the northern part of the site during the field work. There are, however, a number of definable wetland areas in the southern part of the property. Delineation of those areas has been accomplished by REC Environmental..

Given the relative sparse occurrence of food plant suitable for the Quino, and a lack of sightings of the species during the three site visits. It would appear that there is no occupation of the property by that endangered species.

B. Background. The Quino Checkerspot Butterfly (*Euphydryas editha quino*; see Figure 4) was listed as an endangered species in January of 1997 (Fish and Wildlife Service, 1997). Thought at one time to be extinct, the subspecies is today (1999) found in a small number of populations in Riverside and San Diego Counties. As a wildlife species listed under the Federal Endangered Species Act (ESA) the Quino is afforded the considerable legal protections offered by the Act. Commission of a "take" of the species, either directly or indirectly, is prohibited by law. In order to assist land owners and in an effort to prevent a "take" of the species, the Fish and Wildlife Service has promulgated survey protocols for the species (Fish and Wildlife Service, 1999). These protocols identify geographical areas over which surveys for the adult butterflies are mandated and over which surveys are recommended when populations of certain plant species are present and/or in the presence of certain topographic features.

The Quino Checkerspot is best thought of as a "two phase" animal. The larvae are obligate feeders on one (two? three?) food plants: Dot-seed Plantain (*Plantago erecta*); perhaps Owl's Clover (*Castilleja exserta*); and possibly on other members of the Scrophulariaceae family (such as Chinese Houses, *Collinsia heterophylla*). The presence or absence of these food plants is usually sufficient to decide the presence or absence of the larvae on a given site. The second "phase" is the adult butterfly. The males of the species exhibit what is referred to as "hilltopping" behavior. They fly to prominent topographical points where they congregate, spending hours each day inspecting each butterfly that passes by, hoping to find a receptive female Quino. The adults are, additionally, found in association with the larval food plants, where they originally emerged from the pupa and where they subsequently lay eggs and roost. Properties with either plant populations that favor the Quino adults and larvae and/or with topography that favors the adults should be surveyed in order to define the presence or absence of the species.

The Pala Mesa Center Property is located in the County of San Diego, generally on the floor of a broad valley that is located north of the San Luis Rey River. The site encompasses approximately 350-acres and is an irregular, elongate property, lying parallel to and east of Interstate-15. It is bordered on the south by Pala Road and on the east by Monserate Mountain. (see Figures 1 and 2). The southern portion of the site is flat lying and encompasses the broad flood plain of the unnamed creek that flows south through the valley and is tributary to the San Luis Rey River (see Figure 2). The middle sections of the property lie on colluvial slopes above the flood plain and the northern part of the site begins to climb the lower slopes of Monserate Mountain. In the northern area, where the survey effort was focused, elevations ranged between 400 and 500 feet.

The Pala Mesa Center Property lies within an area defined in the Federal Survey Protocols as an "Potential Habitat Area." As such, a ground survey for at least the larval food plants is mandated. Such a survey was performed early in March by the staff of REC Environmental. Their botanical effort encompassed the entire property, if only to determine that the occurrence of *Plantago* is not consistent with riparian habitats nor is it consistent with intense cattle grazing. The two populations located (see Figure 3) were both found on old, abandoned dirt roads in the northern part of the property (see Figure 5B). No populations of *Castilleja exserta* nor of *Collinsia heterophylla* were seen within the subject property during the current survey effort.

The two *Plantago erecta* populations varied greatly in size. The western most population was several 1000 square feet in size and extended along a few hundred feet of road, while the more easterly population was a few 100 square feet in size.

The 1999 flight season of the Quino Checkerspot was defined by the Fish and Wildlife Service (for Riverside County and the northern part of San Diego County) as extending from 17 March through 9 May 1999. During this eight-week period, butterfly surveys were limited to days that met certain specific wind, clarity (lack of cloud cover) and temperature conditions. Butterflies are thermally dependent and are simply not functional on cool, cloudy and/or excessively windy days. During the eight weeks of the flight season, more than 27 of the 55-days had adverse weather through the entire day. Additionally, eight of the days were only valid for survey work for less than half the day, leaving 19-days that were fully available for the survey effort. Only 35 percent of the days were fully available for Quino work. Unsuitable days were characterized by excessive wind, cloud cover, rain, low air temperature, or (usually) some combination of these factors. The subject property lies at a unique location with respect to coastal weather parameters. The San Luis Rey River valley is a topographic feature that acts as a funnel for coastal winds, guiding and compressing on-shore winds into the Pala area and points further inland. Winds were notable throughout the site.

The Pala Mesa Center site was surveyed three times during the Riverside flight period of the Quino. This was the maximum given weather considerations, and assuming a seven-day work week on the part of the consultant. Of the last three weeks of the flight period, three whole days and only one or two half days (after coastal cloud burn-off) were suitable for butterfly work in the north County area.

II. Project Description

A. Physical Environment. The geological formation underlying the entire site is mapped as "gabbroics" of the southern California Batholith (Weber, 1962). The valley floor is a Quaternary alluvium (a fluvial deposit) while the low lying slopes in the middle part of the site are probably a mixture of fluvial sediments and slope-wash or colluvium from the surrounding hills.

No springs, seeps or other permanent water sources were observed during the course of the survey in the northern part of the property. Such resources, however, occur in the southern part of the site. The riparian woodland on the valley floor occupies several tens of acres. Definable wetlands (using the Federal tripartite definition; Environmental Laboratory, 1987) and other such riparian resources have been mapped by REC Environmental.

B. Biological Environment. The vegetation over a significant part of the Pala Mesa Center is agricultural in nature. The entire central part of the site is subject to heavy grazing, discing, and a variety of other modifications. The southern part of the site, virtually the entire flat lying valley floor, is occupied by a Riparian Woodland. The northern part of the property (see Figure 3) is a more eclectic mixture: flat lying areas reflect past agricultural disturbance and are occupied by ruderal or disturbed vegetation. *Steeper lands* that are south facing have a Coastal Sage Scrub while more north

facing slopes have a chaparral flavor to the vegetation. Species dominant within the sage scrub include (but are not limited to):

Eriogonum fasciculatum
Salvia apiana
Artemisia californica
Lotus scoparius
Corethrogyne virgata
Keckiella antirrhinoides
Salvia mellifera

As previously described, plant surveys (to determine the presence or absence of species suitable for the Quino larvae) were performed on this property in the spring of 1999 by REC Environmental. Only limited populations of *Plantago erecta* was found, no other plants suitable for the Quino Checkerspot were seen on-site. On the subsequent site visits, while there was an on-going survey for other species, no additional populations of the *Plantago* were noted.

The on-site vegetation is illustrated in Figures 5A and 5B. As can be seen in the photographs, ruderal species predominate along the valley floors while the Sage Scrub association dominates the slopes. Properties on the east and north of the Pala Mesa Center property are steep sloped and are open space, at the present time. Lands to the south of the site are within the flood plain of the San Luis Rey River and are either open space or are in agricultural use. Property to the west include the freeway, and beyond that, the Pala Mesa golf course and residential development.

The suite of wildlife species found within the bounds of the property is comparable to that seen on any other disturbed ruderal, Coastal Sage Scrub association in the San Diego County foothills. Rodents and birds dominate the fauna with reptiles are a close third. No sensitive wildlife species were noted in the northern part of the property during the course of the Quino survey effort. Given the density of riparian woodland in the southern part of the site it would not be surprising to find the Least Bell's Vireo and other species in that area.

No sensitive plant species were noted during the course of the other field efforts.

C. Proposed Development. The development plan for the property encompasses all of the approximately 350-acres. The site, if approved, would be mass graded to create a series of 5- to 10-acre industrial pads.

III. Field Methods

A detailed discussion of the field methods, the date of the surveys and the extant weather conditions on each of the field dates is included in the field notes and on the "General Forms" reproduced in this report as the appendix. These details will not be repeated here. The reader is referred to the appendix.

In general, the following considerations governed the conduct of the field survey:

- There were only two relatively limited populations of Dot-seed Plantain (*Plantago erecta*) on the Pala Mesa Center property. Field visits, therefore, specifically addressed these limited known populations of *Plantago*, and the field visits were used to generally attempt to locate additional populations (see Figure 3).
- The only potential hilltopping location within the bounds of the property was the high ground on the ridge parallel to and adjacent to the freeway. This was examined closely on each of the site visits (see Figure 3).
- Because of the lack of Quino specific resources on the property, as much of the site as possible was examined during each of the field visits. Special attention was paid to areas that might harbor additional populations of food plants. Beyond that, no attempt was made to examine all of the micro-habitats.

IV. Results and Analysis

No adult or larval Quino Checkerspot Butterflies were seen during the course of the survey effort on the Pala Mesa Center property.

The following points highlight the results of the butterfly survey effort on the Pala Mesa Center property:

- A total of 11 butterfly species were observed. These are detailed in Table 1.
- Those hilltopping species that were found on the property (i.e. *Vanessa*, *Papilio*) did not actually exhibit hilltopping behavior, rather they were seen as flybys.
- No one butterfly species was seen in notable numbers within the bounds of the site. The majority of butterflies observed were associated either specifically or generally with the Sage Scrub. The balance of the individuals were associated with habitats from outside of the northern part of the property.
- The distribution of the *Plantago erecta* on this site appears to be limited to two populations in the northern part of the property.

Given the relatively small size of the *Plantago erecta* populations on this site (and the virtual lack of *Castilleja exserta* or any possible alternative larval food plants for the Quino Checkerspot), and the lack of any Quino sightings on the Pala Mesa Center property, it would appear that the site can be developed without concern for a possible take of the Quino Checkerspot.

V. Certification

This report represent an independent survey and analysis of the Pala Mesa Center property for the occurrence of the Quino Checkerspot Butterfly. Any errors or omissions are solely the responsibility of the undersigned.



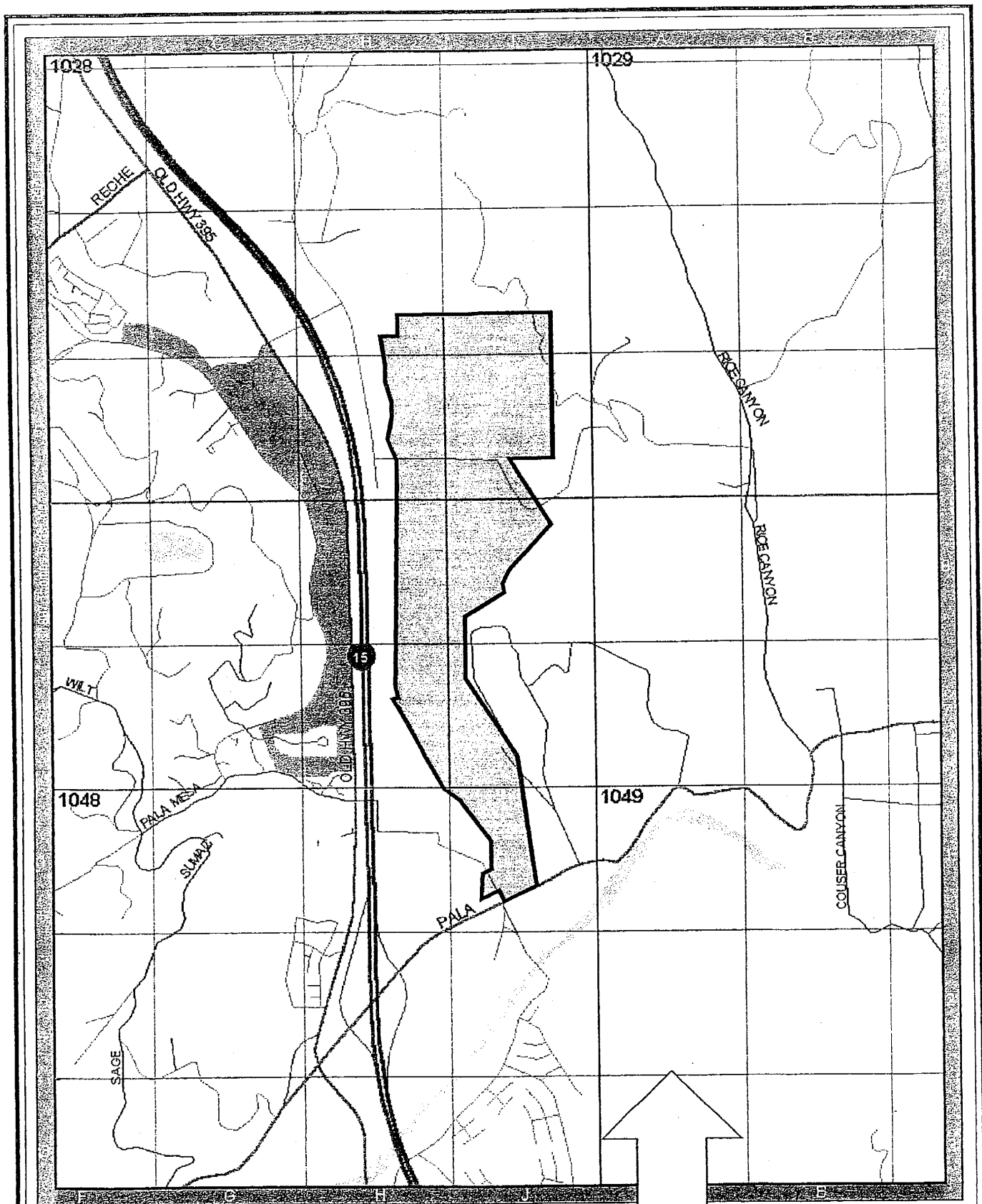
Royce B. Riggan, Jr., AICP/Federal Permit Number PRT-780195
Principal
RBRiggan and Associates
RBR Job Number 1734. 50C
24 June 1999

Attachments:

1. References Cited
2. Table 1 — Butterfly Species Observed
3. Figure 1 — Project Location on a Thomas Brothers Map
4. Figure 2 — Project Location on a USGS Quadrangle Map
5. Figure 3 — Location of Potential Quino Resources
6. Figure 4 — Representative Butterflies Observed
7. Figure 5A — Site Photographs (Thumbnails)
8. Figure 5B — Site Photographs (Thumbnails)
9. Figure 5C — Site Photographs (slides)
10. Appendix
 - a. Copies of Pertinent Pages from Author's Field Notebook
 - b. Copies of FWS's General Forms

References Cited

- Bowman, Roy H., et al. 1973. Soil Survey of the San Diego Area, California. U.S. Department of Agriculture, Soil Conservation Service, Washington, D.C.
- Emmel, Thomas C., and John F. Emmel. 1973. The Butterflies of Southern California. Natural History Museum of Los Angeles County, Science Series 26, xi + 148 pp.
- Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi.
- Fish and Wildlife Service. 1997. Endangered and Threatened Wildlife and Plants: Determination of Endangered Status for the Laguna Mountains Skipper and Quino Checkerspot Butterfly. Federal Register 62(11):2313-2322.
- Fish and Wildlife Service. 1999. Survey Protocol for the Endangered Quino Checkerspot Butterfly (*Euphydryas editha quino*) for the 1999 Field Season. Unpublished manuscript, available from the Carlsbad Field Office, Carlsbad, Calif., 5 pp + appendices.
- Holland, Robert F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. California Department of Fish and Game, Sacramento, California. iii + 155 pp.
- Mattoni, Rudi, et al. 1995 (1997). The endangered Quino Checkerspot Butterfly, *Euphydryas editha quino* (Lepidoptera: Nymphalidae). J. of Research on the Lepidoptera 34(1-4):99-118.
- Parmesan, Camille. 1995. Traversing the Checkerboard of *Euphydryas* Identification. American Butterflies 3(4):12-22.
- Scott, James A. 1986. The Butterflies of North America. Stanford University Press, Stanford, Calif., xii + 583 pp. [CD-ROM edition published by Hopkins Technology, LLC, 1997]
- Weber, Jr., F. Harold. 1963. Geology and Mineral Resources of San Diego County, California. California Division of Mines and Geology, County Report 3, Sacramento, Calif. 309 pages + 11 plates.



RBRiggan and Associates Job Number 1734.50C 1 June 1999

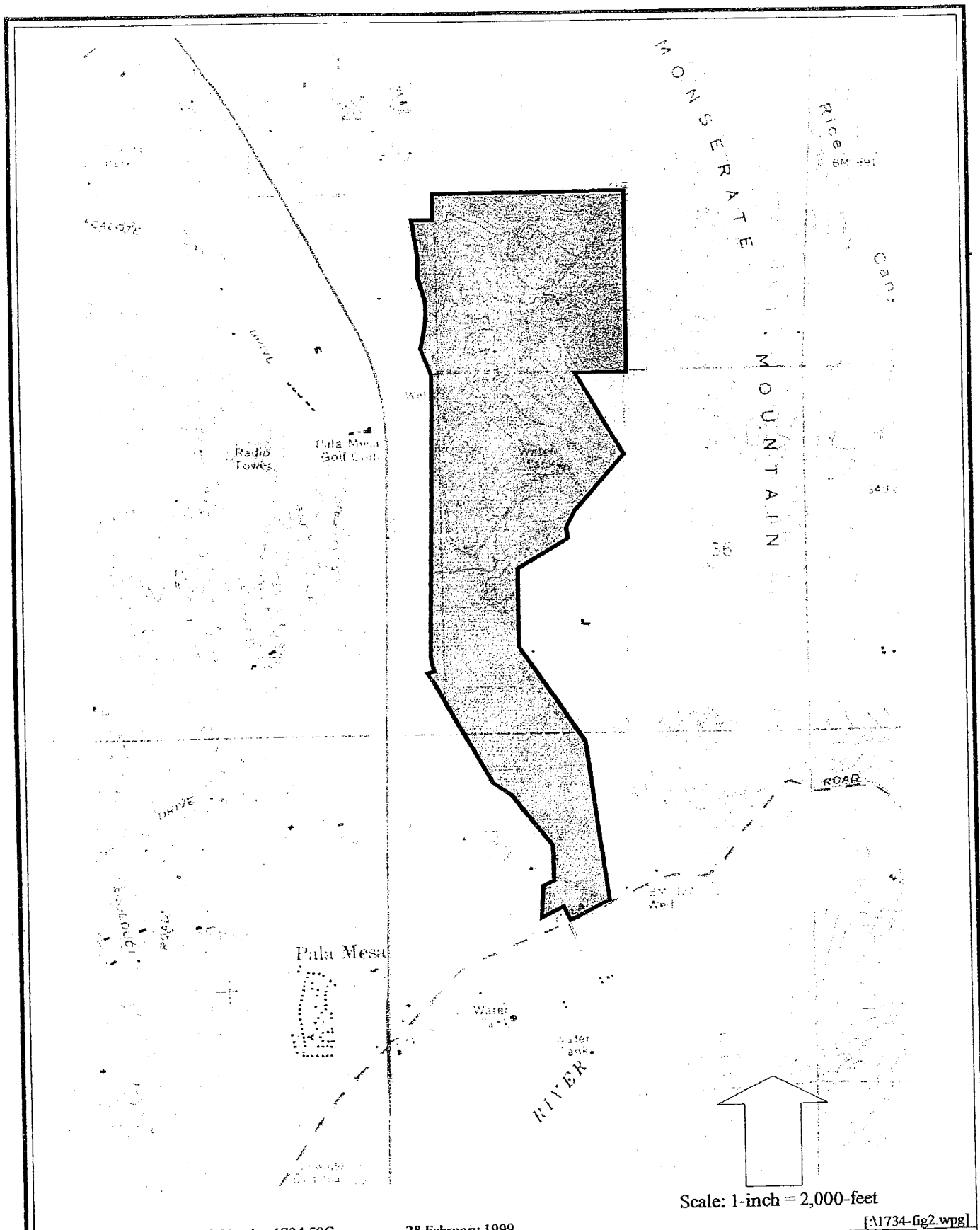
Scale: 1-inch = 2,500-feet

[A1734-fig1.wpg]

**RBRiggan
and
Associates**

**Location of the Pala Mesa Center Project on a
Thomas Brothers Base Map**
[map © Thomas Bros Maps]

**Figure
1**



RBRiggan and Associates Job Number 1734.50C

28 February 1999

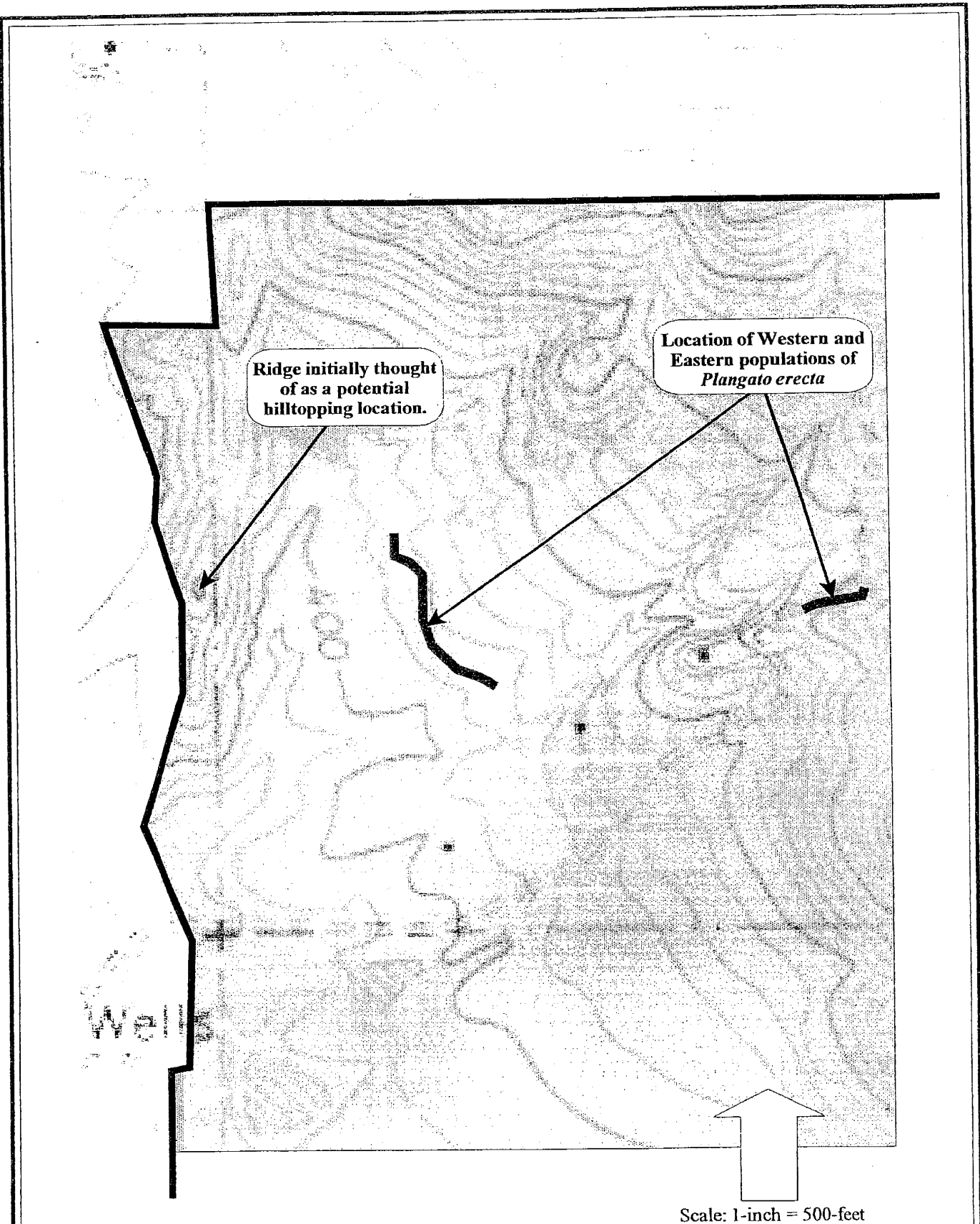
Scale: 1-inch = 2,000-feet

[A1734-fig2.wpg]

**RBRiggan
and
Associates**

**Location of the Pala Mesa Center Project on a
Scanned Portion of the U.S.G.S. 7 1/2-minute
Bonsall Quadrangle Map**

**Figure
2**



RBRiggan and Associates Job Number 1734.50C

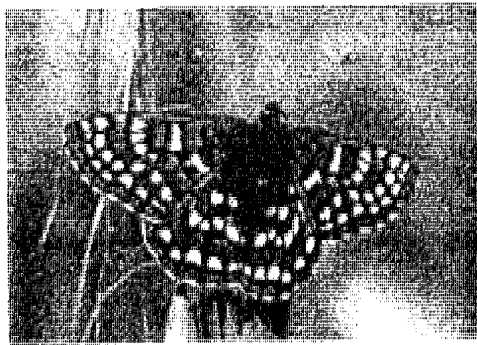
23 March 1999

[N1734-fig3.wpg]

**RBRiggan
and
Associates**

**The Extreme Northern Part of the Pala Mesa
Centre Property Showing the Location of
Resources Potentially Available to the Quino**

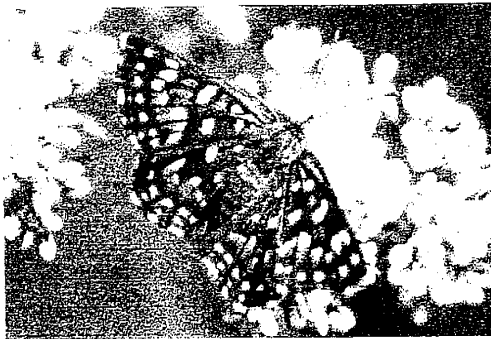
**Figure
3**



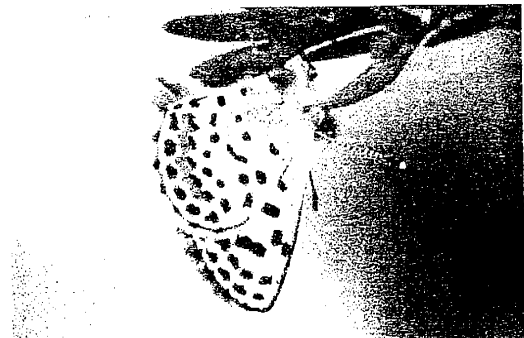
Quino Checkerspot Butterfly (*Euphydryas editha quino*) — NOT found on the Pala Mesa Center, this is the Federally listed species that was the target of the survey effort. Not completely visible in this photo are the diagnostic orange bands on the abdomen (Photo from south of Sage Road in Riverside County).



California Ringlet (*Coenonympha tullia*) — This species' larvae feed on native bunch grasses. Where the habitat is favorable, it can occur in very large numbers. A few were seen in the northern part of the Pala Mesa Center Property.



Mormon Metalmark (*Apodemia mormo virgulti*). This species is abundant where ever its larval food plant, California Buckwheat, is found. That shrub species is common on the Pala Mesa Center site and the butterfly was relatively common.



Bernardino Blue (*Euphilotes bernardino*) — A common species, apparently just beginning their emergence at the end of the 1999 Quino Flight Season. Larvae feed on buckwheats. Photo taken in Temecula.



Southern Blue (*Glaucopsyche lygdamus australis*) — Abundant this year in the San Diego County foothills. Several individuals were also seen on the Pala Mesa Center property. The larvae feed on Deerweed.



Sara Orangetip (*Anthocharis sara*) — This butterfly is relatively common in the San Diego County foothills. The larvae feed on a variety of mustard species. Several individuals were seen on the Pala Mesa Center Property.

RBRiggan and Associates Job Number 1734.50A

25 June 1999

The original of this graphic was printed in color.
Additional color copies may be obtained from the author.

[A1734-fig4.wpg]

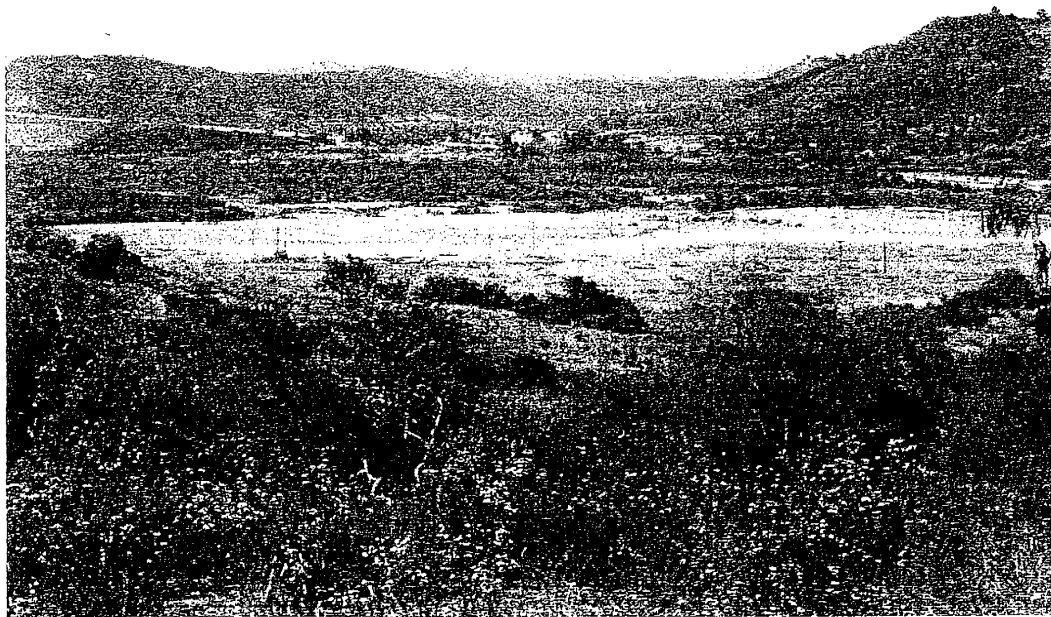
**RBRiggan
and
Associates**

**Representative Butterflies Found on or
Searched for on the Pala Mesa Center
Property, County of San Diego, California**

**Figure
4**



Slide #1: View looking generally east across Interstate-15 at the ridge (marked with an arrow) in the northwest part of the project site that was investigated as a potential hilltopping location. As can be seen, there is much higher ground to the east (photo taken 24 June 1999).



Slide #2: View looking southwest across the Pala Mesa Center property. The foreground chaparral, the middle ground fields and the riparian woodland beyond are all within the project site. Interstate-15 is visible in the lower background.

The original of this graphic was printed in color. Additional color copies may be obtained from the author.

RB Riggan and Associates Job Number 1734.50C

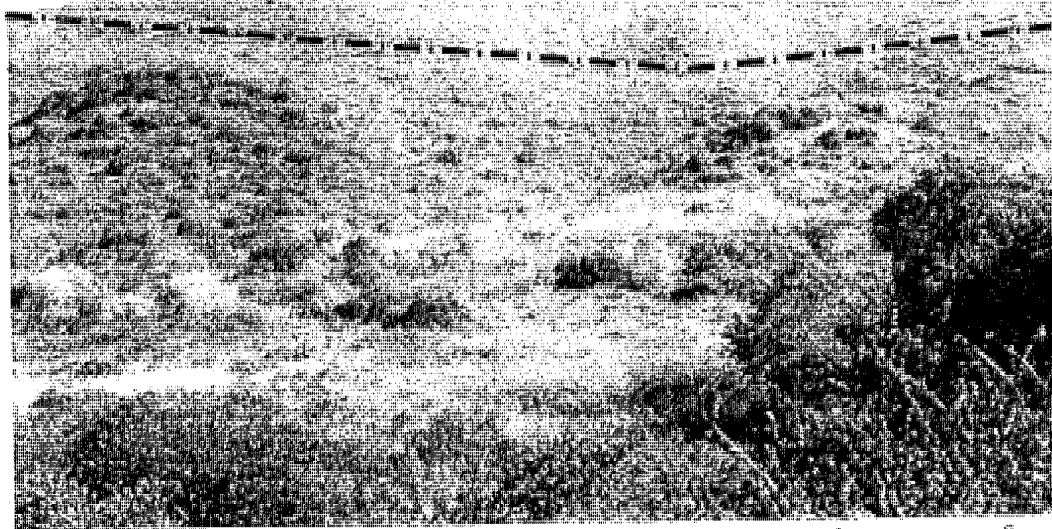
24 June 1999

[:\1734-fig5A.wpg]

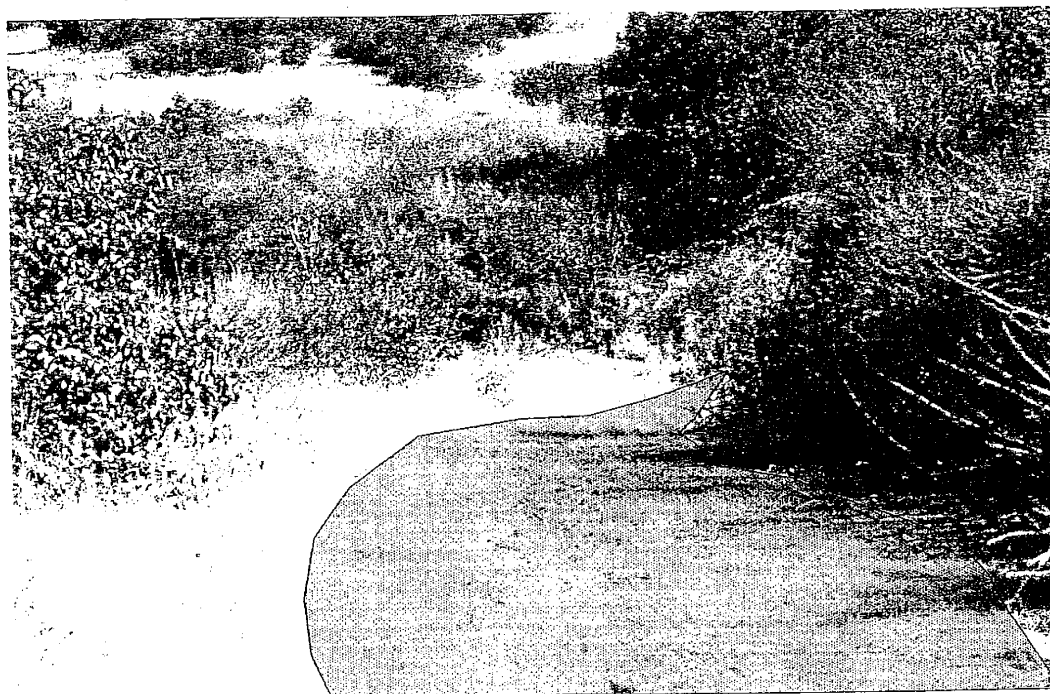
**RB Riggan
and
Associates**

**Site Photographs:
Prints of Slides #1 and #2.**

**Figure
5A**



Slide #3: View looking generally northeast towards the extreme northeast corner of the property in Section 25. As can be seen, the higher ground of the site is occupied almost entirely by a Coastal Sage Scrub association. The approximate property boundary is shown. (photo taken 24 June 1999).



Slide #4: View looking north across an area that supports a moderate growth of *Plantago erecta*. This is an old, little used, dirt road and the *Plantago* is found on the areas of open soil, apparently as a means of avoiding competition with other plants.

The original of this graphic was printed in color. Additional color copies may be obtained from the author.

RBRiggan and Associates Job Number 1734.50C

24 June 1999

[\\1734-fig5B.wpg]

**RBRiggan
and
Associates**

**Site Photographs:
Prints of Slides #3 and #4.**

**Figure
5B**

Table 1

Butterfly Species Observed on the Pala Mesa Center Property,
County of San Diego, as part of a Protocol Survey for the
Quino Checkerspot Butterfly

Butterfly Species	3/22/99	4/18/99	4/25/99	Note
<i>Adelpha bredowii</i>		1		The single individual seen was a flyby. The larvae of this species are tied to live oaks, a number of which are found near the upper parts of the property
<i>Anthocharis sara</i>	3			Seen in the northern part of the property, generally patrolling along drainage swales
<i>Apodemia mormo</i>		6	6	Individuals that were seen were always in association with the larval food plant: <i>Eriogonum fasciculatum</i> — the dominant shrub species on the parts of the property.
<i>Callophrys perplexa</i>	2			The two individuals were seen on the ridge and high point near the freeway. Although station keeping they were not on the high point, this did not appear to be hilltopping behavior per se.
<i>Coenonympha tullia</i>	2	7	4	The central part of the northern area has been disturbed in years past by agriculture. Parts of this area are partially regrown to native bunch grasses. These individuals were seen in association with those grasses.
<i>Erynnis</i> sp.	1			Not of the <i>funeralis/iristis</i> group. A flyby, it could not be identified any more accurately.
<i>Euphilotes bernardino</i>		2	2	The small blues seen on these two dates appeared to be of this species.

Butterfly Species:	3/22/99	4/18/99	4/25/99	Note:
<i>Glaucopteryx hydamus</i>	10	3		Found in association with the larval food plant, <i>Lotus scoparius</i> , which is a common shrub on the disturbed and recovering parts of the property.
<i>Papilio rutulus</i>			1	Seen as a flyby; apparently associated with the extensive riparian in the lower parts of the property.
Polyommatainae	2			These were smaller than the <i>Glaucopteryx</i> seen on the same day, however, they did not land and could not be examined any more closely than they were.
<i>Pontia protodice</i>			2	One was seen to land and could be examined with binoculars, the other was a flyby
<i>Vanessa anabella</i>		2		Seen as a flyby, however, both individuals landed, allowing a close examination with binoculars.

Total: 11 identified species or genera.

Copies of four slides illustrating the site were included in the reports submitted to the Fish and Wildlife Service, provided to REC Environmental, provided to the project applicant and retained by RBRiggan and Associates.

If this report does not contain copies of the slides please refer to the thumbnails printed in the two proceeding Figures. Additional copies of the slides may be obtained from the author.

Appendices

- 1. Copies of RBR Field Note Entries**
- 2. Completed FWS “Quino Checkerspot General Form” for Each Site Visit**

22 March 1999

The following field notes were made during a site visit to the Pala Mesa Center property. The site is located immediately adjacent to and east of Interstate 15 and is immediately adjacent to an north of Pala Road. The site encompasses approximately 350 acres and is an elongate, irregular shape. The site is illustrated in this field notebook as figure 14. The bulk of the property is occupied either by a riparian woodland war is occupied by active agriculture. In either case, the land use is not suitable for the Quino Checkerspot Butterfly (*Euphydryas editha quino*).

The purpose of the site visit, was as the first visit in a series consistent with the federal protocol for Quino surveys. As such, additional field notes will be taken which address the subject property. Over the last few days, members of the RED Environmental staff have conducted a survey of the property to locate populations of one or more of the food plants utilized by the Quino larvae. The only such plant located was *Plantago erecta*. To relatively small populations were located in the extreme northern part of the site (see figure 14). The more westerly of these populations occupies the surface of along abandoned dirt road and probably encompasses a few thousand square feet. The more east early of the two populations, is also located on the surface of an abandoned dirt road, but this population encompasses only a few hundred square feet.

In reviewing the property, it was felt that a ridge and topographic high point located along the Northeast property boundary, adjacent to Interstate 15, might serve as a hilltopping location. For this reason, the ridge and the associated high ground were carefully examined as a part of this field effort.

The vegetation in the northern part of the site (the only area subject to an active survey as a part of this Quino effort) the is an eclectic mixture of Coastal Sage Scrub, chaparral species, nonnative adventives, and horticultural escapes. The nonnative material generally occupies surfaces that had been previously subject to agricultural disturbance. The Sage scrub elements generally occupy undisturbed south facing slopes while the chaparral elements generally occupy similarly undisturbed north facing slopes.

Upon viewing the site for the first time, one is struck by how much of the property is occupied by the riparian woodland that has developed on the broad, flat, floor of the central drainage. This were riparian woodland probably exceeds 200 to 300 feet through much of its length and, as such, may be suitable for the Least Bell's Vireo. This riparian is certainly adjacent to the critical habitat that species if not inclusive of such critical habitat.

A considerable portion of the central part of the property is presently subject to intense grazing pressure. An extensive herd of cattle is on the property and, with the limited rainfall this year, will have a profound effect on the vegetation. Cattle also have the effect of eliminating vegetation suitable for the Quino Checkerspot.

Much of the property is underlain by gabbroics of the southern California batholith (Weber 1962). The lower slopes are covered with colluvium and the lowest lying areas (the broad, flat stream course) are Quaternary Alluvium.

Field observations on the state were made between the hours of 1345 to 1545. The primary field observer was Riggan, who was accompanied in the field on this date by Denise Dixon of the REC Environmental field staff. Wind speed at the beginning of the observation period were measured with a Turbometer (obtained from Forestry Suppliers, Inc.) From 1.5 to 8.2 mph. Also at the beginning of the observational period the air temperature was measured at 72.5 degrees Fahrenheit and the humidity was 41 percent.

Following butterflies (and relative numbers of individuals) were seen on this field date:

Coenonympha tullia — 2

Anthocharis sara — 3

Polyommatinae — 2

Glaucopsyche lygdamus — 10

Erynnis sp. — 2

Callophrys perplexa — 2

The northern part of the property has been disturbed in agriculture, but has lain fallow for period of several years. Within this area a number of native bunch grasses were found. The *Coenonympha tullia* were found in association with these bunch grasses.

The *Anthocharis sara* were seen patrolling in shallow swales or drainage courses. Apparently this is a normal behavior for the species. We Polyommatinae seen were notably smaller than the *Glaucopsyche*. None were seen to land, however, and an accurate identification could not be made. The two individuals of *Erynnis* were clearly not members of the *funeralis/tristis*, however, neither could be examined closely and more accurate identification could not be made. The *Callophrys perplexa* among them were found on the possible hilltopping location but neither was on the crest and neither seemed to be exhibiting hilltopping behavior.

18 April 1999

The following notes were made during a site visit to the Pala Mesa Center property. The site is the subject of an ongoing survey effort to determine the presence or absence of the endangered Quino Checkerspot Butterfly (*Euphydryas editha quino*). This site has been previously described in these field notes, the reader is referred to the entry and 22 March 1999. The site is also illustrated and this notebook as figure 14.

Field observations on the state were made by a single observer: Riggan. Observations were made between 1615 hours and 1715 hours. Wind speed at the beginning of the observational period was measured at between 4.3 and 11.2 mph (utilizing a Turbometer). Air temperature the beginning of the observational period was 88.2 degrees Fahrenheit in the humidity was 24 percent. Despite the late hour, the high temperatures assured Butterfly activity.

The following butterflies (and relative numbers of individuals) were observed:

Euphilotes bernardino — 2
Adelpha bredowii — 1
Apodemia mormo — 6
Vanessa annabella — 2
Coenonympha tullia — 7
Glaucopsyche lygdamus — 3

The *Euphilotes* and the *Apodemia* were seen in association with the larval food plant, *Eriogonum fasciculatum*. The shrub is common, especially in the more disturbed shrub areas in the northern part of property. The *Adelpha* was a flyby. The larvae of that species are associated with the live oaks found several points within the property. The *Coenonympha tullia* were once again seen indirect association with the bunch grasses that are the larval food plants.

25 April 1999

The following field notes were taken during a visit to the Pala Mesa Center property. This site is located adjacent to Interstate 15 and north Pala Road. It is the subject of an ongoing series of investigations to determine the presence or absence of the Quino Checkerspot Butterfly. This species is listed under the federal Endangered Species Act has found in number of sites the and Riverside County, the short distance to the north. This property has been previously described in these field notes, the reader is referred to the entry at 22 March 1999. The site is also illustrated in figure 14.

Them field observations on the state were made by a single observer, Riggan. Observations were made between 1130 and 1300 hours. Wind speed was measured at the beginning of the observational period at between 2.6 and 8.3 mph (utilizing a Turbometer). Air temperature and at the beginning of the observational period was 73.2 degrees Fahrenheit and humidity was 29 percent. As has been noted many times in this field notebook, it should be pointed out that wind speed he is extremely erratic and that microtopography has a profound effect on highly localized winds.

The following butterfly species (and relative number of individuals) were observed on this date:

Apodemia mormo — 6
Coenonympha tullia — 4
Papilio rutulus — 1
Pontia protodice — 2
Euphilotes bernardino — 2

The *Apodemia* were the most common Butterfly observed. Individuals tend to perch a few inches above the ground or typically first seen with a flea in from the observer. The flight of this species is highly erratic and the Butterfly appears as a small black insect randomly bouncing down the trail ahead of the observer. Typically the Butterfly will flying the distance of perhaps 15 or 20 feet, then turning and flying back along the path trail. Eventually, it will calm down and perch once again

either the same location as before or one new vantage point somewhere along the trail were opening.

The single individual of *Papilio rutulus* was one of the few seen during this Quino flight season. Areas an extensive area of riparian woodland in the southern part of the project site and is assumed that this butterfly is associated with that woodland. The larval food plant for the species is *Salix*. The two *Pontia* were seen as flybys. One landed briefly and allowed an accurate field identification, the other was strictly a flyby and the identification was assumed.

Quino Checkerspot General Form

Survey type: Habitat Assessment/Adult Survey

Surveyor: RIGGAN Date: 03/22/99 Site Visit No: 1 2 3 4 5 6 7 8 9 10Total site acres: ±350 Site Name: Pole Mesa Center Site Location: Pole

J#1734

Time (24 hr)	Sky	Wind (Beaufort)	Temp F or C
Begin <u>1345</u>	<u>clear</u> partcloudy/overcast/fog/drizzle/shower	<1 <u>3</u> 4-7 8-12 >12	<u>72.5</u>
	clear/ partcloudy/overcast/fog/drizzle/shower	<1 1-3 4-7 8-12 >12	<u>72</u>
	clear/ partcloudy/overcast/fog/drizzle/shower	<1 1-3 4-7 8-12 >12	<u>72</u>
	clear/ partcloudy/overcast/fog/drizzle/shower	<1 1-3 4-7 8-12 >12	<u>72</u>
	clear/ partcloudy/overcast/fog/drizzle/shower	<1 1-3 4-7 8-12 >12	<u>72</u>
	clear/ partcloudy/overcast/fog/drizzle/shower	<1 1-3 4-7 8-12 >12	<u>72</u>
End <u>1545</u>	<u>clear</u> partcloudy/overcast/fog/drizzle/shower	<1 1-3 <u>4-7</u> 8-12 >12	<u>±72</u>

Total hours surveyed: 2.0Focused Survey Acres: ±2 Elev Min: 400 ft Max: 500 ft

Describe, map, and estimate areas surveyed below.

see Fig. 3

Host Plants ^a	Patch Size (ft ²)	No Plants/ft ²	Sparse/Dense ^b	Map ID ^c	
<u>Plantago</u>	<u>few 1000 ft²</u>	<u>?</u>	<u>moderate</u>	<u>northerly population</u>	
<u>Plantago</u>	<u>few 100 ft²</u>	<u>?</u>	<u>sparse</u>	<u>easterly population</u>	

a. Larval or nectar resources. Identify species.

b. Sparse = plants not touching; dense = plants touching

c. Corresponds to polygon on a map.

Surrounding land uses (including adjoining properties):

North rural residential
 South agriculture / SR 76
 East open space
 West Interstate-15

Distance _____ ft./mile

Distance _____ ft./mile

Distance _____ ft./mile

Distance _____ ft./mile

} adjacent

Habitat onsite (circle) open soils hilltop ridge Plantago Castilleja soil crusts old roads
 nectar clay soils rock outcrops

Conditions: (e.g., grazing agriculture sowbugs/earwigs recent fire grading)

Other: grazing

Quino Checkerspot General Form

Survey type: Habitat Assessment/Adult Survey

Surveyor: RIGGAN Date: 04/18/99 Site Visit No: 12345678910

Total site acres: ±350 Site Name: Palo Verde Center Site Location: Palo Verde

#1734

Time (24 hr)	Sky	Wind (Beaufort)	Temp F or C
Begin <u>1615</u>	<u>clear</u> partcloudy/overcast/fog/drizzle/shower	<1 <u>1-3</u> 4-7 8-12 >12	<u>88.2</u>
	clear/ partcloudy/overcast/fog/drizzle/shower	<1 1-3 4-7 8-12 >12	<u>87</u>
	clear/ partcloudy/overcast/fog/drizzle/shower	<1 1-3 4-7 8-12 >12	<u>87</u>
	clear/ partcloudy/overcast/fog/drizzle/shower	<1 1-3 4-7 8-12 >12	<u>87</u>
	clear/ partcloudy/overcast/fog/drizzle/shower	<1 1-3 4-7 8-12 >12	<u>87</u>
	clear/ partcloudy/overcast/fog/drizzle/shower	<1 1-3 4-7 8-12 >12	<u>87</u>
End <u>1745</u>	<u>clear</u> partcloudy/overcast/fog/drizzle/shower	<1 <u>1-3</u> 4-7 8-12 >12	<u>±80</u>

Total hours surveyed: 1.5

Focused Survey Acres: ±2 Elev Min: 400 ft Max: 500 ft

Describe, map, and estimate areas surveyed below.

Host Plants ^a	Patch Size (ft ²)	No Plants/ft ²	Sparse/Dense ^b	Map ID ^c	
<u>Plantago</u>	<u>few 1000 ft²</u>	<u>?</u>	<u>moderate</u>	<u>northerly population</u>	
<u>Plantago</u>	<u>few 100 ft²</u>	<u>?</u>	<u>sparse</u>	<u>easterly population</u>	

a. Larval or nectar resources. Identify species.

b. Sparse = plants not touching; dense = plants touching

c. Corresponds to polygon on a map.

Surrounding land uses (including adjoining properties):

North rural residential
 South agriculture/SR 76
 East open space
 West Interstate-15

Distance _____ ft./mile
 Distance _____ ft./mile
 Distance _____ ft./mile
 Distance _____ ft./mile

} adjacent

Habitat onsite (circle) open soils hilltop ridge Plantago Castilleja soil crusts old roads
 nectar clay soils rock outcrops

Conditions: (e.g., grazing agriculture sowbugs/earwigs recent fire grading)

Other: grazing

Quino Checkerspot General Form

Survey type: Habitat Assessment/Adult Survey

Surveyor: RIGGAN Date: 04/25/99 Site Visit No: 1 2 3 4 5 6 7 8 9 10

#1734

Total site acres: ±350 Site Name: Pole Mesa Center Site Location: Polo

Time (24 hr)	Sky	Wind (Beaufort)	Temp F or C
Begin <u>1130</u>	<u>clear</u> partcloudy/overcast/fog/drizzle/shower	<1 <u>1-3</u> 4-7 8-12 >12	<u>73.2</u>
	clear/ partcloudy/overcast/fog/drizzle/shower	<1 1-3 4-7 8-12 >12	<u>77</u>
	clear/ partcloudy/overcast/fog/drizzle/shower	<1 1-3 4-7 8-12 >12	<u>77</u>
	clear/ partcloudy/overcast/fog/drizzle/shower	<1 1-3 4-7 8-12 >12	<u>77</u>
	clear/ partcloudy/overcast/fog/drizzle/shower	<1 1-3 4-7 8-12 >12	<u>77</u>
	clear/ partcloudy/overcast/fog/drizzle/shower	<1 1-3 4-7 8-12 >12	<u>77</u>
End <u>1300</u>	<u>clear</u> partcloudy/overcast/fog/drizzle/shower	<1 <u>1-3</u> 4-7 8-12 >12	<u>±77</u>

Total hours surveyed: 1.5

Focused Survey Acres: ±2 Elev Min: 400 ft Max: 500 ft

Describe, map, and estimate areas surveyed below.

Host Plants ^a	Patch Size (ft ²)	No Plants/ft ²	Sparse/Dense ^b	Map ID ^c	
<u>Plantago</u>	<u>few 1000 ft²</u>	<u>?</u>	<u>moderate</u>	<u>northerly population</u>	
<u>Plantago</u>	<u>few 100 ft²</u>	<u>?</u>	<u>sparse</u>	<u>easterly population</u>	

a. Larval or nectar resources. Identify species.

b. Sparse = plants not touching; dense = plants touching

c. Corresponds to polygon on a map.

Surrounding land uses (including adjoining properties):

North rural residential
 South agriculture/SR76
 East open space
 West Interstate 15

Distance _____ ft./mile
 Distance _____ ft./mile
 Distance _____ ft./mile
 Distance _____ ft./mile

} adjacent

Habitat onsite (circle) open soils hilltop ridge Plantago Castilleja soil crusts old roads
 nectar clay soils rock outcrops

Conditions: (e.g., grazing agriculture sowbugs/earwigs recent fire grading)

Other: grazing

ATTACHMENT 3

Least Bell's Vireo Report



Civil Engineering - Environmental

2442 Second Avenue
San Diego, CA 92101
Phone: 619.232.9200
Fax: 619.232.9210

September 1, 2004

Mr. Daniel Marquez
USFWS
6010 Hidden Valley Road
Carlsbad, CA 92009

Subject: **Least Bell's Vireo Survey Report for the Campus Park Site**

Dear Mr. Marquez,

Introduction

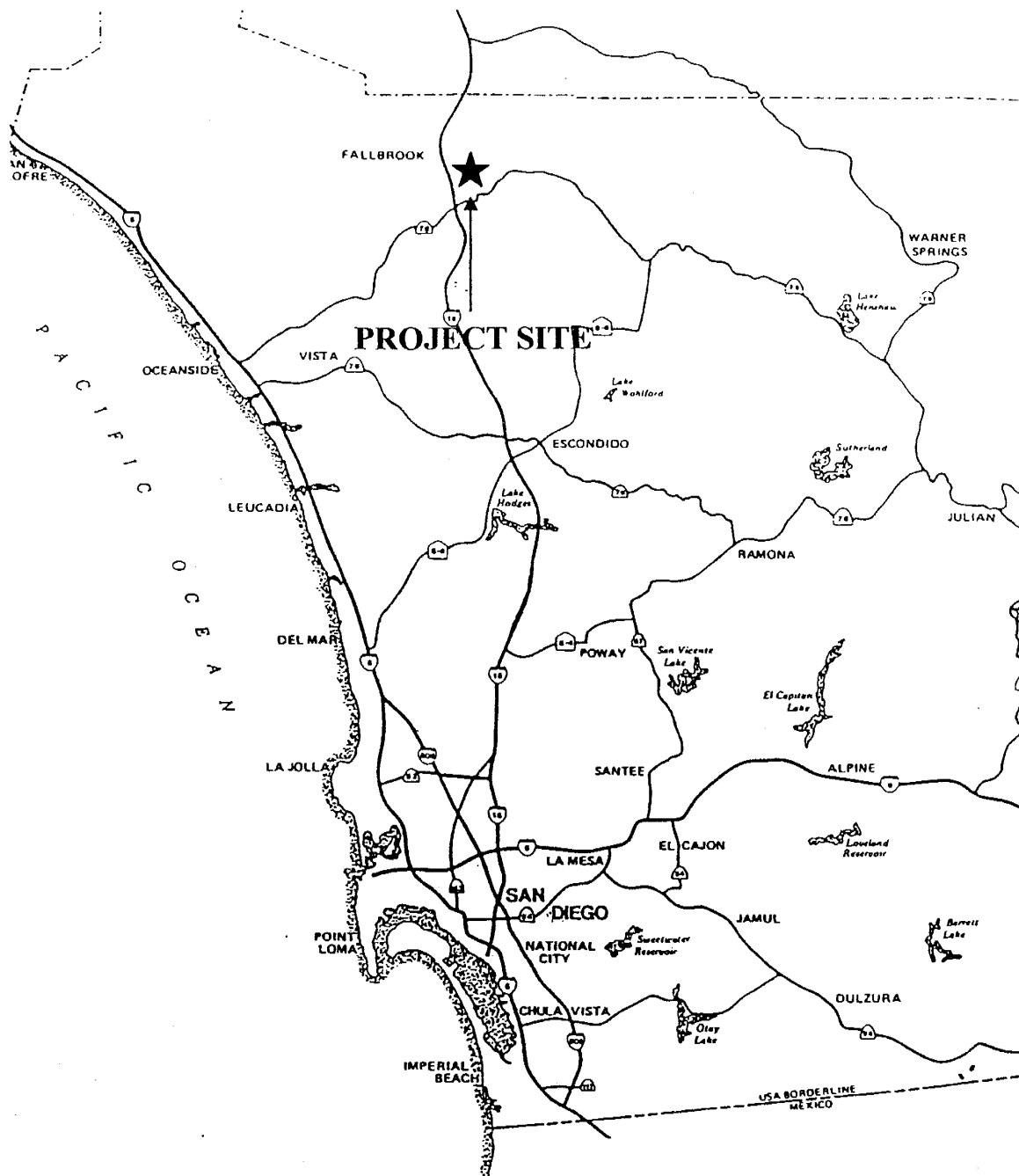
The least Bell's Vireo (*Vireo bellii pusillus*) is a small migratory songbird that breeds in willow-dominated communities during the summer months. This species, imperiled by loss and degradation of habitat and brown-headed cowbird nest parasitism, is listed as California and Federal Endangered. A presence/absence survey for least Bell's Vireo is required for sites with planned development in or near potential breeding habitat. The survey must be conducted according to the most recent United States Fish and Wildlife Service (USFWS) protocol (January 2001), which requires a minimum of eight surveys, at least ten days apart, to determine presence/absence of this species.

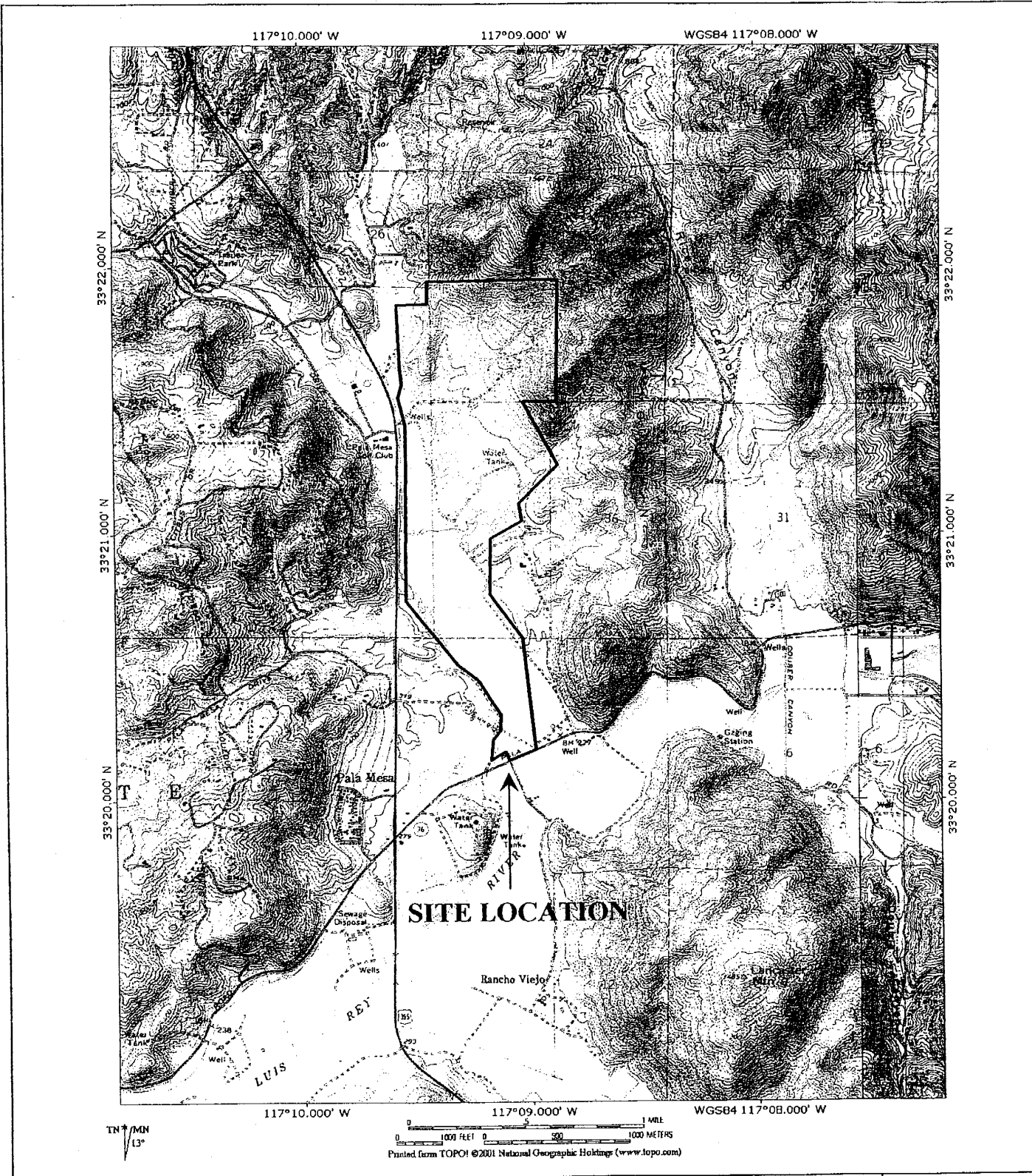
The proposed project is a mixed-use commercial, residential, and college development in northeastern San Diego County. The following report details the USFWS protocol surveys for least Bell's Vireo performed by REC biologists Catherine MacGregor, Valerie Walsh, and Cheryl Delektó.

Geographical Limits of the Study Area

The Campus Park site is located northeast of the intersection of Interstate 15 and Pala Road (State Highway 76), in northeastern San Diego County (Figure 1). The approximately 500 acre site (APNs 108-120-47, 108-120-49, 108-120-50, 108-120-51, 108-121-12, 108-121-13, 108-421-03, 108-421-04, 125-061-03) is surrounded by undeveloped land to the north, undeveloped and agricultural land to the east, Pala Road to the south, and undeveloped land and Interstate 15 to the west. The site contains one residence and extensive pastureland but is otherwise undeveloped. An extensive riparian forest occupies the southern section of the site.

The site is relatively flat in the southern two-thirds and gently slopes up at the northern edge. Elevations onsite range from approximately 260 feet above mean sea level at the southern edge to 730 feet above mean sea level at the northeastern edge. A creek traverses the southwestern edge of the property, draining toward the San Luis Rey River. (Figure 2)





Habitats

The project site supports 12 habitat types: southern riparian forest, southern willow scrub, freshwater marsh, oak woodland, Diegan coastal sage scrub, coyote brush scrub, non-native grassland, pasture, Eucalyptus woodland, ornamental vegetation, developed land, and disturbed land. Southern riparian forest and southern willow scrub, described below, were considered likely habitats for least Bell's Vireo.

Southern Riparian Forest

The southern riparian forest onsite is a wooded wetland forest characterized by a canopy of willow trees (*Salix spp.*) with western cottonwoods (*Populus fremontii*) and sycamores (*Platanus racemosa*). This habitat occupies approximately 91.7 acres in the southern section of the site.

Southern Willow Scrub

Southern willow scrub habitat onsite consists of thickets of willows (*Salix spp.*). This habitat is generally less tall and less diverse than the nearby southern riparian forest habitat. Southern willow scrub occupies approximately 2.8 acres in the central section of the site.

Least Bell's Vireo Survey Methods

The riparian and willow scrub habitats were surveyed by REC biologists. No territory mapping, handling, banding, or nest monitoring was conducted. Taped vocalizations were not used. Table 1 summarizes the survey dates, personnel, and weather conditions for least Bell's Vireo surveys performed onsite.

TABLE 1 Least Bell's Vireo Surveys Conducted on the Campus Park Site			
Date	Time	Conditions Temp (°F), Wind (mph) begin and end, Sky	Biologists
4/13/04	0705-1045	Warm, 0-5, Clear	C. MacGregor, V. Walsh
4/23/04	0820-1050	Warm, 0-5, Clear	C. MacGregor, V. Walsh
5/5/04	0915-1100	79-87, 0-1 and 1.4-3.9, Clear	C. Delekto, C. MacGregor, V. Walsh
5/17/04	0745-1015	68-81, 0 and 0-2.7, Overcast to partly cloudy	C. MacGregor, V. Walsh
6/2/04	0705-1015	67-74, 0-0.6 and 0-2.1, Cloud to clear	C. MacGregor, V. Walsh
6/15/04	0815-1100	98-76, 0-1.5 and 0-4.1, Overcast to clear	C. MacGregor, V. Walsh
6/29/04	0815-1050	71-75, 0 and 0-2.2, Overcast to clear	C. MacGregor, V. Walsh
7/8/04	0830-1100	73-76, 0 and 0-1.9, Overcast to clear	C. MacGregor, V. Walsh

Eight presence/absence surveys for the least Bell's Vireo were completed by REC biologists Catherine MacGregor, Valerie Walsh, and Cheryl Delekto. Each survey was conducted at least ten days apart, within the southern riparian forest and southern willow scrub habitats onsite. All surveys were conducted on foot during favorable weather conditions. Wildlife species were identified directly by sight or by vocalizations, and indirectly by scat, tracks, or burrows. Field notes were maintained throughout the surveys, and all least Bell's Vireos and species of interest

were mapped. Sufficient time was spent in all appropriate habitats to determine the presence/absence of the least Bell's Vireo.

Results

Locations of observations are shown in Figure 3. Observations per survey are summarized in Table 2 below. A minimum of nine least Bell's Vireos were observed onsite, including two pairs and one probable juvenile. This minimum number represents the total number of birds observed in any single survey (five males and one pair), plus the female and juvenile of a pair observed in a different location from the first pair on a different day. In addition to the least Bell's Vireo observed onsite, brown-headed cowbirds (*Molothrus ater*) were heard in two locations on one day (Figure 3). The presence of the cowbirds onsite is significant because brown-headed cowbirds are known to parasitize the nests of the least Bell's Vireo by depositing their own eggs in the Vireo nests. Cowbird chicks often outcompete Vireo chicks for food, leading to a higher mortality for Vireo chicks in cowbird-infested areas. Yellow breasted chats (*Icteria virens*), a California Species of Special Concern, were also observed onsite, at the locations shown in Figure 3. No Federal Endangered southwestern willow flycatchers (*Empidonax traillii extimus*) or California Endangered yellow-billed cuckoos (*Coccyzus americanus*) were detected.

TABLE 2 Least Bell's Vireo Observations on the Campus Park Site		
Survey No.	Date	Least Bell's Vireo Observations
1	4/13/04	4 (males)
2	4/23/04	4 (males)
3	5/5/04	5 (3 males and 1 pair)
4	5/17/04	7 (5 males and 1 pair)
5	6/2/04	3 (males)
6	6/15/04	7 (5 males and 1 pair)
7	6/29/04	6 (3 males and a group of 3)
8	7/8/04	4 (males)

Several other bird species were also observed during the least Bell's Vireo surveys. Some of the most commonly seen or heard bird species in the riparian habitat were common yellow-throat, mourning dove, song sparrow, and house finch. A complete list of bird species observed during the least Bell's Vireo surveys is provided in Attachment A.

Please do not hesitate to contact REC if you have any questions.

Sincerely,



Catherine H. MacGregor
Senior Biologist

Attachments

ATTACHMENT A ANIMALS OBSERVED DURING LEAST BELL'S VIREO SURVEYS ON THE CAMPUS PARK SITE			
Common Name	Species Name	Habitat Observed	Maximum No. Observed per Survey (estimate)
Invertebrates			
Cabbage white	<i>Pieris rapae</i>	SRF	several
Cricket	Family Gryllidae	SRF	several
Lorquin's admiral	<i>Limenitis lorquini</i>	SRF	1
Amphibians			
Treefrog	<i>Hyla sp.</i>	SRF	1
Reptiles			
Coastal whiptail	<i>Cnemidophorus tigris</i>	SRF	1
Common side-blotched lizard	<i>Uta stansburiana</i>	CBS	1
Western fence lizard	<i>Sceloporus occidentalis</i>	SRF	1
Birds			
American crow	<i>Corvus brachyrhynchos</i>	SRF	1
American kestrel	<i>Falco sparverius</i>	SRF	1
Anna's hummingbird	<i>Calypte anna</i>	SRF	1
Ash-throated flycatcher	<i>Myiarchus cinerascens</i>	PAS, SRF	1, 1
Bewick's wren	<i>Thryomanes bewickii</i>	SRF	2
Black phoebe	<i>Sayornis nigricans</i>	SRF	1
Black-headed grosbeak	<i>Pheucticus melanocephalus</i>	SRF	3
Brown-headed cowbird	<i>Molothrus ater</i>	SRF	2
Bullock's oriole	<i>Icterus bullockii</i>	SRF	2
Bushtit	<i>Psaltiriparus minimus</i>	SRF	2
California quail	<i>Callipepla californica</i>	CBS, SRF	7, 2
California towhee	<i>Pipilo crissalis</i>	SRF	1
Cassin's kingbird	<i>Tyrannus vociferans vociferans</i>	PAS	2
Common yellowthroat	<i>Geothlypis trichas</i>	PAS, SRF	1, 8
Great blue heron	<i>Ardea herodias</i>	flyover	1
Hooded oriole	<i>Icterus cucullatus</i>	SRF	1
House finch	<i>Carpodacus mexicanus</i>	SRF	3
Least Bell's Vireo*	<i>Vireo bellii pusillus</i>	SRF	≥9
Lesser goldfinch	<i>Carduelis psaltria</i>	PAS, SRF	1, 1
Mallard	<i>Anas platyrhynchos</i>	flyover	2
Mourning dove	<i>Zenaida macroura</i>	PAS, SRF	3, 3
Northern mockingbird	<i>Mimus polyglottos</i>	SRF	1
Nuttall's woodpecker	<i>Picoides nuttallii</i>	SRF	2
Ostrich (domestic)**	<i>Struthio camelus</i>	PAS	2
Red-shouldered hawk	<i>Buteo lineatus</i>	SRF	1
Red-tailed hawk	<i>Buteo jamaicensis</i>	PAS	2
Snowy egret	<i>Egretta thula</i>	flyover	1
Song sparrow	<i>Melospiza melodia</i>	PAS, SRF	1, many
Sparrow (unidentified)	Family Emberizidae	SRF	5
Spotted towhee	<i>Pipilo maculatus</i>	SRF	2
Western kingbird	<i>Tyrannus verticalis</i>	PAS	1
Western scrub jay	<i>Aphelocoma californica</i>	SRF	1
Wrentit	<i>Chamaea fasciata</i>	SRF	1

Common Name	Species Name	Habitat Observed	Maximum No. Observed per Survey (estimate)
Yellow-breasted chat*	<i>Icteria virens</i>	SRF	2
Yellow-rumped warbler	<i>Dendroica coronata</i>	SRF	1
Mammals			
Cow (domestic)**	<i>Bos taurus</i>	SRF	12
Desert cottontail	<i>Sylvilagus audubonii</i>	SRF	1
Dusky-footed woodrat	<i>Neotoma fuscipes</i>	SRF	3 nests
Raccoon	<i>Procyon lotor</i>	SRF	tracks

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

** Non-native species

CBS - Coyote Brush Scrub

PAS - Pasture

SRF - Southern Riparian Forest

flyover - observed flying over the site

ATTACHMENT 4

Arroyo Toad Survey Report



Consultants, Inc.

Civil Engineering • Environmental

2442 Second Avenue
San Diego, CA 92101
Phone: 619.232.9200
Fax: 619.232.9210

September 13, 2004

Mr. Daniel Marquez
U.S. Fish and Wildlife Service
6010 Hidden Valley Road
Carlsbad, CA 92009

Subject: Results of the USFWS Protocol Surveys for the Arroyo Toad on the Passerelle Property, northern San Diego County, California

Dear Mr. Marquez:

A U.S. Fish and Wildlife Service (USFWS) protocol survey for the arroyo toad (*Bufo Californicus*), was conducted on the Passerelle property. This letter presents the survey results.

The Passerelle project site covers approximately 493 acres in northern San Diego County. The site is more specifically located within the community of Pala Mesa, east of Interstate 15 and north of Pala Road (Figure 1). The site is bounded by Interstate 15 to the west, Pala Road to the south, and undeveloped land to the north and agriculture to the east. Current land uses onsite include open pasture land that supports cattle and ostrich.

The proposed project is located on the Bonsall U.S.G.S. 7.5' Quad, in Townships 9 and 10 South, Range 3 West (Figure 2).

A habitat assessment was conducted on February 9, 2004 to determine if the site could potentially support arroyo toads. There were two drainages that crossed the site. The larger one that is north to south is comprised of a sandy bottom, but is dry. The second drainage entered the site from the citrus/agricultural site located to the east and flows southwesterly. This drainage is comprised of a sand and mud and contains water in it. Both drainages flow offsite to the San Luis Rey River. The banks of both channels flow through several habitats and include southern willow scrub, freshwater marsh, and open pasture. The adjacent soils are Grangeville fine sandy loam 0 to 2 % slopes (GoA), Ramona sandy loam 2 to 5 % slopes (RaB), Ramona sandy loam 5 to 9% slopes (RaC2), Ramona sandy loam 9 to 15 % slopes (RaD2), Visalia sandy loam 0 to 2% slopes (VaA), Visalia sandy loam 2 to 5 % slopes (VaB), and Wyman loam 5 to 9% slopes (WmC). Arroyo toads were not detected onsite during the surveys. However, it is known that the arroyo toad has been detected in the San Luis Rey River in the past.

Surveys were conducted according the USFWS survey protocols. This included six daytime and six nighttime surveys, conducted approximately one week apart, in the correct moon phase and at temperatures above 45 degrees Fahrenheit. The day and night surveys were conducted during the same 24 hour period.

During the survey, the drainage areas were walked. The substrate of the creek was noted, presence or absence of water, type of vegetation in the area, and presence of egg masses, larvae, juveniles, or adults were recorded. Dates and times for all surveys are presented in Table 1.

Table 1

Date	Time Day/ Night	Temperature Day/Night °F	Wind Day/Night MPH	Weather Day/Night
3/16/04	1650-1735 / 1930-2015	68 / 58	0-1 / 0-1	Clear / Foggy
4/15/04	1600-1745 / 2020-2120	70 / 59	0-1/ 0-1	Clear / Hazy
5/11/04	1700-1815/2035-2130	67/60	0.9-3.5/0-1	Clear / Clear
5/18/04	1600-1636 / 2030-2100	78 / 70	4-6/ Calm	Clear/Clear
5/25/04	1645-1702 / 2030-2100	68 / 60	0-1 / 0-4	Cloudy / Clear
6/10/04	1700-11745 / 2030- 2100	73 /64	2-4 /0-1	Clear / Clear

No sign of adult, juvenile, larval, or egg masses of the arroyo toad were discovered during the surveys. Many chorus frogs (*Hyla regilla*) were heard throughout the site. One western toad (*Bufo boreas*) was found on a dirt road onsite on the evening of May 11, 2004. Two other western toads were found on the eastern access road that is located offsite on the evening of May 25, 2004.

The site does not currently support the arroyo toad. While the drainages with a sandy substrate appear to be appropriate, for toads, the lack of water appears to limit the habitation of these areas. In the drainages that do contain water, the substrate appears to consist of a heavier silt that would not be appropriate for burrowing. The closest known sighting of arroyo toads based on the California Natural Diversity Database is at the San Luis Rey River which is to the south of the site.

If you have any questions, please feel free to call me at 619-232-9200.

Sincerely,

Victor Novik
REC Consulting Inc.

ATTACHMENT 5

Wetland Delineation

**CAMPUS PARK
WETLAND DELINEATION REPORT**

Prepared for:

**Environmental Development, Inc.
402 West Broadway, Suite 2175
San Diego, CA 92101-3542**

Prepared by:

**REC Consultants, Inc.
2442 Second Avenue
San Diego, CA 92101**



**Catherine MacGregor
Senior Biologist**

September 1, 2004

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1.0 INTRODUCTION

A wetland investigation was conducted on the Campus Park site for the purpose of identifying and delineating potential Federal, State and County jurisdictional wetlands and waters. The approximately 500 acre Campus Park project will include residential and commercial development, associated access and infrastructure (i.e. sewer, utilities), and open space. The proposed project is located east of Interstate 15 and north of Pala Road, in San Diego County (Figures 1 and 2). The site is located on the USGS 7.5' Bonsall Quad, Townships 9 and 10 south, Range 3 West. The site is within the County of San Diego MSCP (Multiple Species Conservation Program) North County Subarea, for which a subarea plan is not yet complete.

1.1 Existing Conditions

The project site supports natural habitat, a residence, and extensive pastureland. A riparian woodland occurs in the southwestern part of the site. The site is bordered by undeveloped land to the north, undeveloped and agricultural land on the lower slopes of Monserate Mountain to the east, Pala Road (State Highway 76) to the south, and undeveloped land and Interstate 15 to the west.

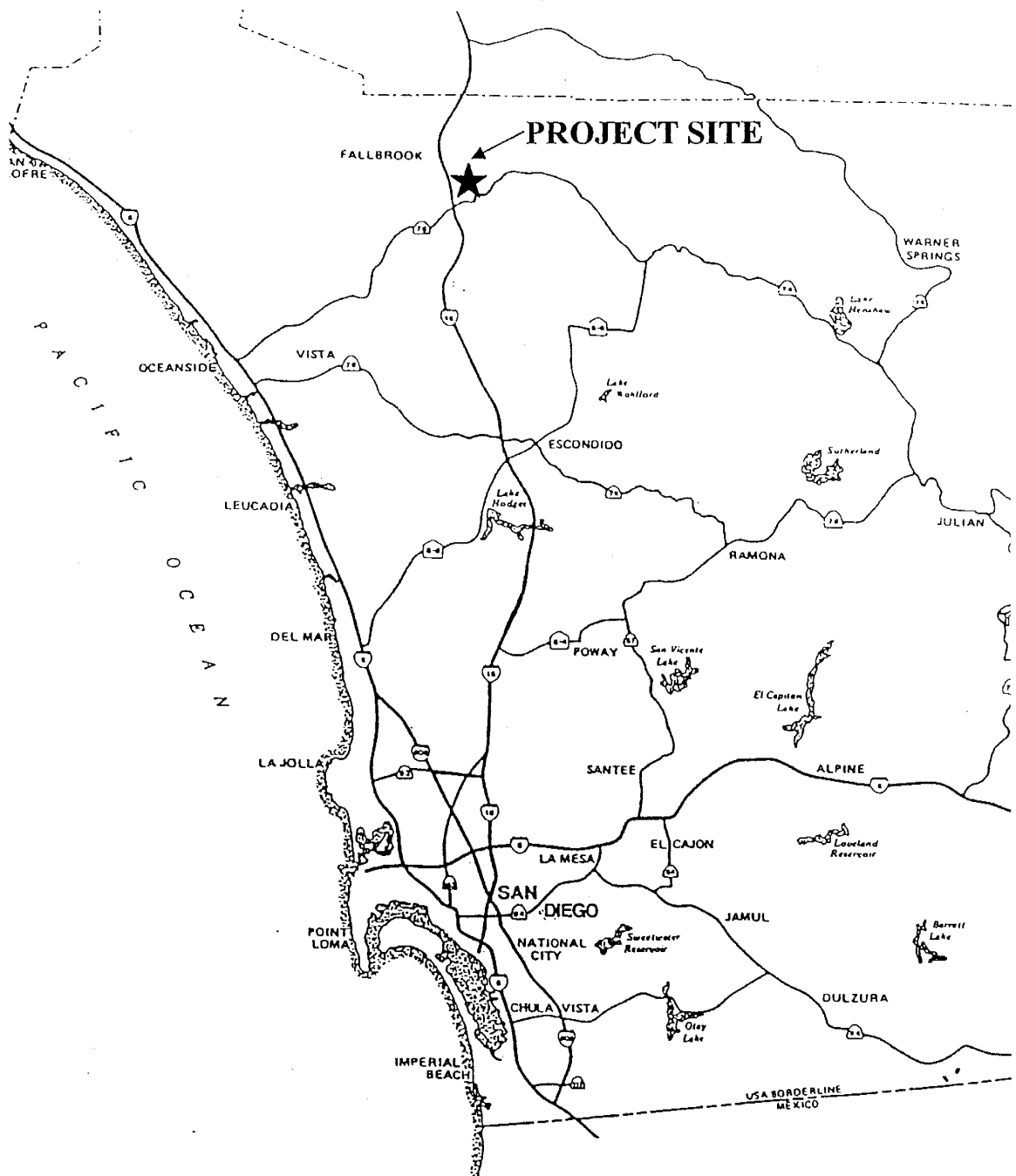
2.0 REGULATION OF WETLANDS AND WATERS

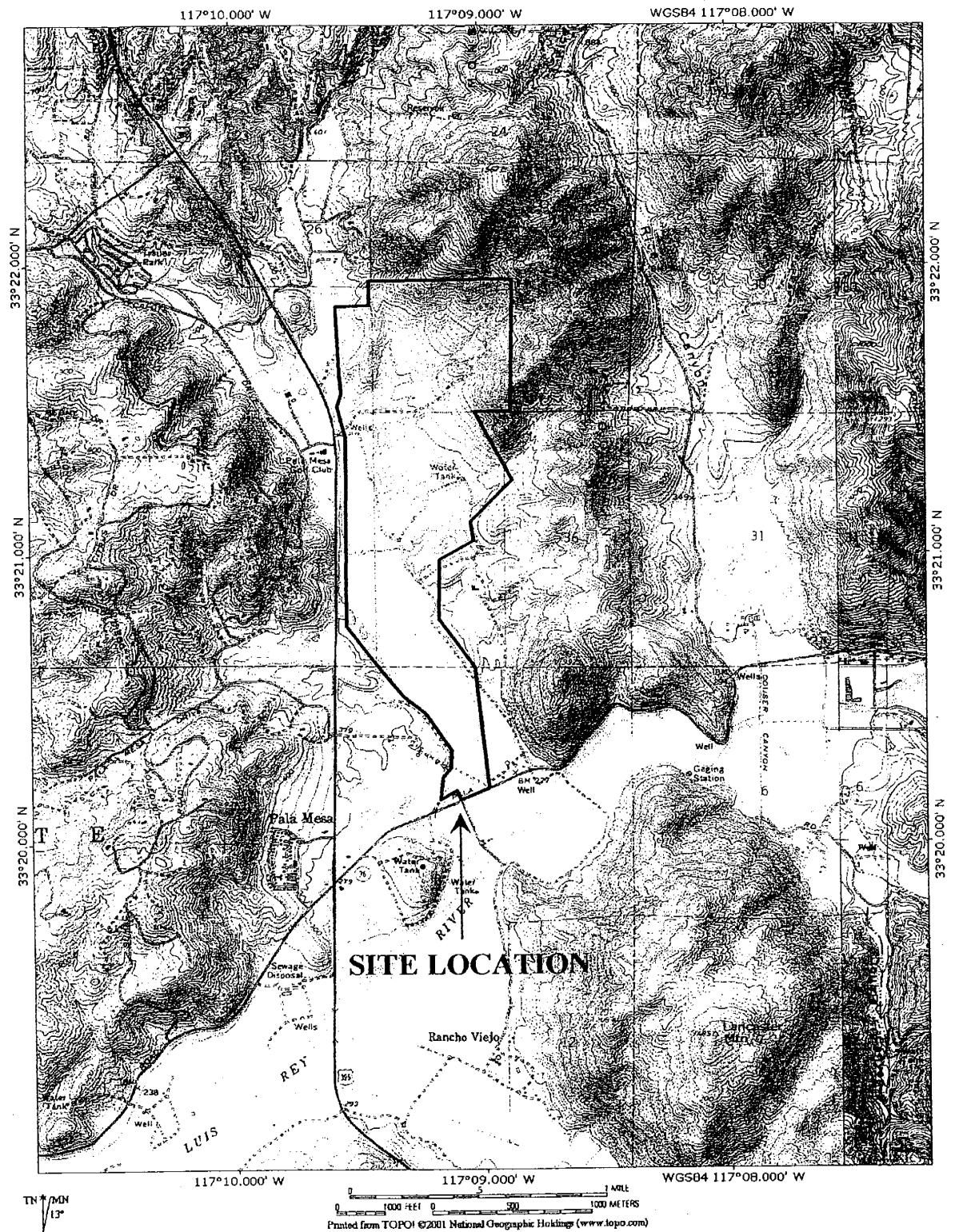
Wetlands may be regulated by several different agencies or jurisdictions. Each agency or jurisdiction defines or delineates wetlands and/or waters differently. Consequently, a given wetland may have more than one jurisdictional boundary.

Wetlands and/or waters on the project site may fall under jurisdiction of three agencies: the U.S. Army Corps of Engineers (ACOE), the California Department of Fish and Game (CDFG), and the County of San Diego.

2.1 U.S. Army Corps of Engineers

The Army Corps of Engineers regulates impacts to wetlands pursuant to Section 404 of the Clean Water Act. This agency claims jurisdiction over waters of the U.S., including wetlands in or adjacent to waters of the U.S. ACOE wetlands are delineated based on the presence of three criteria: hydric soils, hydrophytic vegetation, and hydrology, according to the processes described in the 1987 Corps of Engineers Wetlands Delineation Manual. ACOE wetlands end where one of these three criteria is no longer present. ACOE waters of the U.S. are delineated according to the definitions outlined in 33 CFR Part 328. Non-wetland waters include all interstate waters and tributaries to those waters. Non-wetland waters are delineated based on the presence of an ordinary high water mark. Impacts to wetlands and waters of the U.S. generally require a permit from the ACOE, and mitigation may be required.





2.2 California Department of Fish and Game

The CDFG regulates impacts to streams and lakes through the Streambed Alteration Program under Sections 1601 and 1603 of the Fish and Game Code. The definition of a stream is "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation." The limit of CDFG jurisdiction extends either to the top of the bank or to the outer edge of the riparian vegetation, whichever is greater. Impacts to CDFG wetlands and waters generally require a Streambed Alteration Agreement and mitigation.

2.3 County of San Diego

The County protects wetlands through the Resource Protection Act (RPO). The County definition of wetlands, as found in the RPO, is "All lands which are transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or where the land is covered by water. All lands having one or more of the following attributes are 'wetlands': (a) at least periodically, the land supports predominantly hydrophytes (plants whose habitat is water or very wet places); (b) the substratum is predominantly undrained hydric soil; or (c) the substratum is nonsoil and is saturated with water or covered by water at some time during the growing season of each year". In general, the County does not allow impacts to wetlands, but when impacts are unavoidable mitigation is required.

3.0 METHODS

REC biologist Catherine MacGregor conducted a wetland investigation at the site on December 23, 2002; January 26, 2003; and September 2, 2003. The purpose of these site visits was to determine the jurisdictional status of the drainages and wetlands onsite.

Field methodology consisted of evaluating onsite drainages and wetlands according to ACOE, CDFG, and RPO standards. ACOE data forms were created for 23 locations. Completion of ACOE data sheets involves digging a soil pit and documenting soil conditions, dominant vegetation, and hydrologic indicators at the soil pit location.

4.0 RESULTS

4.1 ACOE Jurisdiction

Twenty-three soil pits (1-5, 7-24) were created to investigate ACOE jurisdiction over ditches, swales, depressions, and riparian woodlands. Copies of the data forms for each pit are provided as an attachment.

Soil pits 1 through 5 and 7 were located in the northern section of the site, north of the east-west dirt road. These pits were dug in channels or depressions that appeared to have

hydrology and the potential to contain hydric soil, although wetland vegetation was not observed. Pits 1 through 5 and 7 did not contain hydric soil and were not in an ACOE wetland.

Soil pits 8 through 12 were located in the central section of the site, south of the east-west road and north of the narrow, more heavily vegetated southern section. Pits 8 and 9 were in depressions that appeared to be former cow ponds. Pits 10 and 11 were in an erosion rill that cut through the pasture from upslope groves. This channel was approximately five feet wide, with steep bare banks and upland weedy species in the bottom. Pit 12 was in a sloping area where two channels broadened and disappeared, and some hydrophytic plants were observed. Pits 8 through 12 did not contain hydric soil and were not in an ACOE wetland.

Pits 13 through 24 were located in the southern section of the property. Pit 13 was near the western edge of the site, within a canopy of narrow-leaf willow (*Salix exigua*) in what appeared to be the northern end of the southwestern riparian woodland. Pit 13 did not contain field-apparent hydric soil indicators, but the soil map unit in this area (Grangeville fine sandy loam, 0-2% slopes) automatically qualifies the soil as hydric because it belongs to an aquic suborder. Pits 17 through 20 also contained this type of hydric soil. Pits 13 and 17 through 20 were all in ACOE wetlands. Pits 14 through 16 and 22 through 24 did not contain hydric soils and were not in ACOE wetlands. Pit 21 contained soil that had positive field indicators of hydric status, and was within ACOE wetlands.

Based on the results of these soil pits, it appears that the southwestern riparian woodland, fringing herbaceous wetlands, and some of the fringing Bermuda grass-dominated pasture fall under ACOE wetlands jurisdiction. Some of the willow "islands" to the north of the main riparian woodland are also ACOE wetlands. Other willow "islands" do not contain hydric soils and are not ACOE wetlands. Drainages in the northern section of the site that had an ordinary high water mark on the bank, but did not contain hydrophytes or hydric soil, were classified as ACOE waters. A drainage in the central section also qualified as ACOE waters. These results are depicted in Figure 3.

4.2 CDFG Jurisdiction

CDFG jurisdiction covers lakes, and rivers or streams that flow at least periodically or intermittently through a bed or channel that has a bed and banks and supports fish or other aquatic life, including riparian vegetation. The limit of CDFG jurisdiction extends either to the top of the bank or to the outer edge of the riparian vegetation, whichever is greater. These parameters would apply to the drainages and riparian woodland in the central and southern part of the site, as shown in Figure 3.

4.3 RPO Jurisdiction

RPO jurisdiction wetlands were delineated according to the definition in Section 2.3.

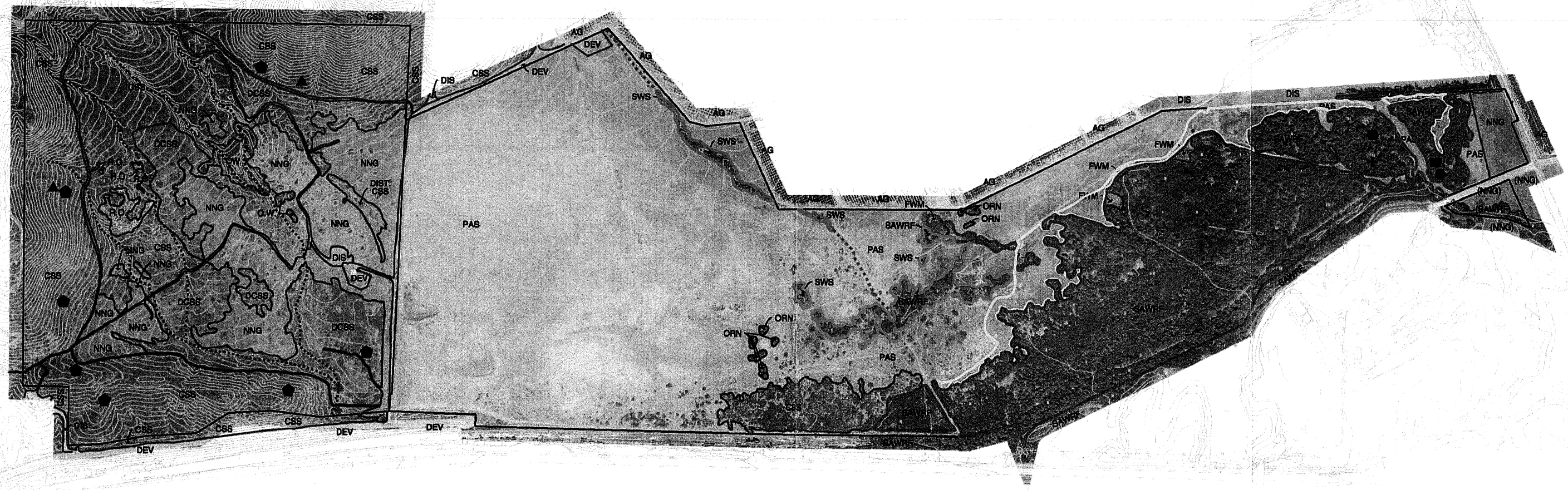
RPO jurisdiction would include the ACOE wetlands areas in the southern section, as well as the hydrophyte-vegetated ACOE waters and riparian woodlands lacking hydric soil, as shown in Figure 3.

5.0 CONCLUSION

The site contains wetlands and drainages that fall under jurisdiction of the ACOE, CDFG, and the County RPO. Most of the jurisdictional drainage and wetland areas occur in the southern section of the site, where the riparian woodland occurs; some tributary drainages to that area are also jurisdictional. Proposed impacts to these wetland will require permits and mitigation.

6.0 REFERENCES

- Bowman, R. H. 1973. *Soil Survey, San Diego Area, California*. United States Department of Agriculture.
- CDFG. 2003. California Department of Fish and Game Lake or Streambed Alteration Program website: <http://www.dfg.ca.gov/1600/>.
- County of San Diego. 1991. *Resource Protection Ordinance*. Board of Supervisors, County of San Diego.
- Environmental Laboratory. 1987. *Corps of Engineers Wetland Delineation Manual*, Technical Report Y-87-1, US Army Engineer Waterways Experiment Station, Vicksburg, Miss.
- Hickman, J. C., ed. 1996. *The Jepson Manual Higher Plants of California*. University of California Press, Berkeley.
- Simpson, M.G. and J. P. Rebman, 2001. *Checklist of the Vascular Plants of San Diego County*. Third Edition. SDSU Herbarium Press: San Diego, CA.



LEGEND

 ACOE Wetlands, CDFG, RPO

 ACOE Wetlands, RPO

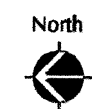
 CDFG, RPO

 ACOE Waters

 ACOE Waters, CDFG

 ACOE Waters, CDFG, RPO

 Habitat



0 200 400 800
Scale in feet

ATTACHMENT A

Campus Park ACOE Data Forms

DATA FORM
ROUTINE WETLAND DETERMINATION
 (1987 COE Wetlands Delineation Manual)

Project/Site: <u>Passerelle</u> Applicant/Owner: _____ Investigator: <u>Catherine MacGregor</u>	Date: <u>12/23/02</u> County: <u>SD</u> State: <u>CA</u>
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	<div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Yes <input checked="" type="radio"/> No </div> <div> Community ID: _____ Transect ID: _____ Plot ID: <u>1</u> </div> </div>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Brassica nigra</u>	<u>H</u>	<u>UA</u>	9. _____	_____	_____
2. _____	_____	_____	10. _____	_____	_____
3. _____	_____	_____	11. _____	_____	_____
4. _____	_____	_____	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-I). 0%.

Remarks: no wetland veg

HYDROLOGY

<p> <input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available </p> <hr/> <p>Field Observations:</p> <p>Depth of Surface Water: <u>Ø</u> (in.)</p> <p>Depth to Free Water in Pit: <u>>20</u> (in.)</p> <p>Depth to Saturated Soil: <u>>20</u> (in.)</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input checked="" type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands </p> <p>Secondary Indicators (2 or more required):</p> <p> <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks) </p>
Remarks: <u>no hydrology</u>	

SOILS

Map Unit Name: Wyman loam 5-9% (WMC) Drainage Class: well drained
(Series and Phase):
Taxonomy (Subgroup): Typic haploxera ffs Field Observations
Confirm Mapped Type? Yes No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
<u>0-20</u>		<u>10YR 3/2</u>	<u>multi-colored</u>	<u>large sand</u>	<u>averaging 10YR 3/2</u>

Hydric Soil Indicators: none

<input type="checkbox"/> Histosol	<input type="checkbox"/> Concretions
<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils
<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> Organic Streaking in Sandy Soils
<input type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Listed on Local Hydric Soils List
<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> Listed on National Hydric Soils List
<input type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Other (Explain in Remarks)

Remarks: no hydric soil
(sandy, rocky bottom; bank)

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Wetland Hydrology Present? Hydric Soils Present?	Yes No (Circle) Yes No Yes No	Is this Sampling Point Within a Wetland?	Yes No (Circle)
Remarks:			

Approved by HQUSACE 2/92

DATA FORM
ROUTINE WETLAND DETERMINATION
 (1987 COE Wetlands Delineation Manual)

Project/Site: <u>Passerelle</u> Applicant/Owner: _____ Investigator: <u>Catherine MacGregor</u>	Date: <u>12/23/02</u> County: <u>SD</u> State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.)	Community ID: _____ Transect ID: _____ Plot ID: <u>2</u>

just up from oak tree

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Erodium sp.</u>	<u>H</u>	<u>UPL</u>	9. _____	_____	_____
2. <u>Poaceae (bany)</u>	<u>H</u>	<u>?</u>	10. _____	_____	_____
3. _____	_____	_____	11. _____	_____	_____
4. _____	_____	_____	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0?

Remarks: no wetland veg

HYDROLOGY

<p>___ Recorded Data (Describe in Remarks):</p> <p style="margin-left: 20px;">___ Stream, Lake, or Tide Gauge</p> <p style="margin-left: 20px;">___ Aerial Photographs</p> <p style="margin-left: 20px;">___ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p> <hr/> <p>Field Observations:</p> <p>Depth of Surface Water: <u>0</u> (in.)</p> <p>Depth to Free Water in Pit: <u>>6</u> (in.)</p> <p>Depth to Saturated Soil: <u>>6</u> (in.)</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>___ Inundated</p> <p>___ Saturated in Upper 12 Inches</p> <p>___ Water Marks</p> <p>___ Drift Lines</p> <p><input checked="" type="checkbox"/> Sediment Deposits</p> <p>___ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>___ Oxidized Root Channels in Upper 12 Inches</p> <p>___ Water-Stained Leaves</p> <p>___ Local Soil Survey Data</p> <p>___ FAC-Neutral Test</p> <p>___ Other (Explain in Remarks)</p>
<p>Remarks: <u>couldn't dig deeper than 6"</u></p>	

#2, p. 2

WETLAND DETERMINATION

Approved by HOUSEACE 2/92

DATA FORM
ROUTINE WETLAND DETERMINATION
 (1987 COE Wetlands Delineation Manual)

Project/Site: <u>Passerelle</u> Applicant/Owner: _____ Investigator: <u>Catherine MacGregor</u>	Date: <u>12/23/02</u> County: <u>SD</u> State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.)	Community ID: _____ Transect ID: _____ Plot ID: <u>3</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Centaurea melitensis</u>	<u>H</u>	<u>UPL</u>	9. _____	_____	_____
2. <u>Eriogonum fasciculatum</u>	<u>H</u>	<u>UPL</u>	10. _____	_____	_____
3. <u>Brassica nigra</u>	<u>H</u>	<u>UPL</u>	11. _____	_____	_____
4. <u>Galium aparine</u>	<u>H</u>	<u>FACU</u>	12. _____	_____	_____
5. <u>Erodium sp.</u>	<u>H</u>	<u>UPL</u>	13. _____	_____	_____
6. <u>Phacelia sp.</u>	<u>H</u>	<u>UPL</u>	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 07.

Remarks: no wetland veg

HYDROLOGY

<p>Recorded Data (Describe in Remarks): _____ Stream, Lake, or Tide Gauge _____ Aerial Photographs _____ Other <input checked="" type="checkbox"/> No Recorded Data Available</p> <p>Field Observations:</p> <p>Depth of Surface Water: <u>0</u> (in.)</p> <p>Depth to Free Water in Pit: <u>>10</u> (in.)</p> <p>Depth to Saturated Soil: <u>~10</u> (in.)</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><input type="checkbox"/> Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 Inches</p> <p><input type="checkbox"/> Water Marks</p> <p><input type="checkbox"/> Drift Lines</p> <p><input type="checkbox"/> Sediment Deposits</p> <p><input type="checkbox"/> Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches</p> <p><input type="checkbox"/> Water-Stained Leaves</p> <p><input type="checkbox"/> Local Soil Survey Data</p> <p><input type="checkbox"/> FAC-Neutral Test</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
Remarks: _____	

#3, p.2

WETLAND DETERMINATION

Approved by HQUSACE 2/92

DATA FORM
ROUTINE WETLAND DETERMINATION
 (1987 COE Wetlands Delineation Manual)

Project/Site: <u>Passerelle</u> Applicant/Owner: _____ Investigator: <u>Catherine MacGregor</u>	Date: <u>12/23/02</u> County: <u>SD</u> State: <u>SA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.)	Community ID: _____ Transect ID: _____ Plot ID: <u>4</u>

low area near house, where channel ends (dug to rock)

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Erodium sp.</u>	<u>H</u>	<u>UPL</u>	9. _____	_____	_____
2. <u>Foeniculum vulgare</u>	<u>H</u>	<u>FACU</u>	10. _____	_____	_____
3. <u>Centaurea melitensis</u>	<u>H</u>	<u>UPL</u>	11. _____	_____	_____
4. <u>Brassica nigra</u>	<u>H</u>	<u>UPL</u>	12. _____	_____	_____
5. <u>Avena sp.</u>	<u>H</u>	<u>UPL</u>	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 07.

Remarks: no wetland veg

HYDROLOGY

<p>___ Recorded Data (Describe in Remarks): ___ Stream, Lake, or Tide Gauge ___ Aerial Photographs ___ Other <input checked="" type="checkbox"/> No Recorded Data Available</p> <hr/> <p>Field Observations:</p> <p>Depth of Surface Water: <u>0</u> (in.)</p> <p>Depth to Free Water in Pit: <u>>17"</u> (in.)</p> <p>Depth to Saturated Soil: <u>10</u> (in.)</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>___ Inundated ___ Saturated in Upper 12 Inches ___ Water Marks ___ Drift Lines ___ Sediment Deposits ___ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>___ Oxidized Root Channels in Upper 12 Inches ___ Water-Stained Leaves ___ Local Soil Survey Data ___ FAC-Neutral Test ___ Other (Explain in Remarks)</p>
<p>Remarks: <u>no hydrology</u></p>	

SOILS

Map Unit Name: Wyman loam 5-9% (WmC) Drainage Class: well drained
(Series and Phase): Typic haploxeralfs Field Observations: very
Taxonomy (Subgroup): Yes Confirm Mapped Type? No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
<u>0-3</u>		<u>7.5YR 3/1</u>		<u>dark sand</u>	<u>mixed w/ red clayey</u>
<u>3-17</u>		<u>7.5YR 3/2</u>			<u>red clayey soil</u>

Hydric Soil Indicators: none

<input type="checkbox"/> Histosol	<input type="checkbox"/> Concretions
<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils
<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> Organic Streaking in Sandy Soils
<input type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Listed on Local Hydric Soils List
<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> Listed on National Hydric Soils List
<input type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Other (Explain in Remarks)

Remarks: no hydric indicators

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	No (Circle)		
Wetland Hydrology Present?	Yes	No		
Hydric Soils Present?	Yes	No		
			Is this Sampling Point Within a Wetland?	Yes No (Circle)
Remarks:				

DATA FORM
ROUTINE WETLAND DETERMINATION
 (1987 COE Wetlands Delineation Manual)

Project/Site: <u>Passerelle</u> Applicant/Owner: _____ Investigator: <u>Catherine MacGregor</u>	Date: <u>12/23/02</u> County: <u>SD</u> State: <u>CA</u>		
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	<table style="width: 100%;"> <tr> <td style="text-align: center;"> <input checked="" type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Yes <input checked="" type="radio"/> No </td> <td style="vertical-align: top;"> Community ID: _____ Transect ID: _____ Plot ID: <u>5</u> </td> </tr> </table>	<input checked="" type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Yes <input checked="" type="radio"/> No	Community ID: _____ Transect ID: _____ Plot ID: <u>5</u>
<input checked="" type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Yes <input checked="" type="radio"/> No	Community ID: _____ Transect ID: _____ Plot ID: <u>5</u>		

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Brassica nigra</u>	<u>H</u>	<u>UPL</u>	9. _____	_____	_____
2. <u>Erodium sp.</u>	<u>H</u>	<u>UPL</u>	10. _____	_____	_____
3. <u>Avena sp.</u>	<u>H</u>	<u>UPL</u>	11. _____	_____	_____
4. _____	_____	_____	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 0%

Remarks: no wetland veg

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p> <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available </p> <hr/> <p>Field Observations:</p> <p>Depth of Surface Water: <u>0</u> (in.)</p> <p>Depth to Free Water in Pit: <u>>24</u> (in.)</p> <p>Depth to Saturated Soil: <u>>24</u> (in.)</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands </p> <p>Secondary Indicators (2 or more required):</p> <p> <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input checked="" type="checkbox"/> Other (Explain in Remarks) <u>0</u> </p>
<p>Remarks: <u>old banks, ~20' across, flat bottom with upland vegetation</u></p>	

#5, p.2

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes <u>No</u> (Circle)	Is this Sampling Point Within a Wetland?	Yes <u>No</u> (Circle)
Wetland Hydrology Present?	Yes <u>No</u>		
Hydric Soils Present?	Yes <u>No</u>		
Remarks:			

DATA FORM
ROUTINE WETLAND DETERMINATION
 (1987 COE Wetlands Delineation Manual)

Project/Site: <u>Passerelle</u> Applicant/Owner: _____ Investigator: <u>Catherine MacGregor</u>	Date: <u>12/23/02</u> County: <u>SD</u> State: <u>CA</u>			
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	<table style="width: 100%;"> <tr> <td style="text-align: center;">Yes <input checked="" type="radio"/> No <input type="radio"/></td> <td style="text-align: center;">Yes <input type="radio"/> No <input checked="" type="radio"/></td> <td style="text-align: center;">Yes <input type="radio"/> No <input checked="" type="radio"/></td> </tr> </table>	Yes <input checked="" type="radio"/> No <input type="radio"/>	Yes <input type="radio"/> No <input checked="" type="radio"/>	Yes <input type="radio"/> No <input checked="" type="radio"/>
Yes <input checked="" type="radio"/> No <input type="radio"/>	Yes <input type="radio"/> No <input checked="" type="radio"/>	Yes <input type="radio"/> No <input checked="" type="radio"/>		
Community ID: _____ Transect ID: _____ Plot ID: <u>7</u>				

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Avena spp</u>	<u>H</u>	<u>UPL</u>	9. _____	_____	_____
2. <u>Brassica nigra</u>	<u>H</u>	<u>UPL</u>	10. _____	_____	_____
3. <u>Erodium sp.</u>	<u>H</u>	<u>UPL</u>	11. _____	_____	_____
4. _____	_____	_____	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 0%

Remarks: no wetland veg

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>Stream, Lake, or Tide Gauge _____</p> <p>Aerial Photographs _____</p> <p>Other _____</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p> <hr/> <p>Field Observations:</p> <p>Depth of Surface Water: <u>0</u> (in.)</p> <p>Depth to Free Water in Pit: <u>>20</u> (in.)</p> <p>Depth to Saturated Soil: <u>>20</u> (in.)</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><input type="checkbox"/> Inundated</p> <p><input type="checkbox"/> Saturated in Upper 12 Inches</p> <p><input type="checkbox"/> Water Marks</p> <p><input type="checkbox"/> Drift Lines</p> <p><input type="checkbox"/> Sediment Deposits</p> <p><input type="checkbox"/> Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches</p> <p><input type="checkbox"/> Water-Stained Leaves</p> <p><input type="checkbox"/> Local Soil Survey Data <u>0</u></p> <p><input type="checkbox"/> FAC-Neutral Test</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
<p>Remarks: <u>no hydrology</u></p>	

SOILS

[illegible]

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes <u>No</u> (Circle)	Is this Sampling Point Within a Wetland?	Yes <u>No</u>
Wetland Hydrology Present?	Yes <u>No</u>		
Hydric Soils Present?	Yes <u>No</u>		
Remarks:			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Pala Passerelle</u> Applicant/Owner: _____ Investigator: <u>Catherine MacGregor</u>	Date: <u>1/26/03</u> County: <u>SD</u> State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.)	Community ID: _____ Transect ID: _____ Plot ID: <u>8</u>

VEGETATION "cow pond"

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Centaurea melitensis</u>	<u>H</u>	<u>UPL</u>	9. _____	_____	_____
2. <u>Asteraceae*</u>	<u>H</u>	<u>?</u>	10. _____	_____	_____
3. <u>Poaceae*</u>	<u>H</u>	<u>?</u>	11. _____	_____	_____
4. _____	_____	_____	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 0 ?

Remarks: *pasture vegetation, too young to ID

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>___ Stream, Lake, or Tide Gauge</p> <p>___ Aerial Photographs</p> <p>___ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p> <hr/> <p>Field Observations:</p> <p>Depth of Surface Water: <u>0</u> (in.)</p> <p>Depth to Free Water in Pit: <u>>18</u> (in.)</p> <p>Depth to Saturated Soil: <u>>18</u> (in.)</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>___ Inundated</p> <p>___ Saturated in Upper 12 Inches</p> <p>___ Water Marks</p> <p>___ Drift Lines</p> <p>___ Sediment Deposits</p> <p>___ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>___ Oxidized Root Channels in Upper 12 Inches</p> <p>___ Water-Stained Leaves</p> <p>___ Local Soil Survey Data</p> <p>___ FAC-Neutral Test</p> <p>___ Other (Explain in Remarks)</p>
Remarks: <u>possibly a former coupon</u>	

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WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes <input checked="" type="radio"/> No (Circle)	Is this Sampling Point Within a Wetland?	Yes <input checked="" type="radio"/> No (Circle)
Wetland Hydrology Present?	Yes <input checked="" type="radio"/> No (Circle)		
Hydric Soils Present?	Yes <input checked="" type="radio"/> No (Circle)		
Remarks:			

Approved by HQU\$ACE 2/92

DATA FORM
ROUTINE WETLAND DETERMINATION
 (1987 COE Wetlands Delineation Manual)

Project/Site: <u>Paswell</u> Applicant/Owner: _____ Investigator: <u>Catherine MacGregor</u>	Date: <u>1/26/03</u> County: <u>SD</u> State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.)	Community ID: _____ Transect ID: _____ Plot ID: <u>9</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Brassica nigra</u>	<u>H</u>	<u>UPL</u>	9. _____	_____	_____
2. <u>Malva parviflora</u>	<u>H</u>	<u>UPL</u>	10. _____	_____	_____
3. <u>Centaurea melitensis</u>	<u>H</u>	<u>UPL</u>	11. _____	_____	_____
4. <u>Erodium sp.</u>	<u>H</u>	<u>UPL</u>	12. _____	_____	_____
5. <u>Avena sp.</u>	<u>H</u>	<u>UPL</u>	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-I). 07.

Remarks: no wetland veg

HYDROLOGY

<p><input type="checkbox"/> Recorded Data (Describe in Remarks):</p> <p style="margin-left: 20px;"><input type="checkbox"/> Stream, Lake, or Tide Gauge</p> <p style="margin-left: 20px;"><input type="checkbox"/> Aerial Photographs</p> <p style="margin-left: 20px;"><input type="checkbox"/> Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p> <hr/> <p>Field Observations:</p> <p>Depth of Surface Water: <u>Ø</u> (in.)</p> <p>Depth to Free Water in Pit: <u>>18</u> (in.)</p> <p>Depth to Saturated Soil: <u>>18</u> (in.)</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><input type="checkbox"/> Inundated</p> <p><input type="checkbox"/> Saturated in Upper 12 Inches</p> <p><input type="checkbox"/> Water Marks</p> <p><input type="checkbox"/> Drift Lines</p> <p><input type="checkbox"/> Sediment Deposits</p> <p><input type="checkbox"/> Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches</p> <p><input type="checkbox"/> Water-Stained Leaves</p> <p><input type="checkbox"/> Local Soil Survey Data</p> <p><input type="checkbox"/> FAC-Neutral Test</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
Remarks: <u>possible detention basin; no hydrology</u>	

#9, p.2

WETLAND DETERMINATION

Approved by HQUSACE 2/92

DATA FORM
ROUTINE WETLAND DETERMINATION
 (1987 COE Wetlands Delineation Manual)

Project/Site: <u>Passerelle</u> Applicant/Owner: _____ Investigator: <u>Catherine MacGregor</u>	Date: <u>1/26/03</u> County: <u>SD</u> State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.)	Community ID: _____ Transect ID: _____ Plot ID: <u>10</u>

erosion rill in pasture - incised channel, ~4' deep, 5' wide.
 VEGETATION sides of bank bare; bottom is all upland weeds.

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Trifolium sp.</u>	<u>H</u>	<u>FACW?</u>	9. _____	_____	_____
2. <u>Erodium spp.</u>	<u>H</u>	<u>UPL</u>	10. _____	_____	_____
3. <u>Avena sp.</u>	<u>H</u>	<u>UPL</u>	11. _____	_____	_____
4. <u>Centaurea melitensis</u>	<u>H</u>	<u>UPL</u>	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 07.

Remarks: no wetland veg (clover looks like red or white)

HYDROLOGY

<p><input type="checkbox"/> Recorded Data (Describe in Remarks):</p> <p style="margin-left: 20px;"><input type="checkbox"/> Stream, Lake, or Tide Gauge</p> <p style="margin-left: 20px;"><input type="checkbox"/> Aerial Photographs</p> <p style="margin-left: 20px;"><input type="checkbox"/> Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p> <hr/> <p>Field Observations:</p> <p>Depth of Surface Water: <u>0</u> (in.)</p> <p>Depth to Free Water in Pit: <u>718</u> (in.)</p> <p>Depth to Saturated Soil: <u>718</u> (in.)</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><input type="checkbox"/> Inundated</p> <p><input type="checkbox"/> Saturated in Upper 12 Inches</p> <p><input type="checkbox"/> Water Marks</p> <p><input type="checkbox"/> Drift Lines</p> <p><input type="checkbox"/> Sediment Deposits</p> <p><input type="checkbox"/> Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches</p> <p><input type="checkbox"/> Water-Stained Leaves</p> <p><input type="checkbox"/> Local Soil Survey Data</p> <p><input type="checkbox"/> FAC-Neutral Test</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
Remarks: <u>no hydrology</u>	

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WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	<input checked="" type="radio"/> No	(Circle)	Is this Sampling Point Within a Wetland?	Yes	<input type="radio"/> No
Wetland Hydrology Present?	Yes	<input checked="" type="radio"/> No				
Hydric Soils Present?	Yes	<input checked="" type="radio"/> No				

Remarks:

DATA FORM
ROUTINE WETLAND DETERMINATION
 (1987 COE Wetlands Delineation Manual)

Project/Site: <u>Passerelle</u> Applicant/Owner: _____ Investigator: <u>Catherine MacGregor</u>	Date: <u>1/26/03</u> County: <u>SD</u> State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.)	Community ID: _____ Transect ID: _____ Plot ID: <u>11</u>

VEGETATION deep ditch

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Avena sp.</u>	<u>H</u>	<u>UPL</u>	9. _____	_____	_____
2. <u>Artemisia californica</u>	<u>S</u>	<u>UPL</u>	10. _____	_____	_____
3. <u>Rumex crispus</u>	<u>H</u>	<u>FACW</u>	11. _____	_____	_____
4. <u>Nicotiana glauca</u>	<u>S</u>	<u>FAC</u>	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-I): 50%.

Remarks: bottom is vegetated

HYDROLOGY

<p>___ Recorded Data (Describe in Remarks): ___ Stream, Lake, or Tide Gauge ___ Aerial Photographs ___ Other <input checked="" type="checkbox"/> No Recorded Data Available</p> <hr/> <p>Field Observations:</p> <p>Depth of Surface Water: <u>Ø</u> (in.)</p> <p>Depth to Free Water in Pit: <u>>21</u> (in.)</p> <p>Depth to Saturated Soil: <u>>21</u> (in.)</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>___ Inundated ___ Saturated in Upper 12 Inches ___ Water Marks ___ Drift Lines ___ Sediment Deposits ___ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>___ Oxidized Root Channels in Upper 12 Inches ___ Water-Stained Leaves ___ Local Soil Survey Data ___ FAC-Neutral Test ___ Other (Explain in Remarks)</p>
<p>Remarks: <u>no hydrology</u></p>	

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WETLAND DETERMINATION

Approved by HQUSACE 2/92

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Passerelle</u> Applicant/Owner: _____ Investigator: <u>Catherine MacGregor</u>	Date: <u>1/26/03</u> County: <u>SD</u> State: <u>CA</u>
Do Normal Circumstances exist on the site? Yes No Is the site significantly disturbed (Atypical Situation)? Yes No Is the area a potential Problem Area? Yes No (If needed, explain on reverse.)	Community ID: _____ Transect ID: _____ Plot ID: <u>12</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Baccharis salicifolia</u>	<u>S</u>	<u>FACW</u>	9. _____	_____	_____
2. <u>Baccharis pilularis</u>	<u>S</u>	<u>UPL</u>	10. _____	_____	_____
3. <u>Ambrosia psilostachya</u>	<u>H</u>	<u>FAC</u>	11. _____	_____	_____
4. <u>Erodium sp.</u>	<u>H</u>	<u>UPL</u>	12. _____	_____	_____
5. <u>Brassica sp.</u>	<u>H</u>	<u>UPL</u>	13. _____	_____	_____
6. <u>Malva parviflora</u>	<u>H</u>	<u>UPL</u>	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 33.7.

Remarks: _____

HYDROLOGY

<p>Recorded Date (Describe in Remarks): _____ Stream, Lake, or Tide Gauge _____ Aerial Photographs _____ Other <input checked="" type="checkbox"/> No Recorded Data Available </p> <hr/> <p>Field Observations:</p> <p>Depth of Surface Water: <u>Ø</u> (in.)</p> <p>Depth to Free Water in Pit: <u>>18</u> (in.)</p> <p>Depth to Saturated Soil: <u>>18</u> (in.)</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated _____ Saturated in Upper 12 Inches _____ Water Marks _____ Drift Lines _____ Sediment Deposits _____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 Inches _____ Water-Stained Leaves _____ Local Soil Survey Data _____ FAC-Neutral Test _____ Other (Explain in Remarks)</p>
Remarks: <u>no hydrology</u>	

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WETLAND DETERMINATION

Approved by HQUSACE 2/92

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Passerelle</u> Applicant/Owner: _____ Investigator: <u>Catherine MacGregor</u>	Date: <u>1/26/03</u> County: <u>SD</u> State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.)	Community ID: _____ Transect ID: _____ Plot ID: <u>13</u>

just inside northwest tip of salix canopy
VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <u>Salix exigua</u>	<u>C*</u>	<u>OBL</u>	9. _____	_____	_____
2 <u>Conium maculatum</u>	<u>H</u>	<u>FACW</u>	10. _____	_____	_____
3. _____	_____	_____	11. _____	_____	_____
4. _____	_____	_____	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100 %

Remarks: * (tall shrub)

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>___ Stream, Lake, or Tide Gauge</p> <p>___ Aerial Photographs</p> <p>___ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p> <hr/> <p>Field Observations:</p> <p>Depth of Surface Water: <u>0</u> (in.)</p> <p>Depth to Free Water in Pit: <u>>18</u> (in.)</p> <p>Depth to Saturated Soil: <u>>18</u> (in.)</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>___ Inundated</p> <p>___ Saturated in Upper 12 Inches</p> <p>___ Water Marks</p> <p>___ Drift Lines</p> <p>___ Sediment Deposits</p> <p><input checked="" type="checkbox"/> Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>___ Oxidized Root Channels in Upper 12 Inches</p> <p>___ Water-Stained Leaves</p> <p>___ Local Soil Survey Data</p> <p>___ FAC-Neutral Test</p> <p>___ Other (Explain in Remarks)</p>
Remarks: _____	

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WETLAND DETERMINATION

Approved by HQUSACE 2/92

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Passerelle</u> Applicant/Owner: _____ Investigator: <u>Catherine MacGregor</u>	Date: <u>1/26/03</u> County: <u>SD</u> State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.)	Community ID: _____ Transect ID: _____ Plot ID: <u>14</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Salix lasiolepis</u>	<u>C</u>	<u>FACW</u>	9. _____	_____	_____
2. <u>Baccharis pilularis</u>	<u>S</u>	<u>UPL</u>	10. _____	_____	_____
3. <u>Avena sp.</u>	<u>H</u>	<u>UPL</u>	11. _____	_____	_____
4. <u>Brassica sp.</u>	<u>H</u>	<u>UPL</u>	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-I): 25%.

Remarks: _____

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p> <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available </p> <hr/> <p>Field Observations:</p> <p>Depth of Surface Water: <u>0</u> (in.)</p> <p>Depth to Free Water in Pit: <u>>20</u> (in.)</p> <p>Depth to Saturated Soil: <u>>20</u> (in.)</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands </p> <p>Secondary Indicators (2 or more required):</p> <p> <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks) </p>
<p>Remarks: <u>no hydrology</u></p>	

SOILS

#14, p.2

Map Unit Name:

(Series and Phase): Visalia sandy loam 0-2% (Va A)

Drainage Class:

moderately well drained

Taxonomy (Subgroup):

Pachic haploxerolls

Field Observations

Confirm Mapped Type? ☒ Yes ☐ No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-20		10YR 2/2			sandy loam

Hydric Soil Indicators:

- | | |
|--|---|
| <input type="checkbox"/> Histosol | <input type="checkbox"/> Concretions |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking in Sandy Soils |
| <input type="checkbox"/> Aquic Moisture Regime | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National Hydric Soils List |
| <input type="checkbox"/> Gleyed or Low-Chrome Colors | <input type="checkbox"/> Other (Explain in Remarks) |

Remarks:

moist; no hydric indicators.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?

Yes ☐ No ☒ (Circle)

Wetland Hydrology Present?

Yes ☐ No ☒ (Circle)

Hydric Soils Present?

Yes ☐ No ☒ (Circle)

(Circle)

Is this Sampling Point Within a Wetland?

Yes ☐ No ☒ (Circle)

Remarks:

Approved by HQUSACE 2/92

DATA FORM
ROUTINE WETLAND DETERMINATION
 (1987 COE Wetlands Delineation Manual)

Project/Site: <u>Passerelle</u> Applicant/Owner: _____ Investigator: <u>Catherine MacGregor</u>	Date: <u>1/26/03</u> County: <u>SD</u> State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.)	Community ID: _____ Transect ID: _____ Plot ID: <u>15</u>

VEGETATION under willow canopy

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Salix lasiolepis</u>	<u>C</u>	<u>FACW</u>	9. _____	_____	_____
2. _____	_____	_____	10. _____	_____	_____
3. _____	_____	_____	11. _____	_____	_____
4. _____	_____	_____	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-I): 100%.

Remarks: _____

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>___ Stream, Lake, or Tide Gauge</p> <p>___ Aerial Photographs</p> <p>___ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p> <hr/> <p>Field Observations:</p> <p>Depth of Surface Water: <u>0</u> (in.)</p> <p>Depth to Free Water in Pit: <u>>19</u> (in.)</p> <p>Depth to Saturated Soil: <u>>19</u> (in.)</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>___ Inundated</p> <p>___ Saturated in Upper 12 Inches</p> <p>___ Water Marks</p> <p>___ Drift Lines</p> <p>___ Sediment Deposits</p> <p>___ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>___ Oxidized Root Channels in Upper 12 Inches</p> <p>___ Water-Stained Leaves</p> <p>___ Local Soil Survey Data</p> <p>___ FAC-Neutral Test</p> <p>___ Other (Explain in Remarks)</p>
<p>Remarks: <u>no hydrology</u></p>	

#15, p.2

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input checked="" type="radio"/> Yes <input type="radio"/> No (Circle)	Is this Sampling Point Within a Wetland? (Circle) Yes <input type="radio"/> No <input checked="" type="radio"/>
Wetland Hydrology Present?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Hydric Soils Present?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Remarks:		

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Passerelle</u> Applicant/Owner: _____ Investigator: <u>Catherine MacGugor</u>	Date: <u>1/26/03</u> County: <u>SD</u> State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.)	Community ID: _____ Transect ID: _____ Plot ID: <u>16</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Platanus racemosa</u>	<u>C</u>	<u>FACW</u>	9. _____	_____	_____
2. _____	_____	_____	10. _____	_____	_____
3. _____	_____	_____	11. _____	_____	_____
4. _____	_____	_____	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100%.

Remarks: _____

HYDROLOGY

<p><input type="checkbox"/> Recorded Data (Describe in Remarks):</p> <p style="margin-left: 20px;"><input type="checkbox"/> Stream, Lake, or Tide Gauge</p> <p style="margin-left: 20px;"><input type="checkbox"/> Aerial Photographs</p> <p style="margin-left: 20px;"><input type="checkbox"/> Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p> <hr/> <p>Field Observations:</p> <p>Depth of Surface Water: <u>0</u> (in.)</p> <p>Depth to Free Water in Pit: <u>>12</u> (in.)</p> <p>Depth to Saturated Soil: <u>>12</u> (in.)</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><input type="checkbox"/> Inundated</p> <p><input type="checkbox"/> Saturated in Upper 12 Inches</p> <p><input type="checkbox"/> Water Marks</p> <p><input type="checkbox"/> Drift Lines</p> <p><input type="checkbox"/> Sediment Deposits</p> <p><input checked="" type="checkbox"/> Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches</p> <p><input type="checkbox"/> Water-Stained Leaves</p> <p><input type="checkbox"/> Local Soil Survey Data</p> <p><input type="checkbox"/> FAC-Neutral Test</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
Remarks: _____	

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lower

Hydrophytic Vegetation Present?	Yes <input type="radio"/> No <input checked="" type="radio"/> (Circle)	Is this Sampling Point Within a Wetland?	Yes <input type="radio"/> No <input checked="" type="radio"/> (Circle)
Wetland Hydrology Present?	Yes <input type="radio"/> No <input checked="" type="radio"/> (Circle)		
Hydric Soils Present?	Yes <input type="radio"/> No <input checked="" type="radio"/> (Circle)		
Remarks:			

Approved by HQUSACE 2/92

DATA FORM
ROUTINE WETLAND DETERMINATION
 (1987 COE Wetlands Delineation Manual)

Project/Site: <u>Passville</u> Applicant/Owner: _____ Investigator: <u>Catherine MacBregor</u>	Date: <u>9/2/03</u> County: <u>SD</u> State: <u>CA</u>						
Do Normal Circumstances Exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	<table style="width: 100%;"> <tr> <td style="text-align: center;">Yes</td> <td style="text-align: center;">No</td> </tr> <tr> <td style="text-align: center;">Yes</td> <td style="text-align: center;"><u>No</u></td> </tr> <tr> <td style="text-align: center;">Yes</td> <td style="text-align: center;"><u>No</u></td> </tr> </table>	Yes	No	Yes	<u>No</u>	Yes	<u>No</u>
Yes	No						
Yes	<u>No</u>						
Yes	<u>No</u>						
Community ID: _____ Transect ID: _____ Plot ID: <u>17</u>							

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Cynodon dactylon</u>	<u>H</u>	<u>FAC</u>	9. _____	_____	_____
2. _____	_____	_____	10. _____	_____	_____
3. _____	_____	_____	11. _____	_____	_____
4. _____	_____	_____	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100%

Remarks: Cynodon "pasture" just east of willow wetland

HYDROLOGY

<p>___ Recorded Data (Describe in Remarks):</p> <p>___ Stream, Lake, or Tide Gauge</p> <p>___ Aerial Photographs</p> <p>___ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland hydrology Indicators:</p> <p>Primary Indicators:</p> <p>___ Inundated</p> <p>___ Saturated in Upper 12 Inches</p> <p>___ Water Marks</p> <p>___ Drift Lines</p> <p>___ Sediment Deposits</p> <p>___ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>___ Oxidized Root Channels in Upper 12"</p> <p>___ Water-Stained Leaves</p> <p><input checked="" type="checkbox"/> Local Soil Survey Data</p> <p><input checked="" type="checkbox"/> FAC-Neutral Test</p> <p>___ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: <u>0</u> (in.)</p> <p>Depth to Free Water in Pit: <u>7 1/2</u> (in.)</p> <p>Depth to Saturated Soil: <u>7 1/2</u> (in.)</p>	<p>Remarks: <u>hydrology not obvious but present</u></p>

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WETLAND DETERMINATION

Approved by HQUSACE 3/92

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Passerelle</u> Applicant/Owner: _____ Investigator: <u>Catherine MacGregor</u>	Date: <u>9/2/03</u> County: <u>SD</u> State: <u>CA</u>
Do Normal Circumstances Exist on the site? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.)	Community ID: _____ Transect ID: _____ Plot ID: <u>18</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Cynodon dactylon</u>	<u>H</u>	<u>FAC</u>	9. _____	_____	_____
2. _____	_____	_____	10. _____	_____	_____
3. _____	_____	_____	11. _____	_____	_____
4. _____	_____	_____	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100 %

Remarks: _____

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p> <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available </p>	<p>Wetland hydrology Indicators:</p> <p>Primary Indicators:</p> <p> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands </p> <p>Secondary Indicators (2 or more required):</p> <p> <input type="checkbox"/> Oxidized Root Channels in Upper 12" <input type="checkbox"/> Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks) </p>
<p>Field Observations:</p> <p>Depth of Surface Water: <u>Ø</u> (in.)</p> <p>Depth to Free Water in Pit: <u>>14</u> (in.)</p> <p>Depth to Saturated Soil: <u>>14</u> (in.)</p>	<p>Remarks: <u>moist</u></p>

SOILS

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Map Unit Name (Series and Phase) <u>Grangeville fine sandy loam 0-27. (GoA)</u>		Drainage Class: <u>somewhat poorly drained</u> Field Observations Confirm Mapped Type? Yes <input type="radio"/> No <input checked="" type="radio"/>	
Taxonomy (Subgroup): <u>Aquic haploxerolls</u>			
Profile Description:			
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)
0-5		10YR 3/1	with patches of gleyed (N) clayey sandy
5-14		grading to 10YR 3/4	and black soft masses
		↳ with gray around roots, and gray	

Hydric Soil Indicators:

<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input checked="" type="checkbox"/> Aquic Moisture Regime <input checked="" type="checkbox"/> Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)
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Remarks: hydric soil map unit not confirmed, but hydric indicators observed

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <u>Yes</u> No (Circle) Wetland Hydrology Present? <u>Yes</u> No Hydric Soils Present? <u>Yes</u> No	Is this Sampling Point Within a Wetland? <u>Yes</u> No (Circle)
Remarks:	

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Do Normal Circumstances Exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.)	Community ID : _____ Transect ID: _____ Plot ID: <u>19</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Cynodon dactylon</u>	<u>H</u>	<u>FAC</u>	9. _____	_____	_____
2. _____	_____	_____	10. _____	_____	_____
3. _____	_____	_____	11. _____	_____	_____
4. _____	_____	_____	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100 %

Remarks: _____

HYDROLOGY

<p>___ Recorded Data (Describe in Remarks):</p> <p>___ Stream, Lake, or Tide Gauge</p> <p>___ Aerial Photographs</p> <p>___ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland hydrology Indicators:</p> <p>Primary Indicators:</p> <p>___ Inundated</p> <p>___ Saturated in Upper 12 Inches</p> <p>___ Water Marks</p> <p>___ Drift Lines</p> <p>___ Sediment Deposits</p> <p>___ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>___ Oxidized Root Channels in Upper 12"</p> <p>___ Water-Stained Leaves</p> <p><input checked="" type="checkbox"/> Local Soil Survey Data</p> <p><input checked="" type="checkbox"/> FAC-Neutral Test</p> <p>___ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: <u>0</u> (in.)</p> <p>Depth to Free Water in Pit: <u>> 7</u> (in.)</p> <p>Depth to Saturated Soil: <u>> 7</u> (in.)</p>	<p>Remarks: _____</p>

SOILS

#19, p.2

Map Unit Name (Series and Phase) <u>Grangeville fine sandy loam 0-2?</u>		(GoA) Drainage Class: <u>some what poorly drained</u> Field Observations Confirm Mapped Type? <u>(Yes)</u> No			
Taxonomy (Subgroup): <u>Aquic haploxerolls</u>					
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-7		10YR 3/2			

Hydric Soil Indicators:

<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input checked="" type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input checked="" type="checkbox"/> Other (Explain in Remarks) <u>Aquic suborder</u>
--	--

Remarks: couldn't complete pit because soil is so hard, but confirmed GoA.

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <u>(Yes)</u> No (Circle) Wetland Hydrology Present? <u>(Yes)</u> No Hydric Soils Present? <u>(Yes)</u> No	Is this Sampling Point Within a Wetland? <u>(Yes)</u> No
Remarks:	

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Project/Site: <u>Passerelle</u> Applicant/Owner: _____ Investigator: <u>Catherine MacGregor</u>	Date: <u>9/2/03</u> County: <u>SD</u> State: <u>CA</u>
Do Normal Circumstances Exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.) 	Community ID: _____ Transect ID: _____ Plot ID: <u>20</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Cynodon dactylon</u>	<u>H</u>	<u>FAC</u>	9. _____	_____	_____
2. _____	_____	_____	10. _____	_____	_____
3. _____	_____	_____	11. _____	_____	_____
4. _____	_____	_____	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100%.

Remarks: _____

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p> <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available </p> <p>Field Observations:</p> <p>Depth of Surface Water: <u>0</u> (in.)</p> <p>Depth to Free Water in Pit: <u>?</u> (in.)</p> <p>Depth to Saturated Soil: <u>?</u> (in.)</p>	<p>Wetland hydrology Indicators:</p> <p>Primary Indicators:</p> <p> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands </p> <p>Secondary Indicators (2 or more required):</p> <p> <input type="checkbox"/> Oxidized Root Channels in Upper 12" <input type="checkbox"/> Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks) </p>
Remarks: <u>Too hard to dig pit</u>	

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WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="radio"/> Yes <input type="radio"/> No (Circle)	Is this Sampling Point Within a Wetland? <input checked="" type="radio"/> Yes <input type="radio"/> No (Circle)
Wetland Hydrology Present? <input checked="" type="radio"/> Yes <input type="radio"/> No	
Hydric Soils Present? <input checked="" type="radio"/> Yes <input type="radio"/> No	
Remarks:	

DATA FORM
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Project/Site: <u>Passerelle</u> Applicant/Owner: _____ Investigator: <u>Catherine MacGregor</u>		Date: <u>9/2/03</u> County: <u>SD</u> State: <u>CA</u>
Do Normal Circumstances Exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)		Community ID: _____ Transect ID: _____ Plot ID: <u>21</u>
<div style="display: flex; justify-content: space-around;"> Yes <input checked="" type="radio"/> No <input type="radio"/> </div> <div style="display: flex; justify-content: space-around;"> Yes <input type="radio"/> No <input checked="" type="radio"/> </div> <div style="display: flex; justify-content: space-around;"> Yes <input type="radio"/> No <input checked="" type="radio"/> </div>		

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Cynodon dactylon</u>	<u>H</u>	<u>FAC</u>	9. _____	_____	_____
2. _____	_____	_____	10. _____	_____	_____
3. _____	_____	_____	11. _____	_____	_____
4. _____	_____	_____	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100%

Remarks: Scirpus, Baccharis salicifolia, Tamarisk sp. nearby

HYDROLOGY

<p>___ Recorded Data (Describe in Remarks):</p> <p>___ Stream, Lake, or Tide Gauge</p> <p>___ Aerial Photographs</p> <p>___ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland hydrology Indicators:</p> <p>Primary Indicators:</p> <p>___ Inundated</p> <p>___ Saturated in Upper 12 Inches</p> <p>___ Water Marks</p> <p>___ Drift Lines</p> <p>___ Sediment Deposits</p> <p><input checked="" type="checkbox"/> Drainage Patterns in Wetlands <u>in channel</u></p> <p>Secondary Indicators (2 or more required):</p> <p>___ Oxidized Root Channels in Upper 12"</p> <p>___ Water-Stained Leaves</p> <p>___ Local Soil Survey Data</p> <p><input checked="" type="checkbox"/> FAC-Neutral Test</p> <p>___ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: <u>0</u> (in.)</p> <p>Depth to Free Water in Pit: <u>>16</u> (in.)</p> <p>Depth to Saturated Soil: <u>>16</u> (in.)</p>	
<p>Remarks: <u>moist</u></p>	

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10am

WETLAND DETERMINATION

Approved by HQUSACE 3/92

DATA FORM
ROUTINE WETLAND DETERMINATION
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Project/Site: <u>Passerelle</u> Applicant/Owner: _____ Investigator: <u>Catherine MacGregor</u>	Date: <u>9/2/03</u> County: <u>SD</u> State: <u>CA</u>
Do Normal Circumstances Exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.) 	Community ID: _____ Transect ID: _____ Plot ID: <u>22</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Cynodon dactylon</u>	<u>H</u>	<u>FAC</u>	9. _____	_____	_____
2. _____	_____	_____	10. _____	_____	_____
3. _____	_____	_____	11. _____	_____	_____
4. _____	_____	_____	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100%

Remarks: _____

HYDROLOGY

<p>___ Recorded Data (Describe in Remarks):</p> <p style="margin-left: 20px;">___ Stream, Lake, or Tide Gauge</p> <p style="margin-left: 20px;">___ Aerial Photographs</p> <p style="margin-left: 20px;">___ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland hydrology Indicators:</p> <p>Primary Indicators:</p> <p style="margin-left: 20px;">___ Inundated</p> <p style="margin-left: 20px;">___ Saturated in Upper 12 Inches</p> <p style="margin-left: 20px;">___ Water Marks</p> <p style="margin-left: 20px;">___ Drift Lines</p> <p style="margin-left: 20px;">___ Sediment Deposits</p> <p style="margin-left: 20px;">___ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p style="margin-left: 20px;">___ Oxidized Root Channels in Upper 12"</p> <p style="margin-left: 20px;">___ Water-Stained Leaves</p> <p style="margin-left: 20px;">___ Local Soil Survey Data</p> <p style="margin-left: 20px;"><input checked="" type="checkbox"/> FAC-Neutral Test</p> <p style="margin-left: 20px;">___ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: <u>0</u> (in.)</p> <p>Depth to Free Water in Pit: <u>?</u> (in.)</p> <p>Depth to Saturated Soil: <u>?</u> (in.)</p>	<p>Remarks: _____</p>

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WETLAND DETERMINATION

Approved by HQUSACE 3/92

DATA FORM
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Do Normal Circumstances Exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.)	Community ID: _____ Transect ID: _____ Plot ID: <u>23</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Cynodon dactylon</u>	<u>H</u>	<u>FAC</u>	9. _____	_____	_____
2. _____	_____	_____	10. _____	_____	_____
3. _____	_____	_____	11. _____	_____	_____
4. _____	_____	_____	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100 %

Remarks: _____

HYDROLOGY

<p>___ Recorded Data (Describe in Remarks): ___ Stream, Lake, or Tide Gauge ___ Aerial Photographs ___ Other <input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland hydrology Indicators: Primary Indicators: ___ Inundated ___ Saturated in Upper 12 Inches ___ Water Marks ___ Drift Lines ___ Sediment Deposits ___ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ___ Oxidized Root Channels in Upper 12" ___ Water-Stained Leaves ___ Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test ___ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: <u>0</u> (in.)</p> <p>Depth to Free Water in Pit: <u>-</u> (in.)</p> <p>Depth to Saturated Soil: <u>-</u> (in.)</p>	
<p>Remarks: _____</p>	

SOILS

#23, p.2

Map Unit Name (Series and Phase): <u>Visalia sandy loam 0-27 (VaA)</u>		Drainage Class: <u>moderately well drained</u>	
Taxonomy (Subgroup): <u>Pachic haploxerolls</u>		Field Observations Confirm Mapped Type? Yes (No)	

Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.

Hydric Soil Indicators:

<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)
---	---

Remarks: Couldnt dig pit because soil was too hard and dry, but assuming correct mapping, not hydric.

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <u>Yes</u> <u>No</u> (Circle) Wetland Hydrology Present? <u>Yes</u> <u>No</u> (Circle) Hydric Soils Present? <u>Yes</u> <u>No</u> (Circle)	Is this Sampling Point Within a Wetland? Yes <u>No</u> (Circle)
Remarks:	

DATA FORM
ROUTINE WETLAND DETERMINATION
 (1987 COE Wetlands Delineation Manual)

Project/Site: <u>Passerelle</u> Applicant/Owner: _____ Investigator: <u>Catherine MacGregor</u>		Date: <u>9/2/03</u> County: <u>SD</u> State: <u>CA</u>
Do Normal Circumstances Exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)		Community ID: _____ Transect ID: _____ Plot ID: <u>24</u>
<div style="display: flex; justify-content: space-around;"> Yes Yes Yes No <u>No</u> <u>No</u> </div>		

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Salix lasiolepis</u>	<u>C</u>	<u>FACW</u>	9. _____	_____	_____
2. _____	_____	_____	10. _____	_____	_____
3. _____	_____	_____	11. _____	_____	_____
4. _____	_____	_____	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100 %

Remarks: _____

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p> <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input checked="" type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available </p>	<p>Wetland hydrology Indicators:</p> <p>Primary Indicators:</p> <p> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands </p> <p>Secondary Indicators (2 or more required):</p> <p> <input type="checkbox"/> Oxidized Root Channels in Upper 12" <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks) </p>
<p>Field Observations:</p> <p>Depth of Surface Water: <u>Ø</u> (in.)</p> <p>Depth to Free Water in Pit: <u>>12</u> (in.)</p> <p>Depth to Saturated Soil: <u>>12</u> (in.)</p>	
<p>Remarks: _____</p>	

24, p.2

WETLAND DETERMINATION

Approved by HQUSACE 3/92

RESOURCE MANAGEMENT PLAN

**CAMPUS PARK PROPERTY
RESOURCE MANAGEMENT PLAN
TM 5338**

Prepared for:

Passerelle LLC
402 Broadway, Suite 1320
San Diego, CA 92101

Prepared by:



Consultants, Inc.

2442 Second Avenue
San Diego, California 92101
(619) 232-9200

A handwritten signature in black ink, appearing to read 'Elyssa K. Robertson', is written over a horizontal line.

Elyssa K. Robertson, Principal

May 2009

**Campus Park
Resource Management Plan
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1.0 INTRODUCTION

1.1 Purpose of Resource Management Plan

The purpose of this plan is as follows:

- 1) The plan guides management of habitats, species, and programs described herein to protect and enhance wildlife values.
- 2) The plan serves as a guide for appropriate public uses of the property.
- 3) The plan serves as a descriptive inventory of fish, wildlife and native plant habitats, which occur on or use this property.
- 4) The plan serves as a descriptive inventory of archaeological and/or historical resources which occur on this property.
- 5) The plan provides an overview of the property's operation, maintenance and personnel requirements to implement management goals, and serves as a budget planning aid.

1.1.1 Conditions and/or Mitigation Measures

This plan describes proposed management of the Campus Park development biological open space. The biological open space will contain mitigation acreage for the proposed project. The project would develop a mixed-use community of 1,076 single family and multi-family homes, as well as an active sports complex, neighborhood park, town center, office professional, homeowner's association facility, trail staging area, and dedicated biological open space preserves. The infrastructure necessary to support the development would include on- and offsite roadways, sewer and water facilities, and storm drains.

A total of 172 gross acres (approximately 41 percent of the project site) of biological open space would be provided by the project. Preserved open space would include wetlands in the southern portion of the project site north of proposed multi-family residential site, and coastal sage scrub and oak woodland in the northern portion of the site. No development would be permitted within the designated open space areas except for the hiking/equestrian trails.

A table summarizing project impact acreages and mitigation measures is provided below.

<p align="center">Table 1 Campus Park Onsite Impact and Onsite Mitigation Summary</p>					
Habitat Type	Total Habitat Acreage	Direct Impacts	Mitigation Ratio	Total Mitigation (Mitigation Ratio Impact)	Land Available for Mitigation (Total Acres Onsite - Direct Impacts)
Southern Riparian Forest	85.6	9.5	3:1 (2:1 enhancement; 1:1 creation)	28.5 (9.5 creation; 19 enhancement)	76.1
Southern Willow Scrub	1.6	1.6	3:1 (2:1 enhancement; 1:1 creation)	4.8 (1.6 creation; 3.2 enhancement)	0.0
Freshwater Marsh	10.3	7.8	3:1 (2:1 enhancement; 1:1 creation)	23.4 (7.8 creation; 15.6 enhancement)	2.5
Coast Live Oak Woodland	2.8	1.3	2:1 - 3:1	2.9	1.5
Diegan Coastal Sage Scrub	129.6	42.3	2:1	82.0	87.3
Non-native Grassland	44.1	41.2	0.5:1	20.8	2.9
Non-Native Vegetation	0.1	0.1	0:1	0.0	0.0
Pasture	135.4	133.8	0.5:1	70.8	1.6
Disturbed	4.4	3.9	0:1	0.0	0.5
Developed	2.1	2.1	0:1	0.0	0.0
Eucalyptus Woodland	0.1	0.1	0:1	0.0	0.0
TOTAL	416.1	243.7	--	231.7	172.4

1.1.2 Agency Review and Coordination

The project requires the following approvals and permits:

Discretionary Approval/Permit	Approving Agency
General Plan Amendment Specific Plan Amendment Fallbrook Community Plan Conformance I-15 Corridor Sub-regional Plan Conformance I-15/Highway 76 Interchange Master Specific Plan Amendment	County of San Diego Department of Planning and Land Use

Discretionary Approval/Permit	Approving Agency
Zone Reclassification Tentative Map “B” Special Area Designator Site Plan	
Grading Permits Right-of-Way Permit Final Map Improvement Plans Modification to Road Standards (Driveway spacing and corner sight distance)	County of San Diego Department of Public Works
4(d) Habitat Loss Permit	County of San Diego U.S. Fish and Wildlife Service California Department of Fish and Game
State Highway Encroachment Permit	Caltrans
National Pollution Discharge Elimination System Permit General Construction Stormwater Permit Waste Discharge Permit Section 401 Water Quality Certification	San Diego Regional Water Quality Control Board
Section 1602 Streambed Alteration Agreement	California Department of Fish and Game
Section 404 Permit – Dredge and Fill	U.S. Army Corps of Engineers
Section 7 Consultation or Section 10a Permit – Incidental Take	U.S. Fish and Wildlife Service
Water District Authorization Sewer District Authorization	Rainbow Municipal Water District
School District Authorization	Fallbrook Union Elementary School District Fallbrook Union High School District Bonsall Unified School District

1.2 IMPLEMENTATION

1.2.1 Responsible Parties/Designation of Resource Manager

The County of San Diego Department of Parks and Recreation, or other acceptable entity, will be the preserve Resource Manager of the property through the Landscape Maintenance District regulations. The procedure for formation and annexation of a Landscape Maintenance District (LMD) in accordance with Board of Supervisor Policy J-37 is described below.

- A. Proceedings to form the District or a zone of that District (Zone) may be initiated by the County, developers, civic groups, or other parties provided that (a) a funding mechanism is provided to cover all County formation costs, whether or not the formation is successful, and (b) the Director of Parks and Recreation, as

- appropriate, determines that the proposed maintenance through this mechanism is an appropriate use of the District.
- B. Petitions may be initiated by residents, community groups or governmental agencies.
 - C. Developers interested in formation must deposit sufficient funds with the County prior to initiation of proceedings to pay for all costs of formation, including balloting and administration, and each proponent is responsible for producing an independent Assessment Engineer's Report prior to formation hearings unless waived pursuant to the act. The County may require a Developer, or a Developer may desire, to annex to the District to a specified zone of the District or to form a zone as a condition of annexation. In such cases, the Developer may be required to provide written consent from all owners of property within the development waiving the notice, hearing and right of protest and consenting to the annexation and zone formation, if any. (Streets and Highways Code §§ 22608, 22608.2)
 - D. There is a limited amount of Special District formation funding available, which can be used to assist Developed Communities, and which would be reimbursed upon successful formation and collection of assessments. In general, front funding is limited to \$3,000 per zone, with full reimbursement upon formation and assessment collection.
 - E. The purpose of the District and its zones is generally to provide revenue for ongoing maintenance, and not to fund new construction. Community members should follow existing planning methods for new construction. Funding for construction of new facilities will be considered on a case-by-case basis.
 - F. In Developed Communities, proponents will follow guidelines provided by the County for formation activities, including:
 - 1. All steering committee meetings must be open to the public, with all affected property owners invited.
 - 2. Provide the County with a community-initiated petition containing valid, non-weighted signatures of significant numbers to represent probable success of formation. Petitions must accurately describe the proposal, including the facilities to be maintained, and the approximate assessments for each property.
 - G. Once a petition is received and approved, County staff will bring a Resolution of Intention to the Board and request approval to conduct assessment ballot proceedings, with a hearing date set in accordance with the provisions of Proposition 218.
 - H. Proceedings may be initiated by the County in cases where landscaped medians are included as part of a County road improvement project or when the Board of Supervisors determines that is in the public interest to initiate such proceedings.
 - I. Ballot results will be tabulated after a Board hearing and the Board of Supervisors may form the zone if there is not a majority protest weighted in accordance with the provisions of Proposition 218.
 - J. As a condition of acceptance of maintenance responsibility, the County will require a Developer to provide funds for 24 months of district administration and maintenance costs, or until assessments placed on the tax roll are collected, whichever occurs later. Civic groups forming Zones may obtain loans to cover

administrative and maintenance costs prior to County receipt of tax roll assessments.

However, if the County does not manage this land, the County will require that the following criteria be used in selecting a resource manager:

The manager shall demonstrate experience in the County of San Diego in carrying out habitat monitoring, and shall also demonstrate fiscal stability including preparation of an operational budget for the management of this RMP. Resource managers shall have at least one staff member with a biological, ecological or wildlife management degree and must be part of one of the following groups.

- *Established Conservancy Group or Land Manager*
- *County Department of Parks and Recreation*
- *Federal or State Wildlife Agency (U.S. Fish and Wildlife Service, California Department of Fish and Game)*
- *Federal Land Manager such as Bureau of Land Management*
- *Manager approved by the County*

Fee title of all separate open space lots shall be transferred to a resource manager, as defined above. If the land is transferred in fee title to a non-governmental entity, a Biological Open Space Easement or Conservation Easement must be dedicated to the County. If the land is transferred to the County or wildlife agencies, no easement dedication is necessary.

1.2.2 Financial Responsibility/Mechanism

The financial mechanism to implement this RMP will be a (LMD) that would provide funds to the resource manager to manage this specific property. The property meets the criteria for DPR to manage the land as outlined below:

- a. The land must be located inside a Pre-approved Mitigation Area (PAMA) or proposed PAMA, or otherwise deemed acceptable by the Department of Parks and Recreation.

The Campus Park land is part of the Draft North County MSCP Subarea Plan for which PAMA's and hardlines are agreed and acceptable..

- b. The land must allow for public access.

The property will be able to be accessed via Horse Ranch Creek Road.

- c. The land must allow for recreational opportunities such as a trails system.

Campus Park will provide public access trails that connect to regional trails.

1.2.3 Cost Estimate/Budget

A final cost estimate will be determined by the LMD once established.

1.2.4 Reporting Requirements

An Annual Operation Report shall be submitted to the county (and resource agencies as applicable), along with funds to cover County staff review time. Annual reports shall discuss the previous year's management and monitoring as well as management/monitoring anticipated in the upcoming year.

The Annual Operation Report shall provide a concise but complete summary of management and monitoring methods, identify any new management issues, and address the success or failure of management approaches (based on monitoring). The report shall include a summary of changes from baseline or previous year conditions for species and communities and address any monitoring and management limitations, including weather. The report shall also address any adaptive management resulting from previous monitoring results and provide a methodology for measuring the success of adaptive management.

The Annual Operation Report shall also include copies of California Natural Diversity Data Base (CNDDB) forms that were submitted to the State for any new sensitive species observations or significant changes to species previously reported. In addition, copies of invasive plant species forms submitted to the State or County must be included in the report.

1.2.5 Signed Agreement

For Resource Management Plans associated with discretionary projects the County will require an Open Space Maintenance Agreement with the applicant, the county and the resource manager be provided upon County acceptance of the final RMP. The Agreement will state that the applicant agrees to implement the RMP, which includes a financing mechanism that provides perpetual funding (such as a non-wasting endowment) adequate to pay the costs of all RMP management activities. The LMD funding shall be based upon the approved RMP. The Agreement shall provide a mechanism for the funds to transfer to the county in the event of the failure of the resource manager to meet the goals of the RMP. The Agreement shall provide that, prior to the approval of grading or improvement plans, and prior to approval of the parcel/final map, whichever is first, the applicant shall demonstrate that all RMP funding has been provided or the funding mechanism established.

2.0 PROPERTY DESCRIPTION

2.1 Legal Description

The site is located on the USGS 7.5' Bonsall Quad, Townships 9 and 10 south, Range 3 West, in the County of San Diego. Assessor's parcel numbers are 108-120-55, 56, 57, and 58, 108-121-17, 108-121-13, 108-421-04, and 125-061-03.

2.2 Geographical Setting

The Campus Park project site is located in the unincorporated portion of the County of San Diego in the community of Fallbrook, approximately 6 miles southeast of downtown Fallbrook and 46 miles north of downtown San Diego (Figure 1). The 416.1 acre property can be reached by State Route (SR) 76 which borders the southern project boundary and Interstate 15 (I-15) which borders the property along the northwestern edge. The northern area of the property is currently accessed by the north extension of Pankey Road via Stewart Canyon Road, which travels under I-15 and connects to Old Highway 395 on the west side of the freeway. The southern area of the site is accessed by the south extension of Pankey Road via SR 76. Elevations onsite range from approximately 260 feet above mean sea level at the southern edge to 850 feet at the northeastern edge.

2.3 Land Use

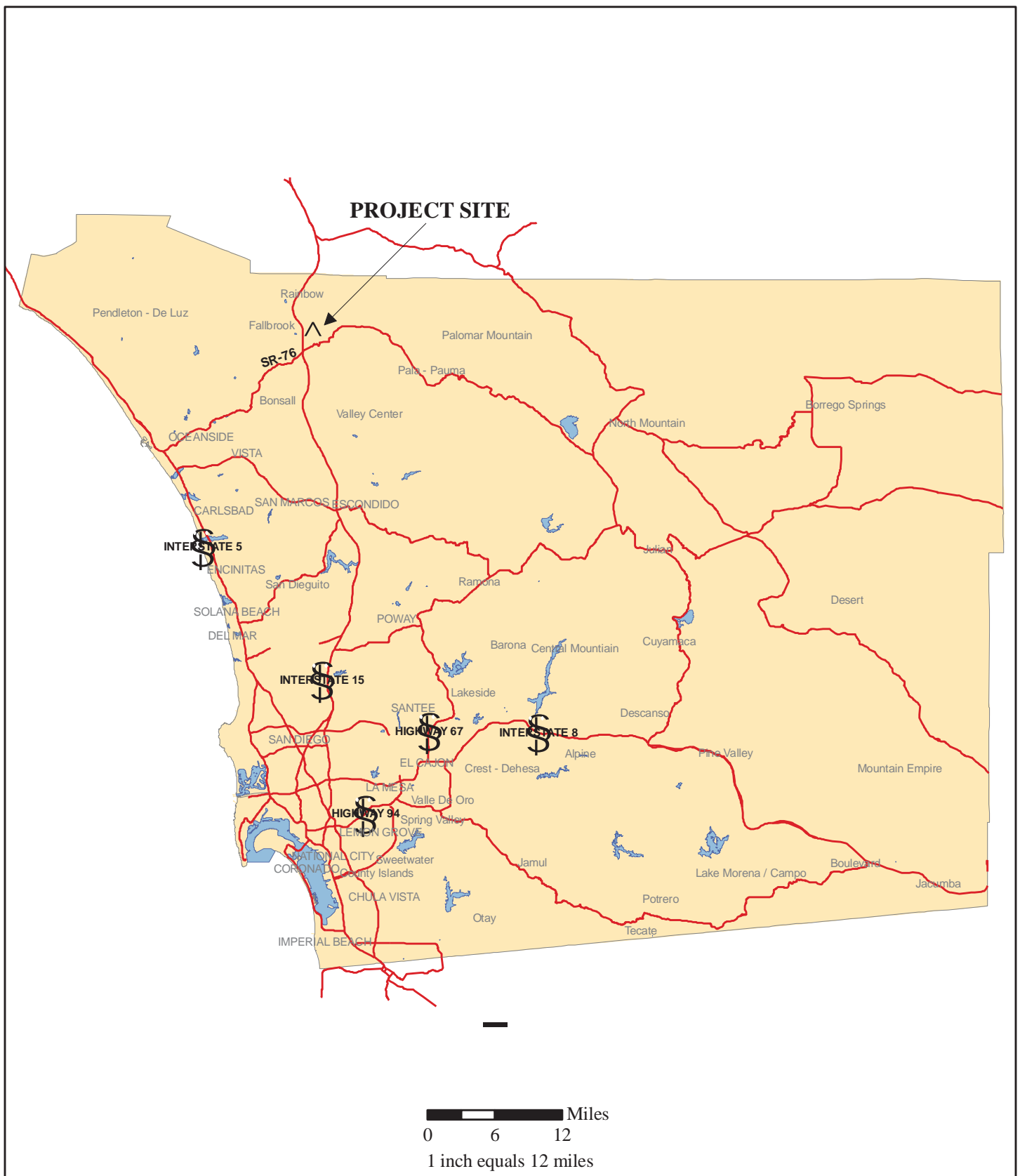
A property map is provided as Figure 2. A gas station, a "take-out" restaurant, and a California Department of Transportation (CALTRANS) Park and Ride facility are located to the west of I-15. Undeveloped land and large-lot residences, with scattered avocado groves, lie adjacent to the project site's northern and northeastern boundary. The Meadowood Specific Plan Amendment area, currently containing cultivated citrus and avocado groves, is located to the east. A small rocky hill, Rosemary Mountain, lies east of the southern portion of the project site. Lancaster Mountain, an undeveloped lot, the San Luis Rey River, and a housing development are located south of the project site. A small radio controlled airplane landing strip exists on a large parcel of undeveloped land to the west. This parcel is proposed to be developed (Campus Park West – TM 5424).

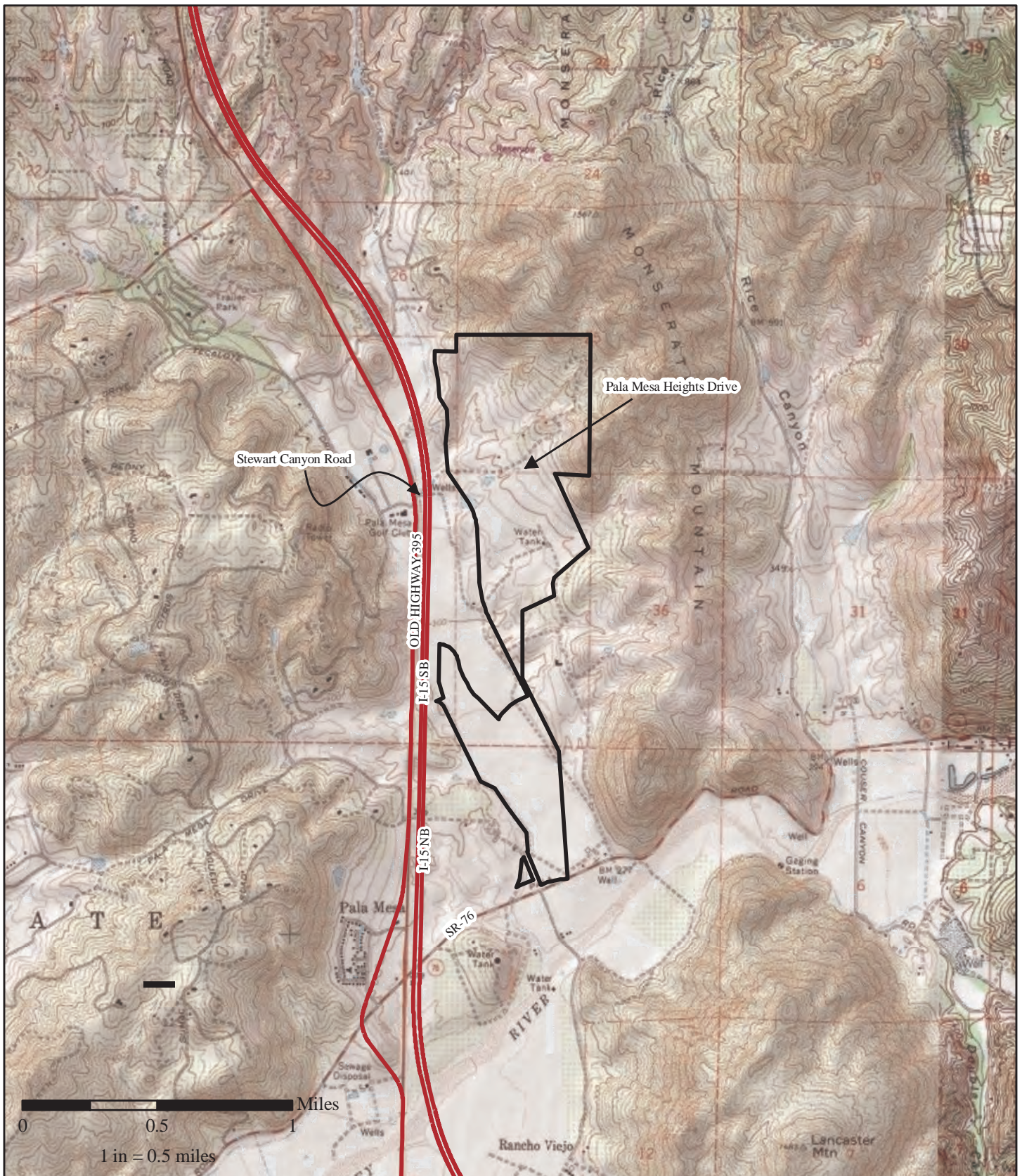
2.4 Geology, Soils, Climate and Hydrology

Geology and Soils

There are nine soil types onsite. These include the following:

- Grangeville fine sandy loam 0 to 2 % slopes (GoA)
- Ramona sandy loam 5 to 9 % slopes (RaC)
- Ramona sandy loam 9 to 15% slopes eroded (RaD2)
- Steep gullied land (StG)
- Visalia sandy loam 0 to 2% slopes (VaA)
- Las Posas fine sandy loam 9 to 15% and 15 to 30 % slopes eroded (LpD2) (LpE2)
- Las Posas stony fine sandy loam 30 to 65% slopes (LrG)





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Site Location Map Campus Park

Figure
2

May 2009

- Wyman loam 2 to 5 % , 5 to 9%, and 9 to 15% slopes (WmB) (WmC) (Wmd)
- Arlington coarse sand loam 2 to 9% slopes (AvC)
(Bowman 1973)

Climate

The annual average precipitation in Fallbrook is 17.96 inches with annual average temperature ranges from 55 to 75 degrees Fahrenheit.

Hydrology

The site has been used historically for farming. For that use, containment and drainage channels were constructed to allow for irrigation and cultivation of crops. Drainage from the property into San Luis Rey River was restricted following the construction of Pala Road (SR 76) and I-15. Exacerbating the onsite conditions was the development of projects to the northwest such as Pala Mesa Resort golf course, resulting in increased dry-season flows in the drainage due to landscape irrigation. A second factor affecting the hydrology, and thus ecology, of the site was alteration of Horse Ranch Creek during the construction of Old Highway 395 and SR-76. More recently, Caltrans realigned the creek during the construction of I-15. Upstream irrigation has resulted in a year round flow of the creek.

2.5 Trails

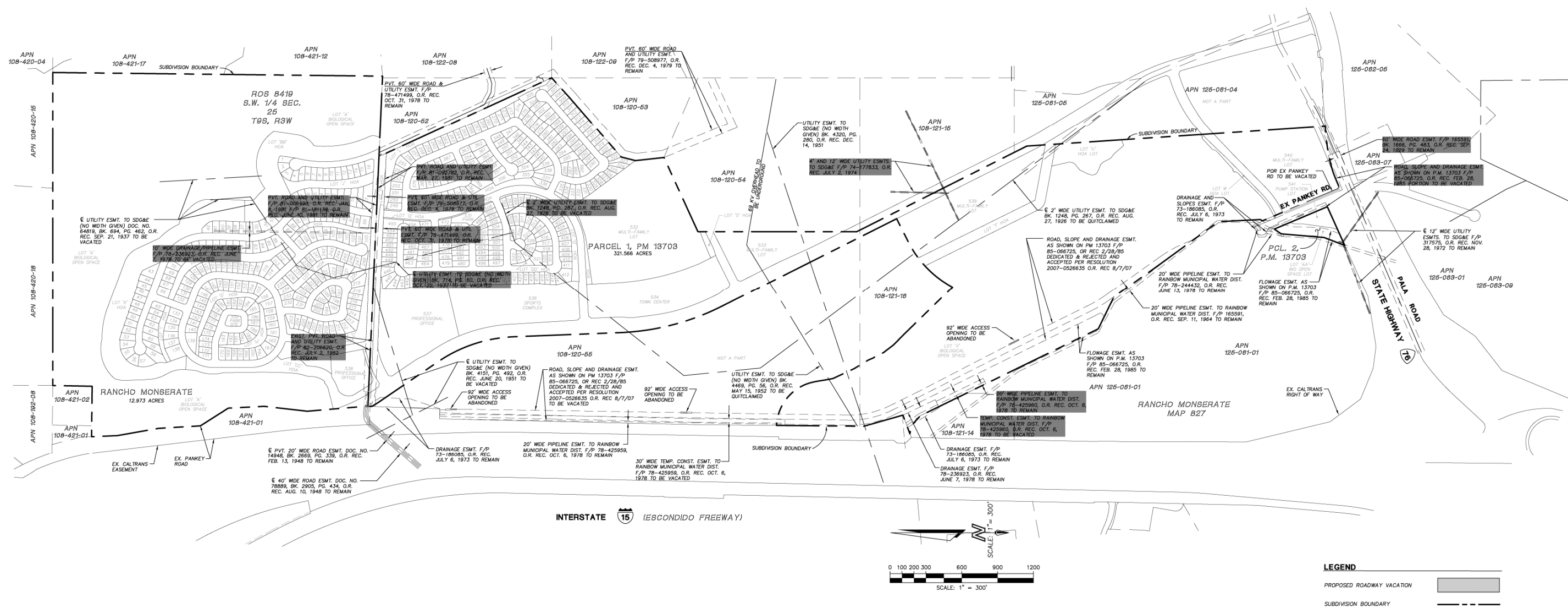
A trail system consisting of community trails and nature trails would be provided throughout the project site. Community trails, to be constructed within the development footprint, would allow pedestrians, equestrians and hikers to connect to the various open space and park areas on the project site. Nature trails would be provided in the northern area. The trails would be 8 feet wide with a soft surface. The trails would extend around the perimeter of the northern area, connecting to the offsite Monserate Mountain trail to the north and east. The Monserate Mountain hiking trail, located within the Fallbrook Conservancy Preserve, currently extends from the existing Pankey Road (north extension) through the undeveloped area north of the project site to the east side of the project site. This trail would connect on either end to the community trail system. The majority of trails will occur in already existing trails or dirt roads.

2.6 Easements or Rights

Easements that exist within the open space are shown on figure 3. The San Diego Gas and Electric (SDGE) Easement within OS-3 is planned to be vacated. OS-3 also will contain the easements for the proposed trails. OS-1 and 2, have an existing 20' Rainbow Municipal Water District Easement and a drainage easement that will remain. Access will be granted to the open space sites via the trails, and adjacent roadways.

2.7 Fire History

The northern portion of the property burned during the recent 2007 Rice Fire. The Rice Fire began on October 22, 2007 and burned over 9,400 acres. The fire burned the



majority of the coastal sage scrub and non-native grassland habitat, as well as the entire population of Parry's Tetracoccus onsite. It is anticipated, and presumed for the preparation of this plan, that these resources will regenerate given time.

3.0 BIOLOGICAL RESOURCE DESCRIPTION

3.1 Vegetation Communities/Habitats

Seven different habitat types are described onsite as part of the resource management plan. These habitats are described below.

The following table lists the habitats and the acres that occur in the open space. An open space map is provided in Figure 4. A complete list of plant observations with common and scientific names is provided in Appendix A.

TABLE 2. Habitat Occurring in Open Space	
Habitat	Acres Available for Management
Southern Riparian Forest	76.1
Freshwater Marsh	2.5
Coast Live Oak Woodland	1.5
Diegan Coastal Sage Scrub	87.3
Non-Native Grassland	2.9
Pasture	1.6
Disturbed	0.5
TOTAL	172.4

3.2 Plant Species

The following information summarizes the dominant and indicator plant species for each habitat type as well as identifies rare, threatened or endangered plant species. Identification of non-native or invasive plant species that may affect the open space are also included.

3.2.1 Plant species present and Correlation of species with habitat onsite

Southern Riparian Forest (County Habitat Code 61300) – 76.1 acres

Southern riparian forest is a riparian habitat characterized by a dense thicket of willow trees (*Salix spp.*) with scattered cottonwoods (*Populus spp.*) and/or western sycamores (*Platanus racemosa*). This habitat occupies approximately 77.4 acres of proposed open space in the southern and southeastern areas onsite and is dominated by black willow (*Salix gooddingii*) and arroyo willow (*Salix lasiolepis*) with western sycamore. The southern riparian forest within onsite open space is of high quality, with a mature riparian



Legend

Sensitive Species

- CaGn Coastal California Gnatcatcher (pair) (*Polioptila californica californica*)
LBV(P) Least Bell's Vireo (Juvenile) (*Vireo bellii pusillus*)
LBV(J) Least Bell's Vireo (Pair) (*Vireo bellii pusillus*)
LBV Least Bell's Vireo (*Vireo bellii pusillus*)
NoRR Northern Red Diamond Rattlesnake (*Crotalus ruber ruber*)

- OrWh Orange-throated Whiptail (*Aspidoscelis hyperythrus*)
PaGr Palmer's Grappling-hook (*Harpagonella palmeri*)
RuCS Southern California Rufous Crowned Sparrow (*Aimophila ruficeps canescens*)
YeBC Yellow Breasted Chat (*Icteria virens*)
YeWa Yellow Warbler (*Dendroica petechia*)
Parry's Tetracoccus (*Tetracoccus dioicus*) (#)

Note: Raptors observed throughout site or overhead include Cooper's Hawk, Turkey Vulture, American Kestrel, White Tailed Kite, Red Shouldered Hawk, and Red Tailed Hawk.

Habitats

- | | | |
|-----------------------------------|----------------------------------|------------------------|
| Coast Live Oak Woodland (71160) | Non-Native Grassland (42200) | Mulefat Scrub (63310) |
| Developed (12000) | Oak Woodland (71100) | Orchard (18100) |
| Diegan Coastal Sage Scrub (32500) | Non-native Vegetation (11000) | Tamarisk Scrub (63810) |
| Disturbed (11300) | Pasture (18310) | |
| Eucalyptus (11100) | Southern Riparian Forest (61300) | |
| Freshwater Marsh (52400) | Southern Willow Scrub (63320) | |

Other

- Proposed Impact Area
Fuel Management Zone
Proposed Open Space

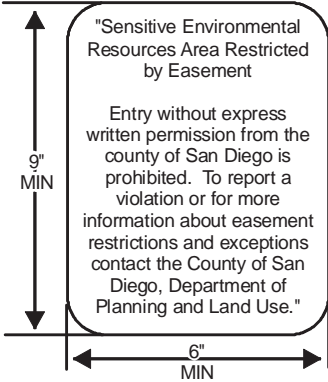


**Biological Open Space
Campus Park**

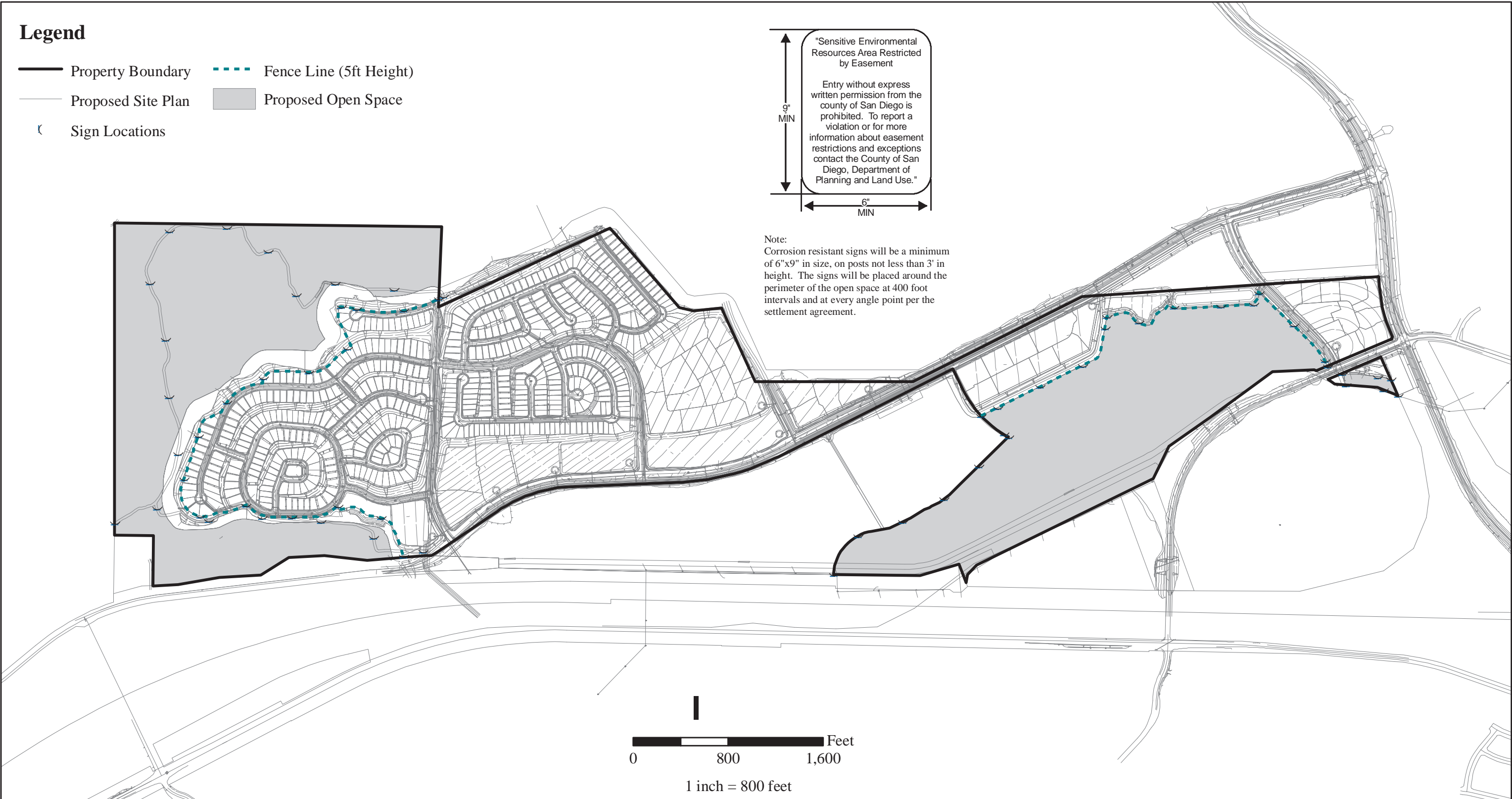
**Figure
4**

Legend

- Property Boundary
- Proposed Site Plan
- Sign Locations
- Fence Line (5ft Height)
- Proposed Open Space



Note:
Corrosion resistant signs will be a minimum of 6"x9" in size, on posts not less than 3' in height. The signs will be placed around the perimeter of the open space at 400 foot intervals and at every angle point per the settlement agreement.



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Open Space Signage/Fencing Plan
Campus Park

Figure
5

canopy, permanent water flow, and sensitive species such as the least Bell's vireo (*Vireo bellii pusillus*), yellow warbler (*Dendroica petechia*), and yellow-breasted chat (*Icteria virens*).

Freshwater Marsh (County Habitat Code 52410) – 2.5 acre

The disturbed wetland contains species such as cattail (*Typha sp.*), mulefat (*Baccharis salicifolia*), giant reed (*Arundo donax*), oats (*Avena sp.*), saltgrass (*Distichlis spicata*), fennel (*Foeniculum vulgare*), tree tobacco (*Nicotiana glauca*), bristly ox-tongue (*Picris echioides*), and tamarisk (*Tamarix sp.*). Wetlands are disturbed and degraded.

Coast Live Oak Woodland (County Habitat Code 71160) – 1.5 acres

This woodland habitat is characterized by coast live oak (*Quercus agrifolia*) as its dominant species. The shrub layer is poorly developed, but may include toyon (*Heteromeles arbutifolia*), currant (*Ribes sp.*), laurel sumac (*Malosma laurina*) and blue elderberry (*Sambucus mexicana*). The herb component is continuous and dominated by ripgut grass (*Bromus diandrus*) and several other introduced taxa. Oak woodland habitat occurs with non-native vegetation onsite. This habitat occupies approximately 1.5 acres of proposed open space and is dominated by coast live oak, scrub oak (*Quercus berberidifolia*) with California fan palm (*Washingtonia filifera*), eucalyptus (*Eucalyptus sp.*), olive (*Olea europaea*), mission manzanita (*Xylococcus bicolor*), and pine (*Pinus sp.*).

Diegan Coastal Sage Scrub (County Habitat Code 32500) – 87.3 acres

Diegan coastal sage scrub is characterized by low-density, drought-deciduous, flexible shrubs such as California sagebrush (*Artemisia californica*) and true sages (*Salvia sp.*) on low-moisture sites (Schoenherr 1992). Approximately 88.6 acres of coastal sage scrub occurs within open space. The coastal sage scrub habitat was considered a high quality habitat prior to the fires of 2007. It is anticipated that a high quality coastal sage scrub habitat will re-generate onsite provided no additional impacts to this area occur. Sensitive species observed in the coastal sage scrub habitat prior to the 2007 fires include Palmer's grappling-hook (*Harpagonella palmeri*), Parry's tetracoccus (*Tetracoccus dioicus*), California gnatcatcher (*Polioptila californica californica*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), northern red diamond rattlesnake (*Crotalus ruber ruber*), and orange-throated whiptail (*Cnemidophorus hyperythrus*).

Non-Native Grassland (County Habitat Code: 42200) – 2.9 acres

Non-native grasses and weeds can become the dominant vegetation type when grazing, agriculture, or other disturbances degrade the native vegetation. Onsite, an area north of Pala Mesa Heights Drive would be characterized as non-native grassland. This area includes species such as wild oats (*Avena sp.*), century plant (*Agave americana*), brome grasses (*Bromus sp.*), California pepper (*Schinus molle*), fennel (*Foeniculum vulgare*),

coyote brush (*Baccharis pilularis*), and star thistle (*Centaurea sp.*). Approximately 2.5 acres of non-native grassland occurs within onsite open space. Non-native grassland habitat provides critical foraging area for resident and migratory raptors. The County of San Diego considers this habitat sensitive.

Pasture (County Habitat Code 18310) – 1.6 acres

The southern portion of the project site south of Pala Mesa Heights Drive has been grazed. Bare ground and non-native vegetation such as tree tobacco (*Nicotiana glauca*), and fennel (*Foeniculum vulgare*) dominate this 5.6 acres of habitat within open space.

Disturbed (County Habitat Code 11300) – 0.5 acres

The disturbed land onsite includes habitats that have been altered to such an extent that native vegetation no longer persists nor would be expected to regenerate to native habitat. The vegetation that thrives within this habitat is often weedy, non-native species that have adapted to rapidly colonize exposed substrates. The 2.0 acres of disturbed habitat onsite is pre-dominantly bare dirt (i.e. dirt roads) with sporadic non-natives such as oats (*Avena sp.*), tocalote (*Centaurea melitensis*), black mustard (*Brassica nigra*), and foxtail chess (*Bromus madritensis*).

3.2.2 Rare, Threatened, or Endangered Plant Species Present or Likely to Occur, Including MSCP Coverage Status, (if applicable)

A list of sensitive plant species with the potential to occur onsite was generated using the California Native Plant Society (CNPS) Electronic Inventory (2006). The resulting list of potential sensitive plants includes any sensitive species documented within the project USGS quad (Bonsall) or eight surrounding quads (or any CNPS List 4 species with habitat and elevation requirements matching site conditions). Each potential species was addressed in field surveys, and an evaluation of the likelihood of occurrence of each species, based on the CNPS Inventory (2006), Reiser (1994), and onsite observations, is provided in Appendix C. The County categorizes sensitive plants into Groups A, B, C, and D, which generally correspond with the CNPS list 1, 2, 3, and 4.

Two sensitive plant species were detected onsite: Parry's Tetracoccus and Palmer's grappling-hook.

Parry's Tetracoccus (*Tetracoccus dioicus*, Euphorbiaceae)

Listing: CNPS List 1b.2, State: none, Federal: none, County: Group A

Distribution: Orange, Riverside, and San Diego Counties; Baja California.

Habitat: Chaparral, coastal scrub; elevation 541 – 3,280 feet.

This shrub, which is in decline due to loss of habitat, typically grows in chaparral or coastal sage scrub on Las Posas soils. Onsite, this species occurs in coastal sage scrub at the northern end of the site. Approximately 1,688 individuals were observed.

Palmer's grappling-hook (*Harpagonella palmeri*, Boraginaceae)

Listing: CNPS List 4.2, State: none, Federal: none, County: Group D

Distribution: Los Angeles, Orange, Santa Catalina Island, San Diego Counties; Arizona; Baja California, Sonora (Mexico)

Habitat: Chaparral, coastal scrub, valley and foothill grassland/clay; elevation 60 – 1,246 feet.

Palmer's grappling-hook is an annual plant associated with clay soils, and is decreasing in numbers throughout Southern California. Urban development and agricultural discing has destroyed much of the habitat for this species. One individual Palmer's grappling-hook was observed on a dirt trail in the northern section of the site. It is likely that more would have been observed under less dry conditions.

3.2.3 Non-native and/or Invasive Plant Species

The predominant non-native/invasive plant species observed onsite is pampas grass (*Cortaderia* sp). This species is prevalent in the floodplain pasture area and has a tendency to invade riparian systems. The majority of this plant will be removed by development of the site, however any individual species occurring the open space should be removed to avoid infestation.

3.3 Wildlife Species

3.3.1 Wildlife Species Present and Correlation of species with Habitat Onsite

Wildlife observations included thirty-three insects, seventy birds, eleven reptiles, four amphibians, and sixteen mammal species. Wildlife was concentrated primarily within the coastal sage scrub habitat in the northern portion of the site and within the riparian habitats on the southern portion of the project site. These are the areas that will be preserved in biological open space. A complete list of animal species observed onsite is included in Appendix B. The most commonly observed species are listed below.

Invertebrates

Thirty-three insect species were observed onsite. The most common of these species include Sara orangetip (*Anthocharis sara*), southern blue (*Glaucopsyche lygdamus australis*), ladybug (Family *Coccinellidae*), and honeybee (*Apis mellifera*).

Reptiles and Amphibians

Four amphibian and eleven reptile species were observed onsite during the survey including Western fence lizard (*Sceloporus occidentalis*), bullfrog (*Rana catesbeiana*), California treefrog (*Hyla cadaverina*), common kingsnake (*Lampropeltis getulus*), and western rattlesnake (*Crotalus viridis*). Tree frogs were prevalent within the riparian habitats onsite while reptile species were more predictably elusive. Two sensitive reptile

species observed onsite including orange-throated whiptails and a northern red rattlesnake.

Birds

Seventy bird species were observed during the field surveys. Some of the more abundant species onsite included American goldfinch (*Carduelis tristis*), yellow-rumped warbler (*Dendroica coronata*), bushtit (*Psaltiriparus minimus*), California towhee (*Pipilo crissalis*), house finch (*Carpodacus mexicanus*), lesser goldfinch (*Carduelis psaltria*), spotted towhee (*Pipilo erythrophthalmus*), and wrentit (*Chamaea fasciata*). Species found in the riparian areas are black phoebe (*Sayornis nigricans*), common yellowthroat (*Geothlypis trichas*), and song sparrow (*Melospiza melodia*). Upland species include Bewick's wren (*Thryomanes bewickii*), southern-California rufous-crowned sparrow (*Aimophila ruficeps canescens*), and western meadowlark (*Sturnella neglecta*).

Mammals

Evidence of sixteen mammal species was identified onsite including raccoon (*Procyon lotor*), ground squirrel (*Spermophilus beecheyi*), gopher (*Thomomys bottae*), coyote (*Canis latrans*), and cottontail rabbit (*Sylvilagus auduboni*). Domestic species onsite included cow (*Bos taurus*), and donkey (*Equus asinus asinus*).

3.3.2 Rare, Threatened or Endangered Wildlife Species Present or likely to occur, including MSCP Coverage Status

A list of sensitive animal species with the potential to occur onsite was generated and is provided in Appendix D. This list includes an evaluation of the potential for each species to occur onsite, based on species requirements, CNDDB reports, previous biological reports, and field observations.

Eight sensitive animal species were observed onsite: orange-throated whiptail, northern red diamond rattlesnake, Cooper's hawk, southern California rufous-crowned sparrow, yellow warbler, yellow-breasted chat, California gnatcatcher, and least Bell's Vireo. One additional species of special County interest, turkey vulture, was also observed onsite. More detailed information on these species is provided below.

Orange-throated whiptail (*Cnemidophorus hyperythrus*)

The orange-throated whiptail, a California Species of Special Concern, is a slender, quick lizard that lives in coastal sage scrub, chaparral, grasslands, and riparian areas and eats insects and spiders. Five orange-throated whiptail observations were made onsite.

Northern Red diamond rattlesnake (*Crotalus ruber ruber*)

This reddish to pinkish-tan rattlesnake, a California Species of Special Concern, occupies coastal sage scrub, chaparral, and woodlands, as well as desert scrub, pinon-juniper woodlands, and fields. It is a secretive species, relatively docile compared to the southern Pacific rattlesnake (*Crotalus viridis*), and eats ground squirrels, lizards, rabbits, and carrion. One northern red diamond rattlesnake was observed in the Diegan coastal sage scrub habitat onsite.

Cooper's hawk (*Accipiter cooperii*)

The Cooper's hawk, a California Species of Special Concern, uses riparian and oak woodlands, Eucalyptus groves, and other wooded habitats. This bird was once a common nester in the County but numbers of breeding pairs have declined over the last decades, probably due to loss of riparian habitat and human disturbance. Two Cooper's hawks were observed in or over the coastal sage scrub and riparian habitats onsite.

Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*)

This sparrow, a California Species of Special Concern, is usually found in coastal sage scrub, grassland, and open pine-oak woodlands, where it nests on the ground. Two southern California rufous-crowned sparrows were observed within the coastal sage scrub habitat in the northern section of the site.

Yellow warbler (*Dendroica petechia*)

The yellow warbler, a California Species of Special Concern, is a small yellow songbird that inhabits bushes, swamp edges, streams and gardens. One yellow warbler was observed in the southern riparian forest onsite.

Yellow-breasted chat (*Icteria virens*)

The yellow-breasted chat, a California Species of Special Concern, is a small warbler with a bright yellow throat and breast and a distinctive call. This species inhabits brushy tangles, briars, and stream thickets. Four individuals were observed in the riparian habitat onsite.

Coastal California gnatcatcher (*Poliophtila californica californica*)

The coastal California gnatcatcher, a threatened federal species and California Species of Special Concern, is a small gray songbird resident in scrub-dominated communities in southwestern California from the Los Angeles Basin through Baja California, Mexico. California gnatcatcher populations have declined due to extensive loss of Diegan coastal sage scrub habitat to urban and agricultural uses. Five pairs of California gnatcatchers were documented onsite in the coastal sage scrub habitat during protocol surveys conducted in 1999. Also note that this sensitive species borders the northwest property line and was observed offsite. Two additional locations of gnatcatchers were noted in the field from faint, distant calls, but were never confirmed or visually identified. These were located at the eastern edge of the northern part of the project site. For this report, only those pairs visually confirmed in the field are taken into consideration.

Least Bell's Vireo (*Vireo bellii pusillus*)

The least Bell's vireo is a small gray bird that inhabits cottonwood-willow forest, oak riparian, shrubby thickets and dry washes with thickets at the edges. This bird is listed as a Federal and California Endangered Species. Nine least Bell's vireos, including two pairs and a juvenile, were observed onsite.

Turkey vulture (*Cathartes aura*)

The turkey vulture is a large scavenger that is usually seen soaring in the sky or perched on dead trees, posts, carrion, or on the ground. Although this species is not State or Federal listed, it is of special interest to the County. Turkey vultures were observed flying over the site.

Raptors

Raptors are large predatory or scavenger birds that typically require tall trees for perching and nesting, with adjacent open grasslands necessary for foraging. These species are protected, especially during their critical nesting and wintering stages. Due to declining habitat and the associated declining numbers, raptors as a group are protected under CDFG Code Section 3500-3516. Non-listed raptors observed on or over the site included four American kestrels (*Falco sparverius*), several white-tailed kites (*Elanus leucurus*), one red-shouldered hawk (*Buteo lineatus*), and several red-tailed hawks (*Buteo jamaicensis*).

Other Sensitive Species Known from the Area

Three federally endangered sensitive species are known in the project vicinity: southwestern willow flycatcher, arroyo toad and Stephens' kangaroo rat. These three species are discussed below.

Southwestern willow flycatcher (*Empidonax traillii extimus*) is a Federally endangered bird that breeds only in dense riparian vegetation near surface water or saturated soil. This species is threatened by loss of habitat and nest parasitism. Southwestern willow flycatchers are documented to occur in the San Luis Rey River in the vicinity of the project site. Although no focused surveys for this species were conducted, the survey protocol for least Bell's vireo requires that willow flycatchers be documented and reported. No willow flycatchers were detected during the least Bell's vireo surveys.

Arroyo toad (*Bufo californicus*), another federally endangered species, is also documented to occur in the San Luis Rey River in the vicinity of the project site. This species, which breeds in slow moving streams with sand substrates is also threatened by habitat loss. The nearest documented location of this species is southeast of the project site in the San Luis Rey River. Two protocol surveys for this species were conducted onsite, in 1999 and 2004, and no arroyo toads were detected. In addition, pit traps were placed on the Meadowood property to the east to determine if aestivation of this species occurs in upland habitats. These results detected no arroyo toads. (Ramirez 2005)

Stephens' kangaroo rat, a Federally endangered species, is known to occur in the Fallbrook area but is more prevalent in Riverside County. The nearest documented occurrence of this species is at the Fallbrook Weapons Station west of I-15. A habitat assessment was conducted by Royce Riggan with negative results. It was determined that the substrate and habitat were not suitable for this species onsite.

3.3.3 Non-native and/or Invasive Wildlife Species

The predominant wildlife species of concern on this property is the brown headed cowbird. Cowbirds are nest parasites and have been shown to have a significant impact on the breeding success of the least Bell's vireo and other native riparian birds.

3.4 Overall Biological and Conservation Value

Although recently burned, the coastal sage scrub in the northern part of the site is of high quality and supports rare plants and animals. The wetlands in the southern open space are also of high quality, with a mature riparian canopy, permanent water flow, and rare species. Overall, the biological value of the open space habitat is very high. The preservation of this high quality habitat will therefore provide for the conservation of sensitive species onsite and contribute to the preservation of sensitive biological resources in the region.

3.5 Enhancement Opportunities

The proposed project will enhance the riparian habitat onsite. This will include removal of pampas grass, palms and potentially removal of the berms onsite. After the project is completed it will be the responsibility of the open space manager to continue the overall maintenance of the site.

4.0 CULTURAL RESOURCES DESCRIPTION

There are no significant archaeological resources or historical resources within the open space lots discussed in this plan.

5.0 MANAGEMENT ELEMENTS, GOALS AND TASKS

5.1 Biological Element: Goals and Tasks

Biological elements include vegetation communities/habitats and plant and animal species for which management goals and tasks have been developed. For the Campus Park project the following goals have been developed followed by specific tasks to ensure implementation of these goals.

5.1.1 Biological Goals

Goal 1: Preserve and manage lands to the benefit of the flora, fauna, and native ecosystem functions reflected in the natural communities occurring within the open space of Campus Park. The habitats, included within the open space to be managed under this goal, include the following: Southern riparian forest, freshwater marsh, coast live oak woodlands, coastal sage scrub, and non-native grassland. This goal shall be achieved by implementing the detailed tasks below and shall ensure that the habitat within the open space are not degraded over time.

Goal 2: Manage the land for the benefit of sensitive species, MSCP covered species, and existing natural communities, without substantive efforts to alter or restrict the natural course of habitat development and dynamics. Sensitive species which occur within the open space include the following:

Orange Throated Whiptail – coastal sage scrub
 Red Diamondback Rattlesnake – coastal sage scrub
 Raptors - riparian
 Rufous Crowned Sparrow – coastal sage scrub
 Yellow Warbler - riparian
 Yellow Breasted chat - riparian
 California Gnatcatcher – coastal sage scrub
 Least Bell's Vireo – riparian
 Parry's tetracoccus – coastal sage scrub
 Palmer's grappling-hook – coastal sage scrub

This goal shall be achieved through species-specific tasks outlined below.

Goal 3: Reduce, control, and where feasible eradicate non-native, invasive flora and/or fauna known to be detrimental to native species and/or the local ecosystem. This may include the on-going eradication of pampas grass or other non-native invasive species as deemed necessary by the open space manager. In addition, periodic cowbird trapping may be appropriate if this species is noted as precluding the successful breeding of riparian birds onsite. This goal will be achieved through implementation of the tasks listed below.

5.1.2 Biological Tasks

Implementation of the following tasks will result in the general goals discussed above being achieved. It should be noted that the following tasks should be considered the initial tasks required. The Resource Manager, with the approval from the County of San Diego may make adjustments to these tasks (either additions, deletions or changes in frequency) as deemed necessary based on adaptive management practices.

Task Number	Task	Description/frequency	Resource	Goal
A1	<i>Baseline inventory of resources</i>	Conduct a complete inventory through field surveys identifying all habitat, plants and animals observed onsite. One time	All habitats, plants and animals	Provides the baseline for Goals 1, 2, and 3.
A2	<i>Update Biological mapping</i>	Biological mapping of habitat limits should be conducted either through field surveys or aerial photo analysis. Once every five years.	Riparian, oak woodland, coastal sage scrub	Provides baseline data for Goals 1, 2, and 3.
A3	<i>Update aerial photo</i>	Update aerial photo of the site every 5 years to show changes in habitat over time.	Riparian, oak woodland, coastal sage	Provides background data for

Task Number	Task	Description/frequency	Resource	Goal
			scrub	Goals 1, 2, and 3
A4	<i>Removal of invasive species</i>	Removal of plant species known to be highly invasive to riparian systems will be removed 4 times per year at most or as needed, based on annual assessments. Special attention should be paid to Pampas Grass and <i>Arundo donax</i>	Riparian	Goal 2 and 3
A5	<i>Cowbird control</i>	If cowbirds are detected during baseline surveys or if they are observed during focused least Bell's vireo surveys cowbird control measures (including trapping) will be implemented. As needed	Riparian, least Bell's vireo	Goal 2
A6	<i>Predator control</i>	Primary predators anticipated are domestic pets. These will be controlled utilizing fences or barriers where needed.	All Sensitive wildlife species	Goal 2
A7	<i>Habitat Restoration/installation</i>	Should it be necessary, restoration of habitats may be required due to unforeseen impacts such as fire, erosion. As - needed	Riparian, oak woodland, coastal sage scrub	Goal 1
A8	<i>Habitat restoration monitoring</i>	If Habitat Restoration is conducted, monitoring of the restoration site will be required.	Riparian, oak woodland, coastal sage scrub	Goal 1
A9	<i>Species specific Survey – California Gnatcatcher</i>	Protocol level surveys once every five years	California gnatcatcher	Goal 2
A10	<i>Species specific Survey, Least Bell's vireo</i>	Protocol level surveys once every five years	Least Bell's vireo	Goal 2
A11	<i>Raptor Survey</i>	Raptor surveys should be conducted to document diversity of raptors onsite and nest locations. Twice per year every five years (once for summer resident and once for winter migrants)	Raptors	Goal 2

5.1.3 Biological Management Constraints

Management constraints include issues that may constrain the ability of the resource manager to effectively implement the goals and tasks of the open space onsite. For the Campus Park Open Space such constraints include:

- Approvals from CDFG and ACOE may be required to conduct work in the riparian habitat onsite.
- Protocol surveys for listed species may require a 10a permit for surveyors.
- Flooding and scour may impact restoration areas.

- Control of off-road vehicle activity of residents either motorized or non-motorized.
- Any grading associated with restoration activities may require a grading permit from the County of San Diego.
- The Resource Manager should meet coordinate with Homeowner Associations to ensure that no conflicts occur between the homeowners management directives and the open space management goals.

5.1.4 Biological Adaptive Management

Adaptive management is the ability for a Resource Manager to change or adapt the tasks listed above in response to onsite conditions and based on data collected. Any changes to the goals or tasks of this plan should be identified within the annual report. These changes should be justified based on observation/data collection, should be defined, frequency provided and potential costs for the change. If a change is required prior to submittal of the annual report (for example, an unforeseen emergency) the County of San Diego should be notified within 48 hours of the change. The goal/task change can then be summarized in the annual report later.

5.2 Cultural Resource Elements: Goals and Tasks

No historic and cultural resources were observed within the open space therefore goals and tasks for this element are not applicable.

5.3 Operations, Maintenance and Administrative element: Goals and Tasks

Operations elements consist of the physical facility and grounds maintenance program, which includes administration necessary to maintain orderly and beneficial management of the area, and are described below.

5.3.1 Operations, Maintenance and Administrative Goals

Goal 1: Maintain sufficient access and facilities to provide for satisfying public use where such use does not conflict with biological or compromise public safety.

Goal 2: Provide and maintain facilities that support the biological goals, provide for public use, enhance public experience, and maintain public safety.

5.3.2 Operations, Maintenance and Administrative Tasks

Specific tasks to achieve the above goals are provided below.

Task Number	Task	Description/frequency	Goal
B1	<i>Establish and maintain database and analysis of</i>	Establish a digital database, maintain and update data as needed	Goal 2

Task Number	Task	Description/frequency	Goal
	<i>data</i>		
B2	<i>Write and submit annual report to County</i>	Prepare annual report as discussed in this plan	Goal 2
B3	<i>Submit review fees for County review of annual report</i>	Ensure funding for County review of annual report	Goal 2
B4	<i>Review and if necessary, update management plan</i>	Update this management plan based on the adaptive management outlined in the annual reports	Goal 2
B5	<i>Order and install signs per Figure 5 of the signage plan</i>	Order enough signs that there is sufficient stock to replace signs as need	Goal 1
B6	<i>Replace signs</i>	Replace signs as needed	Goal 1
B7	<i>Maintain fences and gates</i>	As fences are damaged or vandalized repair as needed	Goal 1
B8	<i>Removal of trash and debris</i>	Removal of trash and/or landscape debris annually each year	Goal 1 and 2
B9	<i>Coordination with DEH and Sheriff</i>	Coordinate with local jurisdictions annually to ensure officials have access to the open space should it be necessary to perform their duties.	Goal 1
B10	<i>Access maintenance</i>	Maintain access points to the open space annually, including removing any barriers, replacing locks etc.	Goal 1
B11	<i>Maintain regular office hours</i>	If the resource manager is offsite, the manager should be able to be contacted during normal business hours to be notified of any issues onsite.	Goal 1
B12	<i>Coordinate with utility providers and easement holders</i>	Coordinate with SDG&E, Rainbow Municipal Water District and the HOA annually.	Goal 1

5.4 Public Use Elements: Goals and Tasks

5.4.1 Public Use Goals

Goal 1: Provide for public access where the type and magnitude of such access would not result in substantive short- or long-term detriment to the natural resources

5.4.2 Public Use Tasks

Task Number	Task	Description/frequency	Goal
C1	<i>Trail monitoring maintenance and repair</i>	Quarterly review the length of each public trail for needed repairs	Goal 1
C2	<i>Public access control</i>	Ensure that there are no unauthorized access points into the open space for public access through the use of barriers or brush control. Quarterly	Goal 1
C3	<i>Neighbor education community partnership</i>	Meet annually with adjacent resource managers and adjacent HOA to ensure public is aware of sensitive nature of open space onsite.	Goal 1

5.4.3 Public Use Management Constraints

No constraints are identified that would preclude the implementation of the above tasks.

5.5 Fire Management Element: Goals and Task

The purpose of a fire management element is to prevent the complete devastation due to fire within the open space preserve. Tasks to achieve this goal will include ensuring that no illegal encampments become established, that no vehicular trespassing occurs and that no illegal dumping occurs. In addition, the fuel modification zone between the open space and the housing development will further deter a catastrophic fire event. The fire management plan for the project is attached to this report for reference. All Fire Management tasks will be conducted by HOA.

5.5.1 Fire Management Goals

Goal 1: To establish vegetation management, operations and facilities maintenance, and public use actions which both reduce risk to people and property and protect RMP land resources.

5.5.2 Fire Management Tasks

(All conducted by HOA)

Task Number	Task	Description/frequency	Goal
D1	<i>Coordination with the applicable fire agencies and access (gate keys etc) for these agencies</i>	Annual coordination with the local fire department to ensure accessibility	Goal 1
D2	<i>Fire evacuation planning for public use areas</i>	Maintain a plan to evacuate people from the public trail should a fire ignite while trail is in use.	Goal 1
D3	<i>Protection of areas with high biological importance</i>	Ensure that areas of extraordinarily rare biological resources are protected from fire through fuel management.	Goal 1
D4	<i>clearing of vegetation</i>	Areas that require vegetation clearing will be assessed annually during the early summer months. Vegetation will be cleared where needed annually	Goal 1
D5	<i>Post fire erosion control</i>	If a fire occurs, the Resource Manager will determine appropriate erosion control measures and implement such measures as needed	Goal 1
D6	<i>Post fire sedimentation removal</i>	If sedimentation has occurred due to erosion post fire, the Resource Manager will coordinate the removal of such sediment without disturbance to biological resources.	Goal 1

Task Number	Task	Description/frequency	Goal
D7	<i>Post fire replanting/reseeding</i>	If required, the Resource Manager will recommend appropriate seed or plant mixture to be implemented post fire and will coordinate this effort.	Goal 1

6.0 RESOURCE MANAGEMENT PLAN SUMMARY AND BUDGET

6.1 Operations and Budget Summary

In summary the management of the Campus Park open space will require tasks associated with the biological resources of the property. The primary operation will be maintaining the perimeter signs, trail head signs, removal of exotic plant and animal species, monitoring of sensitive species populations sizes and reporting.

6.2 Existing Staff and Additional Personnel Needs Summary

It is not anticipated by this RMP that full time staff will be needed to implement this plan. However, if DPR were to manage the land, DPR has anticipated 1.5 full time equivalent staff would be required.

7.0 REFERENCES

- AOU. 2000. American Ornithologists' Union. *42nd Supplement to the to the American Ornithologists' Union Check-list of North American Birds*, as published in The Auk 117: 847-858.
- Atwood, J.L. 1990. *Status Review of the California Gnatcatcher (Polioptila californica)*. Manomet Bird Observatory. December 1990.
- Barbour, M. G. and J. Major, ed. 1988. *Terrestrial Vegetation of California*. California Native Plant Society.
- Bowman, R. H. 1973. *Soil Survey, San Diego Area, California*. United States Department of Agriculture.
- CDFG. 2003. State and Federally Listed Endangered and Threatened Animals of California. California Natural Diversity Database, Wildlife and Habitat Data Analysis Brach: online publication, January 2003.
- CDFG. 2003. State and Federally Listed Endangered, Threatened and Rare Plants of California. California Natural Diversity Database, Wildlife and Habitat Data Analysis Brach: online publication, April 2003.
- CNDDDB. 2000. California Natural Diversity Data Base RareFind 2 searchable database, California Department of Fish and Game.
- County of San Diego. 1991. *Resource Protection Ordinance*. Board of Supervisors, County of San Diego.
- County of San Diego. 1997 *Multiple Species Conservation Program Sub-Area Plan*. Land Use and Planning Group, County of San Diego. October 1997.
- County of San Diego. 2000. *Biological Mitigation Ordinance*. Ordinance No 8845 and 9246. Revised August 9, 2000.
- CNPS. 2006. *Inventory of Rare and Endangered Plants of California* (seventh edition, electronic version). Rare Plant Scientific Advisory Committee, David P. Tibor, convening editor. Sacramento, CA.
- Holland, R. F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. Non-game Heritage Program, State of California Department of Fish and Game, Sacramento.
- Jameson, E.W. and H.J. Peeters. 2004. *California Mammals*. Revised Edition. University of California Press, Berkeley and Los Angeles.

- Jennings, M. R. 1983. An Annotated Checklist of the Amphibians and Reptiles of Southern California. California Department of Fish and Game 69(3):151-171.
- National Geographic. 2001. TOPO! (www.topo.com)
- North American Butterfly Association. 2001. Checklist of North American Butterflies Occuring North of Mexico: www.naba.org/pubs/checklst.html
- Oberbauer, T. 1996. *Terrestrial Communities in San Diego County Based on Holland's Descriptions*. San Diego Association of Governments, San Diego, CA.
- Powell, J.A. and C.L. Hogue. 1979. *California Insects*. University of California Press, Berkeley.
- Soule, M.E. et al. 1988. Reconstructed Dynamics of Rapid Extinctions of Chaparral- Requiring Birds in Urban Habitat Islands. *Conservation Biology* 2(1) pp 75-92.
- USFWS. 2006. Threatened and Endangered Species System Listings by State and Territory. U.S. Fish and Wildlife Service: online publication, October 2006.
- USFWS. 2006. Threatened and Endangered Species System Listings, Proposed and Candidate Species. U.S. Fish and Wildlife Service: online publication, October 2006.

CONCEPTUAL ENHANCEMENT PLAN

**CAMPUS PARK PROPERTY
TM 5338
ONSITE WETLAND ENHANCEMENT PLAN**

Prepared for:


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1.0 INTRODUCTION

The following report is intended to provide the conceptual framework for the completion of a Final Campus Park Wetland Enhancement Plan. The plan herein outlines the mitigation required, the requirements of the final plan, and guidance of how the plan is to be implemented. Wetland mitigation for Campus Park comprises two components. The first is the creation of wetland habitat offsite (report under separate cover) and the second is the enhancement of the wetland onsite. This report outlines the onsite enhancement of the wetland onsite.

1.1 DESCRIPTION OF THE IMPACT SITE

1.1.1 Responsible Parties

This Revegetation Report is prepared for the Campus Park Property (Tentative Map (TM) 5338). Current property owners are responsible for the implementation of this plan. The current responsible party, and property owner is Passerelle LLC.

1.1.2 Location of the Development Project

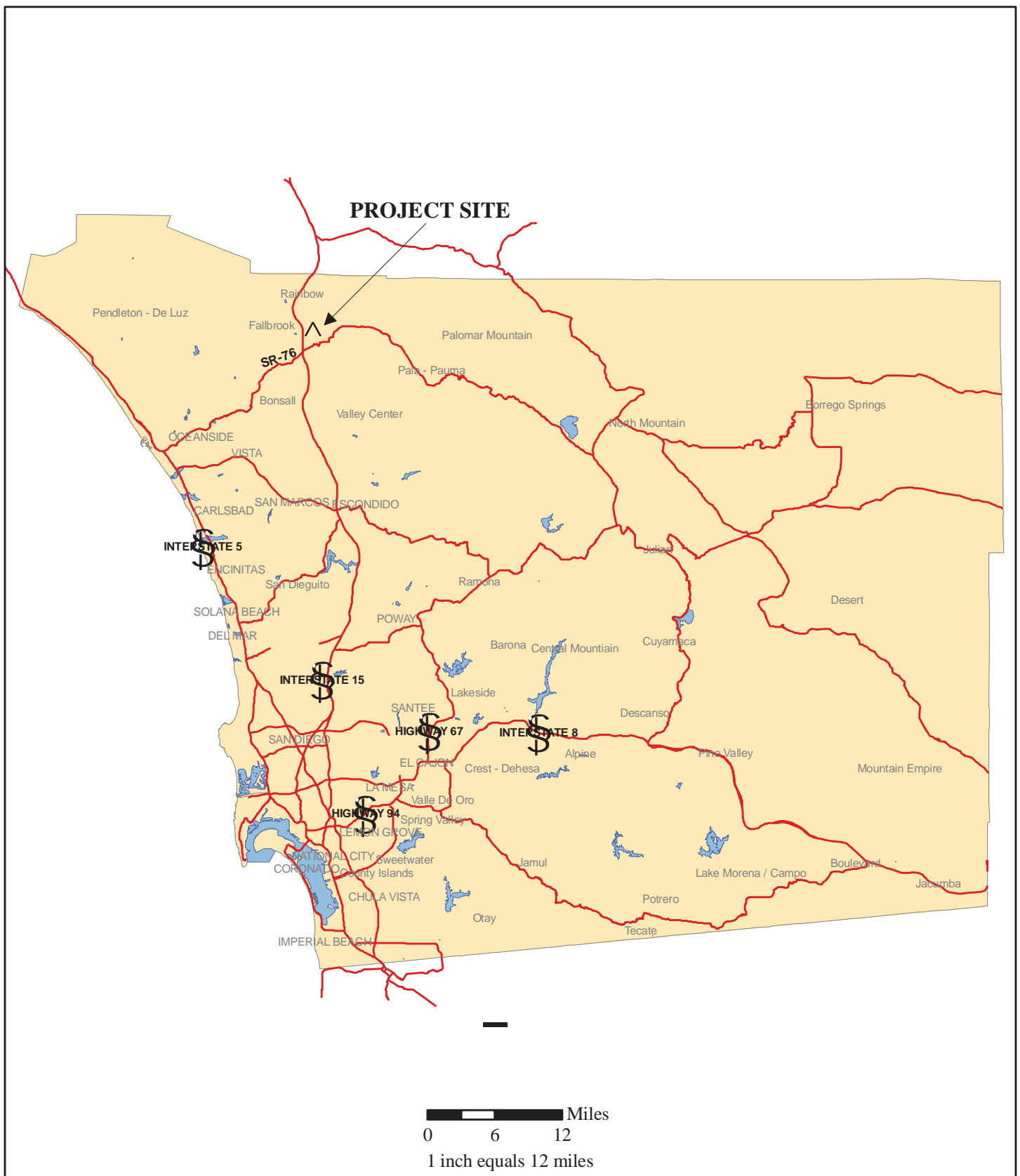
Figures 1 and 2 depict the regional and site vicinity locations, respectively, of the impact location. The specific wetland impact associated with TM 5338 is due to construction of a road that is required to construct multi-family residences. In addition to the road, impacts will occur along the fringe of the wetland habitat due to the proposed development. Figure 3 depicts the land use plan for the Campus Park project.

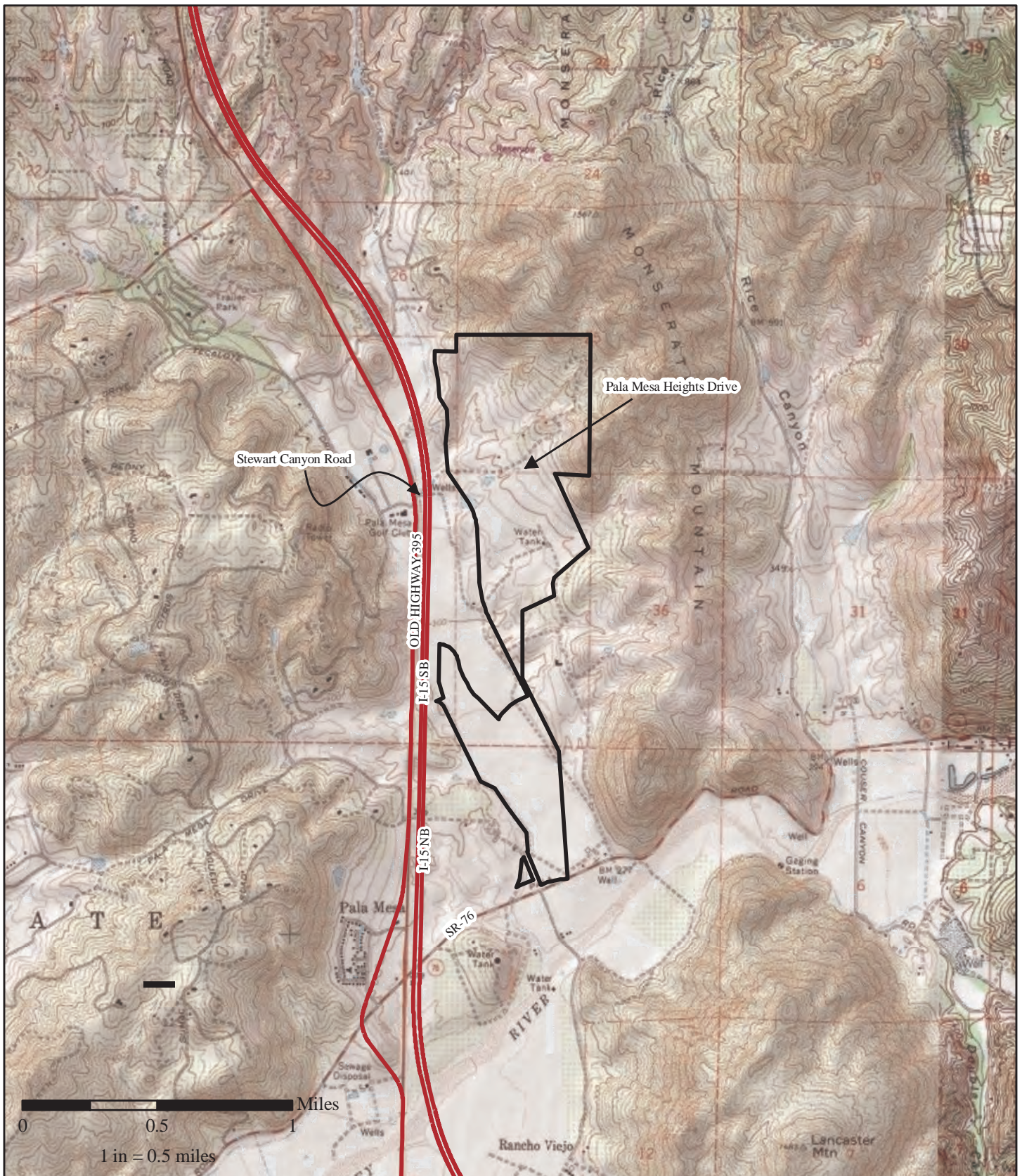
1.1.3 Summary of Overall Development Project and Proposed Mitigation

The proposed 416.1-acre Campus Park project (proposed project) is located in the unincorporated community of Fallbrook, near Pala in the County of San Diego. Historically, the majority of the site has been used, and is currently used, for cattle grazing. The project site is currently undeveloped except for evidence of an old ranch house foundations and an existing trailer in the northern part of the site.

The project includes the development of 243.7 acres of the overall 416.1 acres of the project site. The project proposes to improve offsite facilities including the improvements to intersections.

The project would develop a mixed-use community consisting of 1076 single family and multi-family homes, as well as an active sports complex, neighborhood parks, town center, office professional, homeowners association facility, trail staging area and dedicated biological open space preserves. The infrastructure necessary to support the development would include onsite and offsite roadways, sewer, water and storm drain facilities.



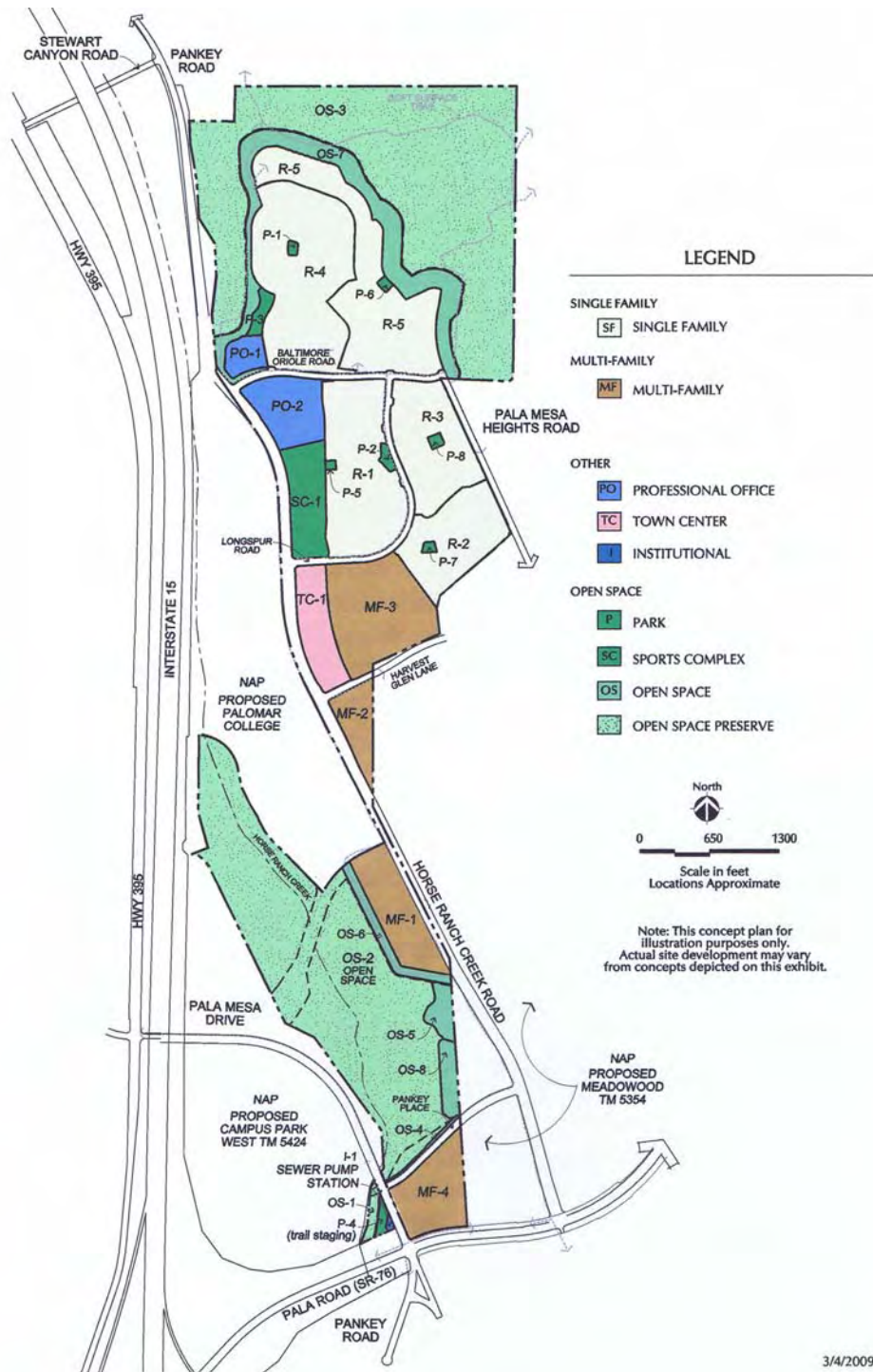


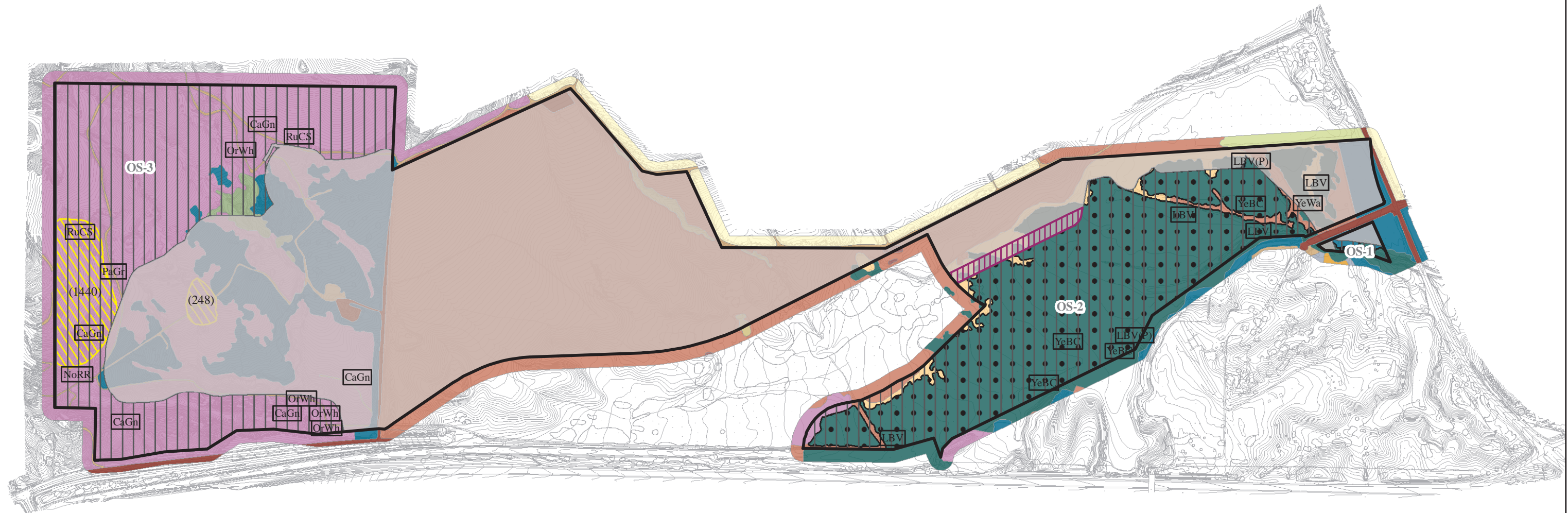
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Site Location Map Campus Park

Figure
2

May 2009





Legend

Sensitive Species

CaGn Coastal California Gnatcatcher (pair) (*Poliophtila californica californica*)
 LBV(P) Least Bell's Vireo (Juvenile) (*Vireo bellii pusillus*)
 LBV(J) Least Bell's Vireo (Pair) (*Vireo bellii pusillus*)
 LBV Least Bell's Vireo (*Vireo bellii pusillus*)
 NoRR Northern Red Diamond Rattlesnake (*Crotalus ruber ruber*)

Note: Raptors observed throughout site or overhead include Cooper's Hawk, Turkey Vulture, American Kestrel, White Tailed Kite, Red Shouldered Hawk, and Red Tailed Hawk.

OrWh Orange-throated Whiptail (*Aspidoscelis hyperythrus*)
 PaGr Palmer's Grappling-hook (*Harpagonella palmeri*)
 RuCS Southern California Rufous Crowned Sparrow (*Aimophila ruficeps canescens*)
 YeBC Yellow Breasted Chat (*Icteria virens*)
 YeWa Yellow Warbler (*Dendroica petechia*)
 Parry's Tetracoccus (*Tetracoccus dioicus*) (#)

Habitats

Coast Live Oak Woodland (71160)	Non-Native Grassland (42200)	Mulefat Scrub (63310)
Developed (12000)	Oak Woodland (71100)	Orchard (18100)
Diegan Coastal Sage Scrub (32500)	Non-native Vegetation (11000)	Tamarisk Scrub (63810)
Disturbed (11300)	Pasture (18310)	Other
Eucalyptus (11100)	Southern Riparian Forest (61300)	Proposed Impact Area
Freshwater Marsh (52400)	Southern Willow Scrub (63320)	Proposed Open Space
		Enhancement Area
		Buffer Planting

A total of 172.4 acres (approximately 41 percent of the project site) of biological open space would be provided by the project. Preserved open space would include wetlands in the southern portion of the project site north of proposed Pankey Place and coastal sage scrub and oak woodlands in the northern portion of the site.

The existing biological resources onsite include eleven habitat types: southern riparian forest, southern willow scrub, freshwater marsh, coast live oak woodland, Diegan coastal sage scrub, non-native grassland, non-native vegetation, pasture, disturbed, developed, and eucalyptus woodland. Approximately 85.6 acres of southern riparian forest, 1.6 acres of southern willow scrub, 10.3 acres of freshwater marsh, 2.8 acres of coast live oak woodland, 129.6 acres of Diegan coastal sage scrub, 44.1 acres of non-native grassland, 0.1 acre of non-native vegetation, 135.4 acres of pasture, 4.4 acres of disturbed, 2.1 acres of developed, and 0.1 acre of eucalyptus woodland currently exist onsite (prior to development) .

Two sensitive reptile species were observed onsite—including five orange-throated whiptails (*Cnemidophorus hyperythrus*) and one northern red diamond rattlesnake (*Crotalus ruber ruber*). In addition, more than six sensitive bird species were observed onsite: coastal California gnatcatchers (*Polioptila californica californica*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), least Bell's vireo (*Vireo bellii pusillus*), yellow warbler (*Dendroica petechia brewsteri*), yellow-breasted chat (*Icteria virens*) and various raptor species.

Sensitive habitats onsite include southern riparian forest, southern willow scrub, freshwater marsh, coast live oak woodland, Diegan coastal sage scrub, disturbed Diegan coastal sage scrub, pasture and non-native grassland.

Two sensitive plant species were observed onsite including Parry's tetracoccus (*Tetracoccus dioicus*) and Palmer's grappling-hook (*Harpagonella palmeri*).

Portions of the habitats onsite are under the jurisdiction of the Army Corp of Engineers (ACOE), U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), Regional Water Quality Control Board (RWQCB), and the County of San Diego.

The following table summarizes the impacts and mitigation measures for the proposed Campus Park project.

Table 1 Campus Park Habitat/Vegetation Communities, Impacts, Mitigation							
Habitat / Vegetation Community	Existing (Acres)	Impacts (Acres)	Offsite Impacts (Acres)	Mitigation Ratio	Mitigation required (Acres)	Preserved On-site (acres)	Off-site Mitigation (acres)
Southern Riparian Forest	85.6	9.5	1.0	3:1	31.5	76.1	10.5 acres creation
Southern Willow Scrub	1.6	1.6	0.06	3:1	4.98	0	1.6 acres creation
Freshwater Marsh	10.3	7.8	0.1	3:1	23.7	2.5	7.9
Coast Live Oak Woodland	2.8	1.3	0.01	2:1 3:1	2.93	1.5	1.4
Diegan Coastal Sage Scrub	129.6	42.3	4.1	2:1	92.8	87.3	5.5
Non-native Grassland	44.1	41.2	5.1	0.5:1	23.1	2.9	20.2
Non-native Vegetation	0.1	0.1	0.4	0:1	0	0	0
Pasture	135.4	133.8	7.9	0.5:1	70.8	1.6	65.3
Disturbed	4.4	3.9	13.7	0:1	0	0.5	0
Developed	2.1	2.1	2.0	0:1	0	0	0
Eucalyptus Woodland	0.1	0.1	1.7	0:1	0	0	0
Orchard	0	0	11.9	0:1	0	0	0
Total	416.1	243.7	47.97		249.8	172.4	112.4

Table 2 Summary of Habitat Impacts and Mitigation Required for this Plan						
Habitats impacted	On-site Impacts	Off-site Impacts	Total Impacted Acreage	Habitat Creation Ratio and Acreage	Habitat Enhancement Ratio and Acreage	Total Mitigation Ratio and Acreage (detailed under separate cover)
Southern Riparian Forest	9.5	1.0	10.5	1:1 (10.5 acres)	2:1 (21.0 acres)	3:1 (31.5 acres)
Southern Willow Scrub	1.6	0.06	1.6	1:1 (1.66 acres)	2:1 (3.32 acres)	3:1 (4.98 acres)
Freshwater Marsh	10.3	0.1	7.9	1:1 (7.9 acre)	2:1 (15.8 acres)	3:1 (23.7 acres)
TOTAL	21.4	1.16	20	20.06	40.12	60.18

An important element to the project is the revegetation of a manufactured slope to serve as a revegetated wetland buffer between development and the adjacent southern riparian forest (OS-2 and MF-1). The slopes that will be created between the MF-1 and OS-2 are proposed to be the Fuel Modification Zone, the Limited Building Zone, as well as a revegetated wetland buffer for riparian wildlife. This revegetated wetland buffer area will be planted with native low fuel plants, including hydrophytic plants such as mulefat, coyote brush, and sandbar willow near the bottom of the slope and coast live oaks, and coast live oak woodland understory as the slope ascends. This enhanced buffer is not considered a habitat mitigation measure but will be important in providing additional buffering between the riparian habitat and the proposed development. The Final Enhancement Plan will detail the plants to be planted within this buffer. Since this buffer is in the LBZ and the Fuel Management Zone it is not considered mitigation and therefore is not required to be monitored or have success criteria associated with it.

2.0 GOALS OF THE ENHANCEMENT PLAN

2.1 Responsibilities

2.1.1 Responsibility of the Project Owner

The owner of the site, Passerelle LLC, will be responsible for the success of this enhancement plan. The owner's responsibilities include contracting a Project Biologist, a California registered Landscape Architect, an Installation Contractor, a Maintenance contractor, and providing the finances to carry out the enhancement plan. Should this property be transferred in ownership, implementation responsibilities will be with the new property owner.

2.1.2 Responsibility of the County of San Diego

The County of San Diego is responsible for ensuring that the final Revegetation Plan is implemented per plan, that the annual maintenance, monitoring and reporting occur, and that the final success criteria are achieved. The County of San Diego has the ability to determine if success thresholds have been met and that the habitat created or restored are functioning in the manner that is the goal of the project.

2.1.3 Responsibility and Qualifications of the Mitigation Project Designer

The Mitigation Project Designer is responsible for taking this conceptual plan and preparing a final revegetation plan including landscape drawings in accordance with the County of San Diego's Report Format and Content Requirements for Revegetation Plans (dated July 30, 2007). The plan and the drawings shall be in enough detail to be implemented by a contractor. The designer should have knowledge of the vegetation associations proposed for the mitigation site, at least two years of study or practical experience in native habitat design and function, and at least two years of field experience in identifying and sampling native vegetation of the San Diego region.

2.1.4 Responsibility and Qualification of Installation Contractor

Should plant material be required to be planted, the following qualifications shall be implemented. The installation contractor will have the responsibility of implementing the landscape drawings contained within the final revegetation plan, and will be responsible for the maintenance of the mitigation area until final notification is received from the Revegetation Monitor certifying proper completion of all required installation contract maintenance tasks, including but not limited to dead plant removal, erosion control, retrofitting plants with browse barriers (if needed), weeding, irrigation regime (if needed) and irrigation system maintenance as needed.

The Installation contractor shall be responsible for the replacement of all plant materials, considered dead or diseased by the Revegetation Monitor, by the specific replacement dates defined in the Final Revegetation Plan.

2.1.5 Responsibility and Qualification of Revegetation Monitor/Project Biologist

A Revegetation Monitor shall direct the project's horticultural monitoring program. The Revegetation Monitor should have training and/or local experience in growing native plant species used in this project, minimum of two years of practical horticultural experience with native plant communities and at least two years of local experience in identifying and sampling native vegetation. The Revegetation Monitor will be responsible for monitoring the installation of the revegetation site in accordance with the specifications. The Revegetation Monitor will be responsible for ensuring that the plans are implemented correctly, that the contractor maintains the site to the standards of the final revegetation plan, conduct the specified number of horticultural monitoring visits, collect data annually to determine success standards and provide communication between the contractor, the property owner and the County of San Diego.

2.1.6 Responsibility and Qualification of Maintenance Contractor

After the installation is deemed complete, the Applicant shall hire a Maintenance Contractor for the 5-year monitoring period. The Maintenance Contractor will be hired on an annual basis with renewal based on the recommendations of the project biologist and the applicant. The maintenance contractor may change on a yearly basis, at the discretion of the applicant and project biologist, if proper maintenance is not performed. The Maintenance Contractor will be responsible for the maintenance program requirements once the installation Contractor's work has been certified as complete. Upon termination of each maintenance contract, the maintenance Contractor will be responsible for completion of all requests for work specified by the project biologist before receiving final payment.

2.2 Types of Habitats to be Established, Enhanced, and Preserved

The proposed wetland mitigation will be the enhancement of southern riparian forest, southern willow scrub, and freshwater marsh to the parameters generally accepted to

support the least Bell's vireo. These habitats, once established will meet or exceed the functions of the areas impacted.

The project requires as mitigation the enhancement of 21.0 acres of southern riparian forest, 3.32 acres of southern willow scrub and 15.8 acres of freshwater marsh. The creation acreage will be required to be implemented at an offsite location since there is no suitable location onsite. The enhancement can be conducted onsite within the southern riparian forest habitat. This habitat is proposed to be placed in an open space conservation easement and managed in perpetuity under a Resource Management Plan. Enhancement potential exist in this habitat due to the decades of cattle impacts, the creation of man-made berms for agricultural purposes and the invasion of pampas grass.

2.3 Functions and Values

The focus of this enhancement plan is to construct a successful native wetland area within a protected open space area that will thrive on its own and provide suitable foraging and breeding habitat for local wildlife after the five-year monitoring period and have the structure to potentially support the least Bell's vireo, yellow breasted chat and yellow warbler. In addition 40.5 acres of the existing riparian 78.6 acres of habitat will be enhanced onsite. This enhancement effort would be completed onsite to improve the function of the habitat for the least Bell's vireo and other sensitive riparian species in the area. Enhancement is feasible in the onsite open space since various impacts have occurred due to the long term grazing onsite. The goal is to add to the general diversity of habitat and to provide foraging, nesting, and roosting opportunities for wildlife.

To enhance least Bell's vireo/yellow breasted chat/yellow warbler quality habitat, a dense multi structure riparian forest with a canopy of willows and dense underbrush will be enhanced. Least Bell's vireo nest predominantly in the shrub under layer of willows (USFWS 1989). In addition, the least Bell's vireo will also forage in the mid range shrub under layer. The willow canopy is important in establishing territories and attracting mates. Currently the understory and shrub layer of the riparian habitat are heavily impacted by cattle due to grazing and trampling. Therefore the enhancement plan herein provides for the improvement to the multi-layer structure required by the least Bell's vireo.

2.4 Time Lapse

It is anticipated that the onsite enhancement mitigation for the impacts to southern riparian forest, southern willow scrub, and freshwater marsh habitat will be installed concurrently with the habitat impact. If the mitigation site is not installed concurrently with the habitat impact, then it must be installed within one year of the impact occurring.

2.5 Cost

The total cost for implementation of this mitigation plan will be determined as part of the Final Plan. The cost must include the following:

- 1) Include all compensatory mitigation site preparation, planting, maintenance, and monitoring and,
- 2) Provide a complete itemized cost estimate for each installation, each maintenance year, and each monitoring year for the mitigation project. Include a 3% (compounding) annual inflation factor per year for the compensatory mitigation costs to be applied to the total project cost.

3.0 DESCRIPTION OF THE PROPOSED COMPENSATORY MITIGATION SITE

3.1 Site Selection

The onsite enhancement area consists of 40.5 acres of wetland habitat onsite. This includes the riparian habitats associated with Horse Ranch Creek (Figure 3). This site was chosen due to the amount of disturbance to this habitat from cattle grazing and trampling, construction of agricultural berms and non-native plant invasion.

3.2 Location and Size of Compensatory Mitigation Site

Enhancement is proposed to occur within the existing riparian forest onsite. The goal is to achieve a minimum of 40.5 acres of enhanced wetland. After construction of the proposed project, there is anticipated to be 78.6 acres of southern riparian forest that will be placed in an open space conservation easement. This habitat is part of Horse Ranch Creek and support several sensitive species. The habitat has been impacted due to cattle grazing, installation of berms, and invasion of non-native plants.

3.3 Functions and Values

In addition the enhancement of the habitat onsite will increase the value of the riparian habitat for endangered species and provide a better quality habitat for the species listed above.

3.4 Jurisdictional Delineation

The habitats onsite have undergone a detailed jurisdictional delineation as part of the CEQA planning process for the Campus Park project. It was determined that the majority of the riparian habitats onsite are Army Corps of Engineers and California Department of Fish and Game Jurisdiction

3.5 Present and Proposed Uses

The enhancement area is proposed to be a part of a larger Biological Open Space Easement that will be managed in perpetuity and in conformance with the Campus Park Property Resource Management Plan.

3.6 Reference Site

The reference site will be selected within the existing southern riparian forest that is not part of the enhancement project, has minimal historic disturbance and supports a high quality habitat with an intact tree canopy, shrub layer and understory. The final reference site will be selected and identified in the Final Enhancement Plan.

4.0 IMPLEMENTATION PLAN FOR THE COMPENSATORY MITIGATION SITE

4.1 Rationale for Expecting Implementation Success at the offsite Creation and Onsite Enhancement Areas

Success for the enhancement area onsite is expected due to the abundance of seed source in the area, the hydrology of the creek, the accessibility of the site, the site's long term management as part of the RMP, and the presence of sensitive species already utilizing the area.

4.2 Financial Assurances

Implementation of the enhancement plan described herein will be the financial responsibility of Passerelle LLC, and/or the current property owner or the entity which is responsible for the enhancement of the wetland impacts. An enhancement agreement shall be signed and notarized by the property owner following approval of the final revegetation plan and accompanied by the required security as agreed upon by the County of San Diego.

4.3 Schedule

A final schedule will be developed as part of the Final Enhancement Plan. This plan should include a schedule for plant procurement (if required), grading (if necessary), plant installation, guarantee period, and five-year monitoring period.

4.4 Site Preparation

4.4.1 Equipment Required

The Final Enhancement Plan will describe the equipment that will be required to implement the final plan. This will be based on site location and need for grading.

4.4.2 Site Access

Access to the enhancement project will be via the proposed adjacent development. There will be several access points during and after construction of the site. The Final Enhancement Plan will detail the access locations. If necessary, the access route will be flagged by the Biologist prior to construction, to avoid any surrounding sensitive habitats.

4.4.3 Site Protection

The limits of grading, if necessary, of the enhancement site will be flagged in the field and checked by the Project Biologist prior to grading. In addition, the limits will be identified to the equipment operators.

4.4.4 Fencing

If temporary fencing is required this will be detailed in the Final Enhancement Plan. Fencing is proposed between the backyard of the residences and the open space and between the public roads and open space.

4.4.5 Schedule

Enhancement of the riparian forest onsite will be conducted outside the bird breeding season (March 15th to September 15th) to avoid inadvertent impacts to nesting birds.

4.4.6 Container Plant Material

If it is determined that planting is required to achieve the goals of the enhancement plan for the onsite riparian forest then the plant palette described herein should be utilized. The plant palette will include the following plants:

Freshwater marsh:

California Cattail	<i>Typha latifolia</i>	seed
California bulrush	<i>Scirpus californicus</i>	seed
Olney's bulrush	<i>Scirpus olneyi</i>	seed

Southern Willow Scrub:

Mulefat	<i>Baccharis salicifolia</i>	poles/container
Arrow weed	<i>Pluchea sericea</i>	poles/container
Sandbar willow	<i>Salix hindsiana</i>	poles/container
Western Ragweed	<i>Ambrosia psilostachya</i>	seed
Douglas Mugwort	<i>Artemisia douglasiana</i>	seed
San Diego Sagewort	<i>Artemisia palmeri</i>	seed

Southern Riparian Forest:

Western sycamore	<i>Platanus racemosa</i>	container
Cottonwood	<i>Populus fremontii</i>	container
Arroyo Willow	<i>Salix lasiolepis</i>	poles/container
Black Willow	<i>Salix goodingii</i>	poles/container
Sandbar Willow	<i>Salix hindsiana</i>	poles/container
Mulefat	<i>Baccharis salicifolia</i>	poles/container
Arrow Weed	<i>Pluchea sericea</i>	poles/container
California rose	<i>Rosa californica</i>	container

Mexican elderberry	<i>Sambucus mexicana</i>	container
Desert Grape	<i>Vitis girdiana</i>	container
Western Ragweed	<i>Ambrosia psilostachya</i>	seed
Douglas mugwort	<i>Artemisia douglasiana</i>	seed
San Diego Sagewort	<i>Aremisia palmeri</i>	seed

4.4.7 Seed material

Seed composition will be detailed in the Final Enhancement Plan if it is required. Seed material and mixture should be based on location to water source. For example, an area adjacent to the drainage or in the floodplain may be a drier mix than that which is in the creek bed. Seed material can include the seed of any of the container plants listed above.

4.4.8 Plant and Seed Source

All container plant and seed material will be from established reputable nurseries that utilize locally grown plant stock.

4.5 Planting Plan

It is not anticipated that this enhancement plan will require a revegetation component. However, if planting is required the following guidelines will be incorporated.

A detailed planting plan will be prepared by a California registered Landscape Architect, and will be required to be included with the final Revegetation plan.

Minor grading may be necessary to create wetland topographic features such as a bed and bank to mimic a natural riparian system. Minor grading shall ensue before the planting plan is implemented. The installation contractor or grading contractor will be responsible for implementing the grading activities.

Plants would be installed in holes that are slightly larger than the root ball. Holes would be soaked and allowed to drain prior to planting. No soil amendments would be used. The installation contractor will be responsible for the planting activities. A detail of the plant installation will be included on the landscape drawings that will be attached to the final Revegetation Plan.

4.6 Irrigation Plan

No irrigation is recommended since the onsite wetland will remain in perpetuity with the current water source and since the onsite hydrology is sufficient to support the wetland habitats.

5.0 MAINTENANCE DURING MONITORING FOR THE ENHANCEMENT SITES

5.1 Maintenance Activities

5.1.1. Irrigation Maintenance

No irrigation is proposed within the onsite habitat therefore irrigation maintenance is not required.

5.1.2. Weed Abatement Schedule

The purpose of the enhancement plan is to enhance the existing riparian forest by removing noxious weeds, as well as debris from the riparian habitat. Implementation of the RMP will provide for the long-term viability of this habitat once these plants have been removed. Plant species that are to be controlled within the existing riparian forest include but may not be limited to the following:

- | | |
|---|-----------------------|
| • <i>Apium graveolens</i> | common celery |
| • <i>Arundo donax</i> | giant reed |
| • <i>Avena</i> sp. | wild oats |
| • <i>Bromus diandrus</i> | ripgut grass |
| • <i>Carduus pycnocephalus</i> | Italian thistle |
| • <i>Chrysanthemum coronarium</i> | garland daisy |
| • <i>Cirsium vulgare</i> | bull thistle |
| • <i>Conium maculatum</i> | common poison hemlock |
| • <i>Cortaderia</i> sp. | Pampas grass |
| • <i>Euphorbia peplus</i> | petty spurge |
| • <i>Ficus carica</i> | edible fig |
| • <i>Galium aparine</i> | common bedstraw |
| • <i>Hemerocallis</i> sp. | day lily |
| • <i>Lactuca serriola</i> | prickly lettuce |
| • <i>Lantana</i> sp. | lantana |
| • <i>Melilotus</i> sp. | sweetclover |
| • <i>Mentha spicata</i> var. <i>spicata</i> | spearmint |
| • <i>Nicotiana glauca</i> | tree tobacco |
| • <i>Pichris echiodes</i> | bristly ox-tongue |
| • <i>Plantago major</i> | common plantain |
| • <i>Polypogon monspeliensis</i> | annual beard grass |
| • <i>Raphanus sativus</i> | wild radish |
| • <i>Senecio mikanioides</i> | German ivy |
| • <i>Tamarix</i> sp. | Tamarisk |
| • <i>Vinca major</i> | greater periwinkle |
| • <i>Washingtonia robusta</i> | Mexican fan palm |
| • <i>Zantedeschia aethiopica</i> | calla lily |

It is not anticipated that some of these species will have 100% eradication. The populations of the most invasive species will be removed while much of the remainder plant species will be controlled. The initial task of the Final Enhancement Plan will be to map large stands of onsite highly invasive plant populations. Eradication technique will depend on access, the size of the stand and the threat of the exotic population to the native habitat. The mapping of the stands, and eradication method will be included within the Final Enhancement Plan.

5.1.3 Pruning

No pruning will occur to native trees in the enhancement area unless diseased that would threaten the native riparian habitat onsite. This will be determined by the monitoring biologist

5.1.4 Trash Removal

The Maintenance Contractor will remove all trash and illegally dumped debris at least once every six months throughout the five-year maintenance period. Care will be taken that these trash removal activities minimize or avoid damage to the native riparian habitat. All dead limbs and tree fall will be left in the enhancement area. Weed debris will be removed from, and disposed of outside of the enhancement area. The Applicant shall comply with all litter and pollution laws. All contractors, subcontractors and employees also shall obey these laws and it shall be the responsibility of the Applicant to ensure compliance.

5.1.5 Pest Control

The Project Biologist shall monitor insects, nuisance animals and diseases. Whenever possible, biological controls such as erecting fences will be used in the place of chemical controls. Plants that are severely diseased will be removed and replaced, to prevent the spread of disease and insects. Pesticides will be avoided unless recommended for special problems by the Project Biologist. Rodent control will be restricted to trapping or anti-coagulants with no secondary poisoning effects. Should cowbird trapping be required, the parameters of such an effort will be detailed in the Final Enhancement Plan.

5.2 Schedule

5.2.1 Maintenance Schedule

The maintenance period will extend five years, commencing when the Project Biologist and the County of San Diego certifies that the mitigation has been initiated.

5.2.2. Irrigation Schedule

No irrigation should be required for the onsite enhancement project unless it is deemed necessary by the monitoring biologist.

6.0 MONITORING PLAN FOR THE ONSITE ENHANCEMENT SITE

6.1 Success Criteria

Success criteria for enhancement plans are often difficult to measure since enhancements to habitats are not always quantifiable. However some determination must be made in the field as to whether or not the non-native plants have been successfully eradicated or not. Therefore for this plan, success criteria will be that the stand of riparian forest will not support more than 10% non-native plants in each of the eradication areas or overall within the riparian forest.

Final success criteria are proposed which will be used to determine the completion and ultimate success of the wetland enhancement mitigation. Fulfillment of these criteria will indicate that the mitigation area has accomplished the long-term goals of this mitigation plan, i.e., the enhancement of the onsite riparian habitats has improved the functions and values for wildlife.

6.2 Adaptive Management and Remedial Measures

The list of plant species to be removed from the riparian forest onsite is based on the site surveys conducted as part of the Biological Technical Report. This list may change given change in onsite conditions. For example if it is determined that a different invasive non-native plant becomes predominant it should be added to the list for removal. In addition, if research reveals new eradication techniques the project may implement those new methods. Any changes to the plan will be summarized in the annual report.

6.3 Target Functions and Value

The target function and value of the riparian forest habitat onsite is expected to include providing a more valuable habitat for the onsite sensitive wildlife species. This will be achieved through slowing or eradicating the invasive non-native plant species that tend to, over time, take over a waterway.

6.4 Target Hydrological Regime

Because the enhancement area is within an existing riparian forest habitat that supports several sensitive animal species it is important that the enhancement tasks do not change the current hydrological condition of the site.

6.5 Target Acreages

A minimum of 21.4 acres of southern riparian forest, 3.3 acres of southern willow scrub, and 15.8 acres of freshwater marsh habitat will be enhanced onsite.

6.6 Monitoring Methods

Since it is difficult to determine a quantitative technique for the success of an “enhancement” project, a percent cover based on visual assessment will be achieved. If the eradication site is large enough, a line transect or quadrat methodology may be implemented to quantify percent cover of non-native species. This will include visiting the weed eradication site once per year, photo-documenting each site and estimate the percent cover of the non-native plant versus there-colonization of native species. The results including the photographs will be included in the annual report.

6.7 Monitoring Schedule

Monitoring of the weed eradication site will be conducted once per year for a five year period.

6.8 Monitoring Reports

The results of the annual monitoring of the enhancement site will be included in the Campus Park Onsite Enhancement Annual report to the County of San Diego or other approving agency.

7.0 COMPLETION OF COMPENSATORY MITIGATION

When the monitoring period is complete, and the final success criteria have been met, the applicant shall notify the County of San Diego when the annual report documenting this completion is submitted.

Following receipt of this report, the County of San Diego will require a site visit to confirm the completion of the mitigation effort and any jurisdictional delineation of the onsite enhancement of the wetlands.

8.0 CONTINGENCY MEASURES

8.1 Initiating Contingency Procedures

If an annual performance criterion is not met for any portion of the mitigation project in any year, or if the final success criteria are not met, the Project Biologist will prepare an analysis of the cause(s) of failure, and, if determined necessary by the County of San Diego, propose remedial action for approval. If the mitigation site has not met the performance criteria, the responsible party’s maintenance and monitoring obligations shall continue until the County of San Diego gives final project confirmation.

8.2 Alternative Locations for Contingency Compensatory Mitigation

If, for any reason, the onsite enhancement project cannot be achieved a suitable location within the San Luis Rey River watershed (or other location as approved by the Director of Planning and Land Use) will be utilized. An area of sufficient size and need for enhancement will be selected. The County and other approving agencies must approve a new location for this mitigation measure.

8.3 Funding

Funding and bond determinations, will be finalized as part of the Final Enhancement Plan.

CONCEPTUAL REVEGETATION PLAN

**CAMPUS PARK PROPERTY
TM 5338
OFFSITE WETLAND REVEGETATION PLAN**

Prepared for:

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Prepared by:



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Elysa K. Robertson, Principal

May 2009

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1.0 INTRODUCTION

The following report is intended to provide the conceptual framework for the completion of a Final Campus Park Wetland Mitigation Plan. The plan herein outlines the mitigation required, the requirements of the final plan, and guidance of how the plan is to be implemented. Wetland mitigation for Campus Park comprises two components. The first is the creation of wetland habitat offsite and the second is the enhancement of the wetland onsite (under separate cover). The offsite wetland creation location has not yet been determined, however specific parameters are provided herein for the selection of a suitable site.

1.1 DESCRIPTION OF THE IMPACT SITE

1.1.1 Responsible Parties

This Revegetation Report is prepared for the Campus Park Property (Vested Tentative Map (VTM) 5338). Current property owners are responsible for the implementation of this plan. The current responsible party, and property owner is Passerelle LLC.

1.1.2 Location of the Development Project

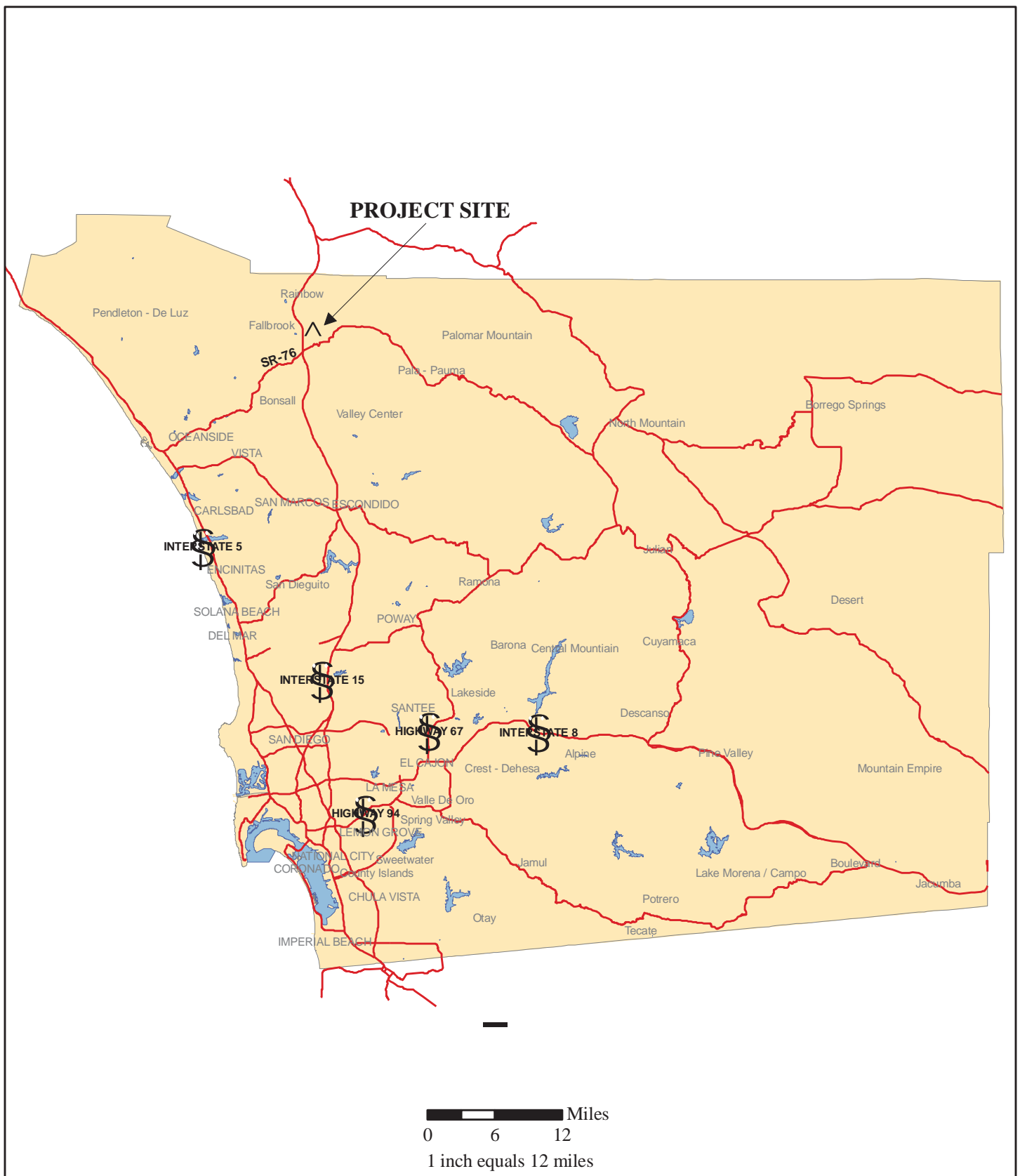
Figures 1 and 2 depict the regional and site vicinity locations, respectively, of the impact location. The specific wetland impact associated with TM 5338 is due to construction of a road that is required to construct multi-family residences. In addition to the road, impacts will occur along the fringe of the wetland habitat due to the proposed development. Figure 3 depicts the land use plan for the Campus Park project.

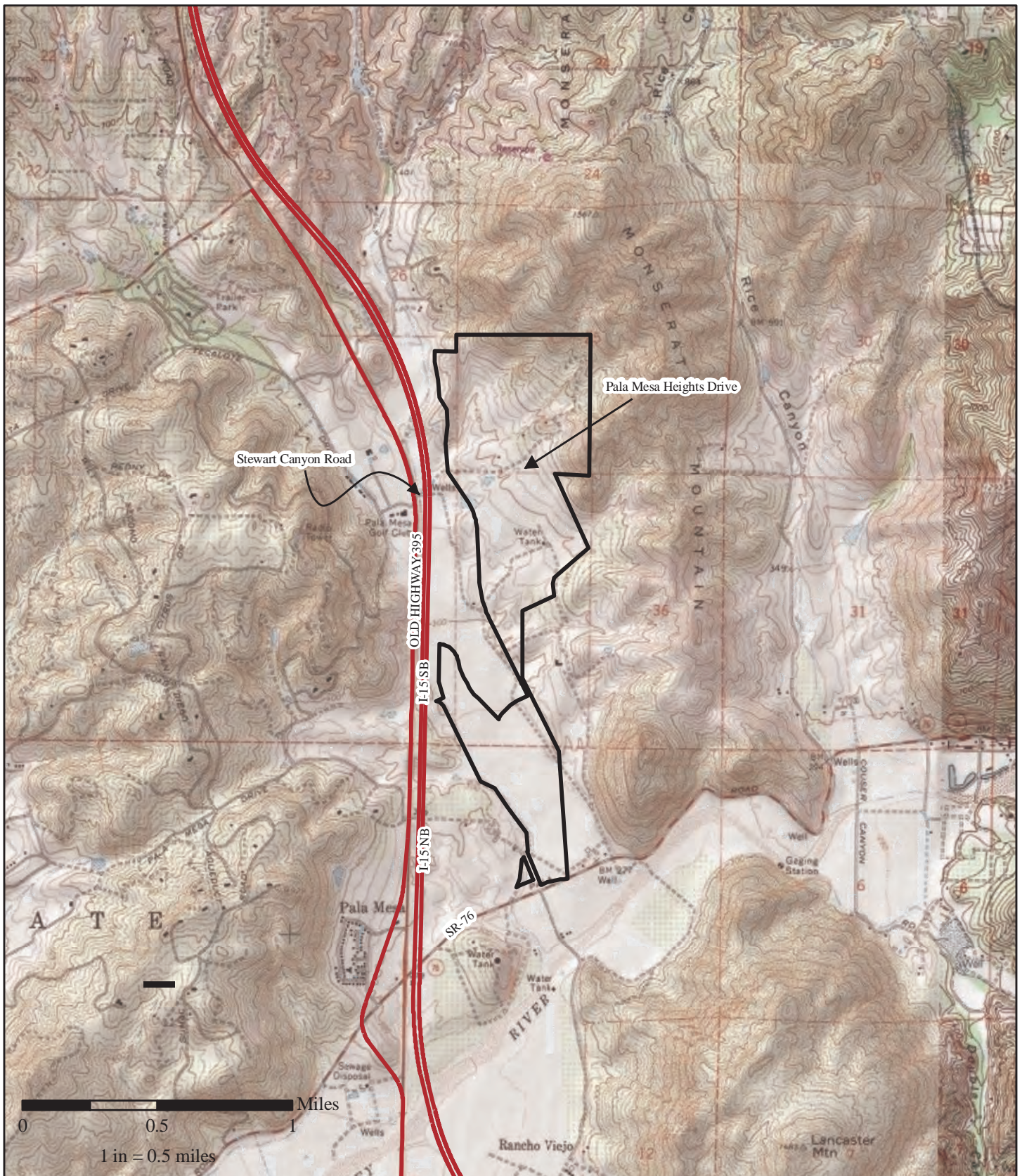
1.1.3 Summary of Overall Development Project and Proposed Mitigation

The proposed 416.1-acre Campus Park project (proposed project) is located in the unincorporated community of Fallbrook, near Pala in the County of San Diego. Historically, the majority of the site has been used, and is currently used, for cattle grazing. The project site is currently undeveloped except for evidence of an old ranch house foundations and an existing trailer in the northern part of the site.

The project includes the development onsite of 243.7 acres of the overall 416.1 acres of the project site. The project proposes to improve 47.9 acres offsite facilities including the improvements to intersections.

The project would develop a mixed-use community consisting of 1076 single family and multi-family homes, as well as an active sports complex, neighborhood parks, town center, office professional, homeowners association facility, trail staging area and dedicated biological open space preserves. The infrastructure necessary to support the



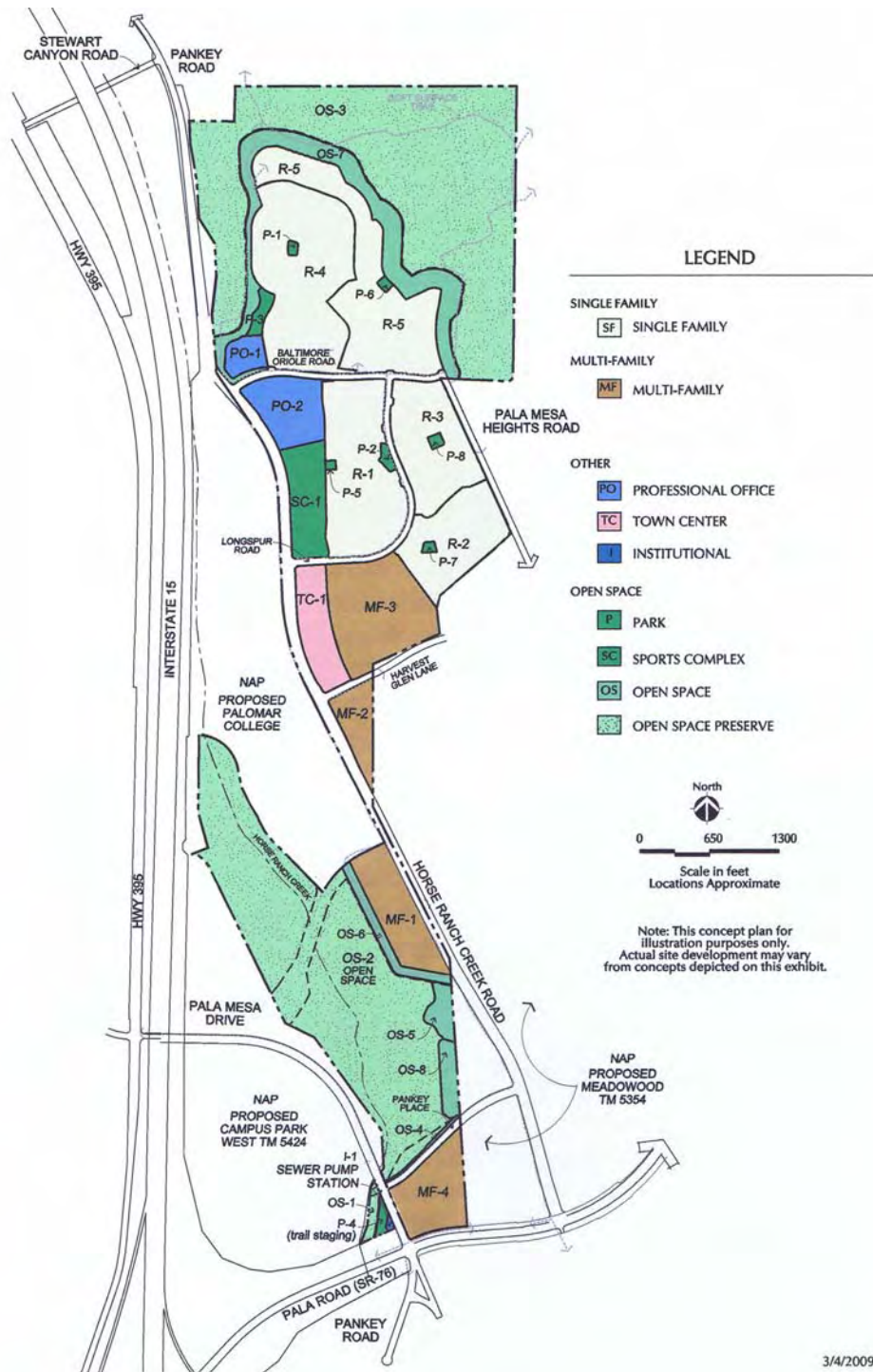


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Site Location Map Campus Park

Figure
2

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development would include onsite and offsite roadways, sewer, water and storm drain facilities.

A total of 172.4 gross acres (approximately 41 percent of the project site) of biological open space would be provided by the project. Preserved open space would include wetlands in the southern portion of the project site north of proposed Pankey Place and coastal sage scrub and oak woodlands in the northern portion of the site.

The existing biological resources onsite include eleven habitat types: southern riparian forest, southern willow scrub, freshwater marsh, coast live oak woodland, Diegan coastal sage scrub, non-native grassland, non-native vegetation, pasture, disturbed, developed, and eucalyptus woodland. Approximately 85.6 acres of southern riparian forest, 1.6 acres of southern willow scrub, 0.9 acre of freshwater marsh, 2.8 acres of coast live oak woodland, 129.6 acres of Diegan coastal sage scrub, 44.1 acres of non-native grassland, 0.1 acre of non-native vegetation, 144.8 acres of pasture, 4.4 acres of disturbed, 2.1 acres of developed, and 0.1 acre of eucalyptus woodland currently exist onsite (prior to development) .

Two sensitive reptile species were observed onsite—including five orange-throated whiptails (*Cnemidophorus hyperythrus*) and one northern red diamond rattlesnake (*Crotalus ruber ruber*). In addition, more than six sensitive bird species were observed onsite: coastal California gnatcatchers (*Polioptila californica californica*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), least Bell's vireo (*Vireo bellii pusillus*), yellow warbler (*Dendroica petechia brewsteri*), yellow-breasted chat (*Icteria virens*) and various raptor species.

Sensitive habitats onsite include southern riparian forest, southern willow scrub, freshwater marsh, coast live oak woodland, Diegan coastal sage scrub, disturbed Diegan coastal sage scrub, pasture and non-native grassland.

Two sensitive plant species were observed onsite including Parry's tetracoccus (*Tetracoccus dioicus*) and Palmer's grappling-hook (*Harpagonella palmeri*).

Portions of the habitats onsite are under the jurisdiction of the Army Corp of Engineers (ACOE), U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), Regional Water Quality Control Board (RWQCB), and the County of San Diego.

The following table summarizes the impacts and mitigation measures for the proposed Campus Park project.

<p align="center">Table 1 Campus Park Habitat/Vegetation Communities, Impacts, Mitigation</p>							
Habitat / Vegetation Community	Existing (Acres)	Impacts (Acres)	Offsite Impacts (Acres)	Mitigation Ratio	Mitigation required (Acres)	Preserved On-site (acres)	Off-site Mitigation (acres)
Southern Riparian Forest	85.6	9.5	1.0	3:1	32.1	76.1	With at least 10.5 acres creation offsite
Southern Willow Scrub	1.6	1.6	0.06	3:1	4.98	0	With at least 1.6 acres creation offsite
Freshwater Marsh	10.3	7.8	0.1	3:1	23.7	2.5	7.9
Coast Live Oak Woodland	2.8	1.3 (1.0 FMZ) (0.3 grading)	0.01	2:1 3:1	2.93	1.5	1.4
Diegan Coastal Sage Scrub	129.6	42.3	4.1	2:1	92.8	87.3	5.5
Non-native Grassland	44.1	41.2	5.1	0.5:1	23.1	2.9	20.2
Non-native Vegetation	0.1	0.1	0.4	0:1	0	0	0
Pasture	135.4	133.8	7.9	0.5:1	70.8	1.6	65.3
Disturbed	4.4	3.9	13.7	0:1	0	0.5	0
Developed	2.1	2.1	2.0	0:1	0	0	0
Eucalyptus Woodland	0.1	0.1	1.7	0:1	0	0	0
Orchard	0	0	11.9	0:1	0	0	0
Total	416.1	243.7	47.97		249.8	172.4	112.4

This mitigation plan is prepared to conceptually outline the requirements for the final Revegetation Plan as they relate to wetland impacts. A final mitigation plan will be required to provide the sufficient data of mitigation implementation once the offsite mitigation site is known. This plan herein provides the framework for which the final plan is to be developed.

Table 3
Summary of Habitat Impacts and Mitigation Required for this Plan

Habitats impacted	On-site Impacts	Off-site Impacts	Total Impacted Acreage	Habitat Creation Ratio and Acreage	Habitat Enhancement Ratio and Acreage (detailed under separate cover)	Total Mitigation Ratio and Acreage
Southern Riparian Forest	9.5	1.0	10.5	1:1 (10.5 acres)	2:1 (21.0 acres)	3:1 (31.5 acres)
Southern Willow Scrub	1.6	0.06	1.66	1:1 (1.66 acres)	2:1 (3.32 acres)	3:1 (4.98 acres)
Freshwater Marsh	7.8	0.1	7.9	1:1 (7.9 acre)	2:1 (15.8 acres)	3:1 (23.7 acres)
TOTAL	18.9	1.16	20.06	20.06	40.12	60.18

2.0 GOALS OF THE REVEGETATION PLAN

2.1 Responsibilities

2.1.1 Responsibility of the Project Owner

The owner of the site, Passerelle LLC, will be responsible for the success of this revegetation/enhancement plan. The owner's responsibilities include contracting a Project Biologist, a California registered Landscape Architect, an Installation Contractor, a Maintenance contractor, and providing the finances to carry out the revegetation/enhancement plan. Should this property be transferred in ownership, implementation responsibilities will be with the new property owner.

2.1.2 Responsibility of the County of San Diego

The County of San Diego is responsible for ensuring that the final Revegetation Plan is implemented per plan, that the annual maintenance, monitoring and reporting occur, and that the final success criteria are achieved. The County of San Diego has the ability to determine if success thresholds have been met and that the habitat created or restored are functioning in the manner that is the goal of the project.

2.1.3 Responsibility and Qualifications of the Mitigation Project Designer

The Mitigation Project Designer is responsible for taking this conceptual plan and preparing a final revegetation plan including landscape drawings in accordance with the Conceptual Revegetation Plan

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County of San Diego's Report Format and Content Requirements for Revegetation Plans (dated 2008) requirements. The plan and the drawings shall be in enough detail to be implemented by a contractor. The designer should have knowledge of the vegetation associations proposed for the mitigation site, at least two years of study or practical experience in native habitat design and function, and at least two years of field experience in identifying and sampling native vegetation of the San Diego region. If the designer is not a landscape architect, the designer will oversee a landscape architect in the completion of the final drawings.

2.1.4 Responsibility and Qualification of Installation Contractor

The installation contractor will have the responsibility of implementing the landscape drawings contained within the final revegetation plan, and will be responsible for the maintenance of the mitigation area until final notification is received from the Revegetation Monitor certifying proper completion of all required installation contract maintenance tasks, including but not limited to dead plant removal, erosion control, retrofitting plants with browse barriers (if needed), weeding, irrigation regime (if needed) and irrigation system maintenance as needed.

The Installation contractor shall be responsible for the replacement of all plant materials, considered dead or diseased by the Revegetation Monitor, by the specific replacement dates defined in the Final Revegetation Plan.

2.1.5 Responsibility and Qualification of Revegetation Monitor/Project Biologist

A Revegetation Monitor shall direct the project's horticultural monitoring program. The Revegetation Monitor should have training and/or local experience in growing native plant species used in this project, minimum of two years of practical horticultural experience with native plant communities and at least two years of local experience in identifying and sampling native vegetation. The Revegetation Monitor will be responsible for monitoring the installation of the revegetation site in accordance with the specifications. The Revegetation Monitor will be responsible for ensuring that the plans are implemented correctly, that the contractor maintains the site to the standards of the final revegetation plan, conduct the specified number of horticultural monitoring visits, collect data annually to determine success standards and provide communication between the contractor, the property owner and the County of San Diego.

2.1.6 Responsibility and Qualification of Maintenance Contractor

After the installation is deemed complete, the Applicant shall hire a Maintenance Contractor for the 5-year monitoring period. The Maintenance Contractor will be hired on an annual basis with renewal based on the recommendations of the project biologist and the applicant. The maintenance contractor may change on a yearly basis, at the discretion of the applicant and project biologist, if proper maintenance is not performed. The Maintenance Contractor will be responsible for the maintenance program requirements once the installation Contractor's work has been certified as complete.

Upon termination of each maintenance contract, the maintenance Contractor will be responsible for completion of all requests for work specified by the project biologist before receiving final payment.

2.2 Types of Habitats to be Established, Revegetated, Restored, Enhanced, and/or Preserved

The proposed wetland mitigation will be the creation and enhancement of southern riparian forest, southern willow scrub, and freshwater marsh to the parameters generally accepted to support the least Bell's vireo. These habitats, once established will meet or exceed the functions of the areas impacted.

The project requires as mitigation the creation of 10.5 acres of southern riparian forest, 1.66 acres of southern willow scrub and 7.9 acres of freshwater marsh. In addition mitigation also requires the Enhancement of 21.0 acres of southern riparian forest, 3.32 acres of southern willow scrub, and 15.8 acres of freshwater marsh. The creation acreage will be required to be implemented at an offsite location since there is no suitable location onsite. The enhancement can be conducted onsite within the southern riparian forest habitat onsite. This habitat is proposed to be placed in an open space conservation easement and managed in perpetuity under a Resource Management Plan. Enhancement potential exist in this habitat due to the decades of cattle impact, the creation of man-made berms for agricultural purposes and the invasion of pampas grass.

2.3 Functions and Values

The focus of this revegetation plan is to construct a successful native wetland area within a protected open space area that will thrive on its own and provide suitable foraging and breeding habitat for local wildlife after the five-year monitoring period and have the structure to potentially support the least Bell's vireo, yellow breasted chat and yellow warbler. The design will consist of creating approximately 20.06 acres of southern riparian forest, southern willow scrub, and freshwater marsh habitat offsite. In addition 40.12 acres of existing riparian habitat will be enhanced onsite. This enhancement effort could be completed onsite to improve the function of the habitat for the least Bell's vireo in the area. Enhancement is feasible in the onsite open space since various impacts have occurred due to the long term grazing onsite. The goal is to add to the general diversity of habitat and to provide foraging, nesting, and roosting opportunities for wildlife.

To create least Bell's vireo/yellow breasted chat/yellow warbler quality habitat, a dense multi structure riparian forest with a canopy of willows and dense underbrush will be achieved. Least Bell's vireo nest predominantly in the shrub under layer of willows (USFWS 1989). In addition, the least Bell's vireo will also forage in the mid range shrub under layer. The willow canopy is important in establishing territories and attracting mates. Therefore the revegetation plan herein provides for the multi-layer structure required by the least Bell's vireo and has been successfully implemented for the vireo in the San Diego River.

2.4 Time Lapse

It is anticipated that the offsite creation and the offsite enhancement mitigation for the impacts to southern riparian forest, southern willow scrub, and freshwater marsh habitat will be bonded concurrently with the habitat impact approved. If the mitigation site is not installed concurrently with the habitat impact, and it must be completed within one year of the impact occurring.

2.5 Cost

The total cost for implementation of this mitigation plan will be determined as part of the Final Plan. The cost must include the following:

- 1) Include all compensatory mitigation site preparation, planting, maintenance, and monitoring and,
- 2) Provide a complete itemized cost estimate for each installation, each maintenance year, and each monitoring year for the mitigation project. Include a 3% (compounding) annual inflation factor per year for the compensatory mitigation costs to be applied to the total project cost.

3.0 DESCRIPTION OF THE PROPOSED COMPENSATORY MITIGATION SITE

3.1 Site Selection

The location of the proposed offsite wetland creation project is yet to be determined. However, the site location must meet specific criteria to be considered adequate mitigation for impacts on Campus Park. The final location of the mitigation will be detailed in the Final wetland creation plan for this project prior to finalization. Impacts to wetlands on Campus Park occur as three different integrated forms: freshwater marsh, southern willow scrub, and southern riparian forest. Each of these components, while different in composition, forms an important part of the conceptual design. The goal of the wetland creation effort is to replicate the suitable habitat for the least Bell's vireo, yellow-breasted chat and yellow warbler.

The wetland creation mitigation site must:

1. Be within an approved mitigation bank or any other land deemed acceptable by the County of San Diego Director of Planning and Land Use.
2. Be approved by the appropriate state and federal resource agencies;
3. Comprise at least 10.5 acres of southern riparian forest, 1.66 acres of southern willow scrub, and 7.9 acres of freshwater marsh creation;
4. Not remove other habitat considered important regionally or provide mitigation for such lands;
5. Be selected based on its hydrological regime, ability to be protected from future impacts, and existing habitat onsite.

6. Provide for adequate hydrology to support hydrophytic plant species either through surface water or groundwater or a combination of both
7. Not be implemented in an area prone to scour or sedimentation
8. Provide soils that enhance the establishment of wetland habitat.
9. The wetland creation site will be located within the same watershed as the San Luis Rey River or other site approved by the DPLU director.

Once the offsite creation area is selected it must be described in detail in the final plan. This must include a description of the size, ownership, habitats present, relationship to adjacent waterway or groundwater and permits required.

3.2 Location and Size of Compensatory Mitigation Site

The offsite creation area must be at least 20.06 acres in size to support the creation effort. Grading, buffers, and access should be considered when determining the final size of the site. The site must at the end of five years be supporting 20.06 acres of wetland not including any uplands, graded slopes (outside of the wetland), access roads, easements etc.

3.3 Functions and Values

The creation of 20.06 acres of wetlands offsite will add to the quality of the habitat of the San Luis Rey River for numerous wildlife species. The creation of habitat adjacent to the river or in the river's watershed will increase the value of the overall river habitat by creating additional nesting, foraging and buffer functions. These functions will directly benefit the least Bell's vireo, yellow-breasted chat, and yellow warbler.

3.4 Jurisdictional Delineation

Prior to final site selection a wetland delineation should be conducted on the creation-site. This is to ensure that existing wetlands are not being removed and to ensure adequate design.

3.5 Present and Proposed Uses

Once a final site for the off-site creation is located, the final revegetation plan will discuss in detail the current uses on the site, any proposed uses, access to the site, and protection of the site. The results of the delineation must be presented with the Final Mitigation plan to the County of San Diego.

3.6 Reference Site

Once a final site for the offsite creation is located, a reference site will be determined. If the site is close to the proposed Campus Park project the reference site may be the onsite wetland habitats. If not, the reference site should be riparian habitat within the San Luis Rey River. The reference site must be identified in the Final Mitigation Plan.

4.0 IMPLEMENTATION PLAN FOR THE COMPENSATORY MITIGATION SITE

4.1 Rationale for Expecting Implementation Success at the offsite Creation Areas

The final revegetation plan will be required to document the rationale for expecting success of the revegetation effort at the chosen location. This may include such information as:

1. Appropriate soils occur onsite.
2. The site will be adjacent to another wetland creation project and therefore, volunteer germination is likely.
3. Sufficient hydrology occurs in the area to support this habitat type.
4. The site will be protected in open space that will be managed in perpetuity.

4.2 Financial Assurances

Implementation of the revegetation plan described herein will be the financial responsibility of Passerelle LLC, and/or the current property owner or the entity which is responsible for the construction of the wetland impacts. A revegetation agreement shall be signed and notarized by the property owner following approval of the final revegetation plan and accompanied by the required security as agreed upon by the County of San Diego.

4.3 Schedule

A final installation and monitoring schedule will be developed as part of the final revegetation plan. This plan should include a schedule for plant procurement, grading (if necessary), plant installation, guarantee period, and five year monitoring period.

4.4 Site Preparation

4.4.1 Equipment Required

The final revegetation plan will describe the equipment that will be required to implement the final plan. This will be based on site location and need for grading.

4.4.2 Site Access

Since the final revegetation site is not yet selected, one of the selection criteria should be ease of access. There should not be any restriction on moving machinery, plants, and crew onto the site to implement the final plan. If necessary, the access route will be flagged by the Biologist prior to construction, to avoid any surrounding sensitive habitats.

4.4.3 Site Protection

The limits of grading, if necessary, of the creation site will be flagged in the field and checked by the Project Biologist prior to grading. In addition, the limits will be identified to the equipment operators.

4.4.4 Fencing

Fencing may or may not be required based on the surrounding uses. If fencing is required this will be detailed in the final revegetation plan. Fencing is proposed between the backyard of the residences and the open space and between the public roads and open space.

4.4.5 Schedule

Planting should be done between October 1 and April 30 to take advantage of the winter rainy season, dormancy of foliage, and rooting period to ensure optimum survival of the plants. If planting cannot be done during this time supplemental irrigation and other measures may be needed to ensure survivability. A installation, monitoring, maintenance, and reporting schedule will be developed with the completion of the Final Revegetation Plan.

4.4.6 Container Plant Material

To achieve the habitat specified within this plan the following container plants will be installed. A final landscape plan will delineate the location of these plants and the total of each species proposed. Plants should be specific to the adjacent habitat type but at a minimum be composed of species that will achieve high quality habitat for the least Bell's vireo. The final plant palette will be determined once the final site is selected. The plant palette will include the following plants:

Freshwater marsh:

California Cattail	<i>Typha latifolia</i>	seed
California bulrush	<i>Scirpus californicus</i>	seed
Olney's bulrush	<i>Scirpus olneyi</i>	seed

Southern Willow Scrub:

Mulefat	<i>Baccharis salicifolia</i>	poles/container
Arrow weed	<i>Pluchea sericea</i>	poles/container
Sandbar willow	<i>Salix hindsiana</i>	poles/container
Western Ragweed	<i>Ambrosia psilostachya</i>	seed
Douglas Mugwort	<i>Artemisia douglasiana</i>	seed
San Diego Sagewort	<i>Artemisia palmeri</i>	seed

Southern Riparian Forest:

Western sycamore	<i>Platanus racemosa</i>	container
Cottonwood	<i>Populus fremontii</i>	container

Arroyo Willow	<i>Salix lasiolepis</i>	poles/container
Black Willow	<i>Salix goodingii</i>	poles/container
Sandbar Willow	<i>Salix hindsiana</i>	poles/container
Mulefat	<i>Baccharis salicifolia</i>	poles/container
Arrow Weed	<i>Pluchea sericea</i>	poles/container
California rose	<i>Rosa californica</i>	container
Mexican elderberry	<i>Sambucus mexicana</i>	container
Desert Grape	<i>Vitis girdiana</i>	container
Western Ragweed	<i>Ambrosia psilostachya</i>	seed
Douglas mugwort	<i>Artemisia douglasiana</i>	seed
San Diego Sagewort	<i>Artemisia palmerseed</i>	

4.4.7 Seed material

Seed composition will be detailed in the final mitigation plan. Seed material and mixture should be based on location to water source. For example, an area adjacent to the drainage or in the floodplain may be a drier mix than that which is in the creek bed. Seed material can include the seed of any of the container plants listed above

4.4.8 Plant and Seed Source

All container plant and seed material will be from established reputable nurseries that utilize locally grown plant stock.

4.5 Planting Plan

A detailed planting plan will be prepared by a California registered ~~licensed~~ Landscape Architect, and will be required to be included with the final Revegetation plan.

Minor grading may be necessary to create wetland topographic features such as a bed and bank to mimic a natural riparian system. Minor grading shall ensue before the planting plan is implemented. The installation contractor or grading contractor will be responsible for implementing the grading activities.

Plants would be installed in holes that are slightly larger than the root ball. Holes would be soaked and allowed to drain prior to planting. No soil amendments would be used. The installation contractor will be responsible for the planting activities. A detail of the plant installation will be included on the landscape drawings that will be attached to the final Revegetation Plan.

4.6 Irrigation Plan

The goal of the Campus Park mitigation is to create a self-sustaining wetland habitat. Every effort should be made to select the final revegetation site such that the minimum irrigation would be required. If irrigation is required an above ground pipe will be installed and high impact irrigation heads will be installed on risers that will not impact

the vegetation. The Project Biologist will determine the need to turn the irrigation on or off.

5.0 MAINTENANCE DURING MONITORING FOR THE CREATION AND ENHANCEMENT SITES

5.1 Maintenance Activities

5.1.1. Irrigation Maintenance

The Installation Contractor shall make checks on the irrigation system every three days for the first month after installation in order to assure proper system operations. Thereafter, the Maintenance Contractor will be responsible for the regular maintenance and repair of all elements of the irrigation system. The Maintenance Contractor shall make checks of the irrigation system every week for the first month after taking over maintenance to ensure that the irrigation system is working correctly and coverage is adequate. Thereafter, the Maintenance Contractor will check the system operation at least once a month, except during periods when the system is not in operation, as recommended by the Project Biologist..

5.1.2. Weed Abatement Schedule

Grubbing (mechanical tilling and removal) and grading shall be the primary treatment to initially eradicate and control prolific stands of invasive exotic plants or weeds at the selection site. The grubbing and grading shall remove all exotic plant seed and propagules that could invade the site. The Project Biologist shall be onsite during all grubbing and grading operations to identify and flag desired natives that shall be protected and to identify invasive exotics that shall be removed. After grubbing and grading, the combinations of manual and herbicide treatments (i.e. Rodeo®) are specified to further eradicate and control weeds.

Some noxious weeds are especially difficult to control and will require the use of herbicides. The Project Biologist will identify these plants. Such control will consist of cutting the plants to 6" high (only during the active growing season April to August), treating the cut stems with 100 percent concentration of "Rodeo" herbicide, or other herbicide approved by a licensed Weed Control Advisor, and the removal of all cut-off top growth to an offsite location. Repeated herbicide applications may be necessary on large plants. All small plants are to be removed with their roots; if possible, before herbicide use is attempted. All herbicide use at the project will be carried out under the supervision of the Project Biologist.

5.1.3 Pruning

Pruning within the creation area is restricted to plants that are diseased. As a remedial measure, pruning may be recommended by the Project Biologist on a species-by-species

basis. The Maintenance Contractor will be advised by the Project Biologist if pruning is necessary.

5.1.4 Trash Removal

The Maintenance Contractor will remove all trash and illegally dumped debris at least once every three months throughout the five-year maintenance period. Care will be taken that these trash removal activities minimize or avoid damage to plantings in the mitigation area. All dead limbs and tree fall will be left in the mitigation area. Weed debris will be removed from, and disposed of outside of the mitigation area. The Applicant shall comply with all litter and pollution laws. All contractors, subcontractors and employees also shall obey these laws and it shall be the responsibility of the Applicant to ensure compliance.

5.1.5 Pest Control

The Project Biologist shall monitor insects, nuisance animals and diseases. Whenever possible, biological controls such as erecting fences will be used in the place of chemical controls. Plants that are severely diseased will be removed and replaced, to prevent the spread of disease and insects. Pesticides will be avoided unless recommended for special problems by the Project Biologist. Rodent control will be restricted to trapping or anti-coagulants with no secondary poisoning effects.

5.2 Schedule

5.2.1 Maintenance Schedule

Offsite Creation

The maintenance period will extend five years, commencing when the Project Biologist and the County of San Diego certifies that the mitigation plantings have been completed. The overall post-construction maintenance will be divided into an initial 120-day installation-maintenance period and a five-year establishment maintenance period.

5.2.2. Irrigation Schedule

The Project Biologist, based upon weather patterns and soil moisture levels, shall determine the irrigation regime. Water will be applied to the site in a manner that ensures deep penetration of water to the soils surrounding the root balls, i.e., deep and infrequent watering. Because these plants must eventually survive in the absence of supplemental irrigation, deep roots are needed to tap into the perennial soil moisture. Over-watering promotes unwanted shallow root systems and undesirable weeds. Deep and infrequent watering stimulates the development of extensive root systems. The Installation and Maintenance Contractors shall provide the Project Biologist with the cycle start times and the length of each cycle for all valves in the mitigation area. These times and cycles will be changed as recommended by the Project Biologist. When changes are made, the Contractor will provide the Project Biologist with written confirmation of the date and

time at which the change was made. The Project Biologist and Contractor shall meet and evaluate the irrigation regime at least six times per year (bi-monthly).

5.2.3 Irrigation System Removal

The irrigation system in the mitigation area is to be removed once the plantings have become established and self-sustaining. The Project Biologist will decide how and when irrigation is to be phased out. However, the irrigation system should be kept functional during the five-year maintenance period, even if it is not used, in the event of replanting and replacement of plants that would require temporary irrigation. Upon completion of the irrigation period, all irrigation components, which are above grade, will be removed by the Contractor from the mitigation area and all valves permanently disconnected.

6.0 MONITORING PLAN FOR THE OFFSITE CREATION SITE

6.1 Performance Standards for Target Dates and Success Criteria

6.1.1 Success Criteria

Final success criteria are proposed which will be used to determine the completion and ultimate success of the wetland creation mitigation. Fulfillment of these criteria will indicate that the mitigation area has accomplished the long-term goals of this mitigation plan, i.e., the created southern riparian forest, southern willow scrub and freshwater marsh habitat provide similar functions and values as natural riparian habitats that have not been impacted.

The proposed plan will result in the creation of southern riparian forest and southern willow scrub habitat that will meet the habitat functionality of jurisdictional wetlands, and least Bell's vireo habitat, as well as other bird species. The success criteria are as follows: :

Cover Criteria:

- 75% total cover after three years for all overstory and understory species
- 90% total cover for all overstory and understory species after five years

Survival Criteria:

- 90% survival of original tree plantings;
- 80% survival of original shrub plantings; and
- 70% cover of native ground cover species.

Growth Criteria:

Success Standards for Willow Tree Heights.

SPECIES	SIZE AT PLANTING	HEIGHT	
		@ 3 Years	@ 5 Years
Arroyo Willow	1 gallon	10 ft	15 ft
Black Willow	1 gallon	10 ft	15 ft
Narrow-leaved Willow	1 gallon	10 ft	15 ft

The goal of this program is the establishment of a self-sustaining community; the plants must be able to eventually survive without supplemental irrigation. A detailed description of the success standards is provided below.

If the specified minimum cover, survivorship, and growth standards are not met then the Applicant will be responsible for any corrective measures as determined in coordination with the resource agencies. Any replacement plantings will be subject to the monitoring requirements and success criteria described herein.

6.1.2 Adaptive Management and Remedial Measures

This section defines the yearly performance standards for evaluating the progress of the project as it compares to the reference site and the proper establishment of the plant materials. These standards will be used to determine the timing of appropriate remedial measures to correct any problems that may arise. Remedial measures are only partially defined here. The ultimate remedial measures are left to the discretion of the Project Biologist, since any given measure will not necessarily always be the appropriate or cost effective remedy. Remedial measures will include, but not necessarily be restricted to additional weeding, fertilization, pest control, replanting, modifications to the irrigation regime, changes to the irrigation system, and species substitution.

Table 3 defines those success standards for the mitigation area that shall be utilized to assess the horticultural and botanical data collected in order to determine the necessity of remedial measures. These standards will ensure that the mature cover goals in the design of the plant palette are ultimately achieved.

<p align="center">Table 4</p> <p align="center">Success Standards and Recommended Remedial Measures</p>	
Standard	Remedial Measure if Standard not Met
Year 1 –	
1. 30% native groundcover of all species by transect analysis of all canopy layers	Reseed/Replant; Substitutions if approved by Project Biologist
2. Adequate establishment of all species	Reseed/Replant; Substitutions if approved by Project Biologist
Year - 2	
1. 60% native groundcover by transect analysis of all canopy layers	Reseed/Replant based on the recommendations of the Project Biologist
2. 80% survival of container shrubs 90% survival of container trees	Replant based on the recommendations of the Project Biologist
Years 3-5	
1. 90% native ground cover by transect analysis of all canopy layers	Reseed/Replant based on the recommendations of the Project Biologist
2. 80% survival of container shrubs 90% survival of container trees	Replant, recommendations to be provided by the Project Biologist based upon actual field conditions.

If the mitigation proposed in this plan cannot be successfully achieved at the proposed mitigation site, the applicant will provide the County of San Diego with the following information: an alternative mitigation location, an indication of funds available to pay for the planning, implementation, and monitoring of the contingency procedures required to achieve the mitigation goals; and a list of the names, addresses and phone numbers of persons or entities responsible for implementing and monitoring the contingency procedures.

6.2 Target Functions and Values

The focus of this revegetation plan is to construct a successful native wetland habitat area that will thrive on its own and provide suitable foraging and breeding habitat for local wildlife and the least Bell's vireo after the five-year monitoring period. The design will consist of creating approximately 15.9 acres of southern riparian forest, southern willow scrub, and freshwater marsh habitat. The goal is to add to the general diversity of habitat and to provide foraging, nesting, and roosting opportunities for wildlife.

6.3 Target Hydrological Regime

The final site selection and final Revegetation Plan should take into account the following hydrological requirements:

1. The revegetation plan will be designed to mimic the natural functions of a native riparian habitat.

2. Water is expected to flow through and saturate the area during precipitation events.
3. It will match local hydrologic features such as ephemeral water movement and scouring, high water table, and erosion and sedimentation.

6.4 Target Acreages

The goal of the revegetation plan is to create, at a minimum 9.5 acres of southern riparian forest, 1.7 acres of southern willow scrub, and 7.8 acres of freshwater marsh.

6.5 Monitoring Methods

6.5.1 Monitoring Program

The monitoring program will begin, prior to commencement of mitigation site construction activities, with a pre-construction education session, involving the Project Biologist, Installation Contractor, and sub-contractors. Monitoring will continue for five years after the completion of the installation and/or until the project is given final approval by the County of San Diego. At this time, the County shall determine if the mitigation program has adequately achieved the performance standards. If the performance standards are deemed complete, no further monitoring will take place. If the County determines that the performance standards have not been adequately achieved, the County, applicant, and Project Biologist shall define additional monitoring and maintenance activities that need to be undertaken.

6.5.2. Horticultural Monitoring

Horticultural monitoring will be assessed qualitatively during regularly scheduled site visits. The project biologist will visually assess the progress of the mitigation effort making notes on project site including plant health, exotic weed growth, trash, and any other pertinent information. All observations will be recorded in a field log during the visits.

A written memorandum shall be prepared after each monitoring visit. Memoranda will list observations, and problems, and recommend appropriate remedial measures, and be sent to the Maintenance Contractor for implementation. These memoranda will focus on horticultural problems such as weeding, irrigation regime and repair, trash removal, pruning, pest control, etc. The Project Biologist shall be responsible for recommending any and all remedial measures to be implemented, and will assist in determining the irrigation schedule and the timing of the phasing-out of the irrigation system.

6.5.3. Botanical Monitoring

Growth and establishment of the habitat will be quantitatively assessed using the line-intercept technique for all three vegetation levels: tree overstory species, understory shrub species and groundcover understory. The vegetation within the mitigation site will be

sampled through the use of four permanent, twenty-five meter long transect. Transect data collected will include survivorship, density, percent cover of species, tree heights, and tree health/vigor (i.e., diameter at breast height (dbh) measurements). Permanent photo points will be established at the transect location and at predetermined sites in general. The permanent transect and photopoint locations will be identified in the field by the placement of wooden stakes that are appropriately labeled and flagged.

The reference site will be utilized to confirm conditions noted in the revegetation area. For example, anomalies related to drought, disease, or other uncontrollable conditions.

The reference site and permanent transect and photopoint locations will be predetermined and labeled on an aerial exhibit.

6.5.4. Modification of the Monitoring Period

The specified monitoring period is five years from the completion of the installation program. If at the end of the five-year monitoring, any of the revegetated areas do not meet the project's final success standards, then the monitoring and maintenance period would need to be extended, and a specific set of remedial measures implemented. The length of the additional monitoring and any necessary remedial measures would be determined in consultation with the County of San Diego. Only those areas failing to meet these final success standards would require the additional remedial measures. This interactive process would continue until all the standards are met, or until the County of San Diego determines that the mitigation goals have been adequately achieved.

6.6 Monitoring Schedule

6.6.1. Horticultural Monitoring

The Project Biologist on a biweekly basis shall inspect plantings during installation. During the first two years, the planting shall be inspected at least once every five weeks and after a large storm event. During the final three years of monitoring, the Project Biologist shall visit the project site a minimum of six times per year. Monitoring visits, however, may be conducted at a higher frequency to ensure the project's successful progress and maintenance.

6.6.2. Botanical Monitoring

The Project Biologist shall be responsible for the supervising of all of the botanical monitoring. Botanical monitoring will be conducted concurrently with horticultural monitoring. Baseline data on a representative sample of plants will be taken in the first year to evaluate growth during the subsequent years. Monitoring will be conducted during the active growing season, from March to August.

6.7 Monitoring Reports

Reports summarizing the monitoring efforts will be provided to the County of San Diego annually. Each report must include a summary of the qualitative and quantitative analysis, contingency measure implemented if pertinent, a determination of success criteria met, and monitoring and maintenance field data.

Any significant issue or contingency that arises on the job site (e.g. plant survival issues, fire, or flooding) shall be reported in writing to the County of San Diego within two weeks from the date of the incident. Accompanying the report shall be a plan for remediation, with an implementation schedule and a monitoring schedule.

7.0 COMPLETION OF COMPENSATORY MITIGATION

When the monitoring period is complete, and the final success criteria have been met, the applicant shall notify the County of San Diego when the annual report documenting this completion is submitted.

Following receipt of this report, the County of San Diego will require a site visit to confirm the completion of the mitigation effort and any jurisdictional delineation of the offsite creation and onsite enhancement of the wetlands.

8.0 CONTINGENCY MEASURES

8.1 Initiating Contingency Procedures

If an annual performance criterion is not met for any portion of the mitigation project in any year, or if the final success criteria are not met, the Project Biologist will prepare an analysis of the cause(s) of failure, and, if determined necessary by the County of San Diego, propose remedial action for approval. If the mitigation site has not met the performance criteria, the responsible party's maintenance and monitoring obligations shall continue until the County of San Diego gives final project confirmation. Remedial measures for all five years of the monitoring period are listed in Table 4 of the Success Standards section of the Monitoring Program.

8.2 Alternative Locations for Contingency Compensatory Mitigation

Should the proposed mitigation area be deemed inappropriate by the County of San Diego, an alternative site will be identified. Site selection will be in accordance with all current regulations for mitigation.

8.3 Funding

Funding and bond determinations, will be finalized as part of the final Mitigation Plan.